TIINA SOININEN

Changing Expectations and Realities of Employment Stability

Longitudinal Analysis of Tenures in Finland

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ABSTRACT

This research tackles the fragmentation of Finnish labour markets during 1991–2007. It analyses conceptually social meaning of the phenomenon, focusing in tenures inside firms in national labour markets. The co-founding factors are situated on three different planes: individual, organisational, and structural levels. Theories of labour matching, segmentation, transitions, and turnover are followed accordingly. The data is a longitudinal follow-up combined employer-employee register from Finland during 1991–2010. Employment stability is analysed using the Cox Proportional Hazard method with stratification and competing risks analyses.

Finnish labour markets have dualised into stabile and fragmented markets during the 2000s. The growing fragmentation touches the unemployed, aged, and low educated segments of labour force; whereas increasing stability is a feature of highly educated, low salaried, and small and middle sized firms. At the same time, the dual-nature of stability is a continuous structural tendency as students, young and female face fragmentation steadily; yet, high-technology industry, and prime aged have good employment stability. Further, some labour force segments face differing conditions in relation to economic trends. Mechanisms of change, the establishment selective patterns, economic cycles, welfare state institutions, and individual actions, intermingle in the structure of employment stability.

The results call for better social understanding of the labour market and re-thinking of national practical labour management institutions.

Keywords: employment stability, flexibility, longitudinal data, critical realism

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ABSTRAKTI

Työelämän muutos ja fragmentoituminen ovat olleet viimeisen kahden vuosikymmenen ajan laajasti yhteiskunnallisen ja tieteellisen keskustelun kohteina. Tilastollinen tutkimus ei kuitenkaan ole havainnut suuria rakenteellisia muutoksia työn vakaudessa. Tämä tutkimus on teoreettinen, empiirinen ja työpoliittinen analyysi työn vakauden merkityksestä nyky-yhteiskunnassa. Teoreettisesti tutkimus nojaa kriittisen sosiaalitutkimuksen perinteeseen sekä hyödyntää työmarkkinoiden kohtaannon, lohkoutumisen, siirtymien ja työvoiman vaihtuvuuden näkökulmia. Aineistona on Tilastokeskuksen pitkittäinen yksilötason seurantarekisteri, johon on liitetty työnantajatason muuttujia (nk. FLEED-aineisto). Aineisto on 1/3-otos Suomen työikäisestä väestöstä vuosilta 1991–2010. Yksilöiden työsuhteiden kestoa analysoidaan Coxin regressiolla, josta tutkimuksessa toteutetaan myös stratifioidut ja kilpailevien riskien analyysit.

Tulosten mukaan Suomen työmarkkinat ovat 2000-luvulla jakautuneet vakaisiin ja fragmentoituneisiin. Osa työvoiman ryhmistä (ikääntyneet, vähän koulutetut ja työttömät) on ajautunut yhä lyheneviin työsuhteisiin. Toisaalta korkeasti koulutettujen, matalasti palkattujen ja pk-yrityksissä työskentelevien työsuhteet pitenevät. Työn vakauden jakautuminen on samalla pysyvä rakenne: opiskelijat, nuoret ja naiset kohtaavat alati fragmentoituneet työmarkkinat. Tutkimus tuo eksplisiittisesti esille, kuinka työmarkkinoiden muutosmekanismit, yritysten työvoiman valikoitumisen tavat, taloussuhdanteet, hyvinvointivaltion työmarkkinainstituutiot ja yksilöiden toiminta kietoutuvat toisiinsa työn vakauden rakenteessa ja muutoksessa.

Asiasanat: työn vakaus, työmarkkinoiden joustavuus, rekisteriaineisto, pitkittäisanalyysi, kriittinen realismi

Foreword

Rigorous science demands stretching ones own thinking to its limits and beyond. However, this is impossible to conduct, nor to encounter, without help of other people; their insights and reflections. Ones own mental barriers need the challenge that may come only from outside. Thus, I want to thank all the community around me.

I want to thank first my supervisors. Too often, I neglected your straight forward good advice, only to recover later, that you were right. I am truly grateful for your patient guidance. I can only hope that I managed to achieve some of your insight in this research. Thank You, professor Leena Koski, University of Eastern Finland. You have guided me into understanding of the sociological analysis throughout my masters, licentiate, and doctoral studies. Society is truly analysable with suitable theories. I thank dearly, professor Pertti Koistinen, University of Tampere. You always amaze me with your theoretical and practical understanding of the labour market. Your experience and vision on labour market structures, functions and policies has always been an inspiration to me. However, this work would never have been conducted in practice if I hadn't been able to consult professor Juha Alho, University of Helsinki. You have shown me how beautiful and neat the society may be once deducting statistical and logical analysis of it.

I also thank for the pre-examiners, professor Annamaria Simonazzi, Universita di Sapienza, and professor Harri Melin, University of Tampere, whom I thank further for becoming my opponent. Your encouraging comments delighted me highly.

I have grown into practicing science in an academic community of University of Eastern Finland, Karelian Institute. I have had the opportunity to live and advance in the warm and friendly, yet academically strict, atmosphere. The environment of flowing multi-disciplinary scientific discussions, philosophical wonderings, and practical project work has been the most fruitful for me in building up my own lines of thinking. Thank you for the everyday sharing and tolerance of my sky embracing joys and depths of despair. In this community, I first thank the Labour researchers' team who took me under their wings and offered so many opportunities and discussions. I thank you Arja Jolkkonen and Arja Kurvinen. Further, in Karelian Institute I thank professor Heikki Eskelinen, Ismo Björn, Sanna-Riikka Knuuttila, Lea Kervinen, and Pirjo Pöllänen. I thank Karelian Institute, also, for financial support of this publication and in finalising my doctoral dissertation.

I am vastly thankful for Academy of Finland, doctoral school Labour Net, and The Finnish Work and Environment Fund for financial support of my work. I thank Labour Net students for becoming my friends and sharing the painful growth into doctoral position both in academic and in personal sense. We have shared laughs and tears, yet, always our meetings have encouraged me to carry on. Thank you Satu Ojala. Special gratitude goes to Liudmila Lipiäinen. You were irreplaceable help in figuring out the right syntax and other practicalities in statistical examination.

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Finally, my deepest gratitude goes to my family! Everything else is irrelevant in comparison to the wonder of life and love that we have. This work is dedicated to Juhani, Tuomo, Jyri, and Sami Junnilainen.

In Joensuu 31th of May 2015

Tiina Soininen

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1 Introduction

Employment stability has played a central role in industrialized societies. Conceptually, it refers to long-term, full-time employment relations of individuals and forms of social system of standard employment. Traditional full-time, long-term employment entails many societally important functions. Employment stability and security has traditionally provided individuals and firms with a social environment where actions had predictable causes (Hall 1982; Ureta 1992), and it has served as a means to secure the cooperation of workers (Nolan 1983). It has incorporated many mutual obligations between the worker and the employer. These obligations include things such as the exclusivity of employment with one organisation, commitment to minimum periods of employment, rules for terminating contracts, and so forth (Harvey 1999). With employment stability employees have been protected from disruptions in the economic markets, and firms have benefited from a reliable framework and could depend on their employees' willingness to cooperate in return for the security that they offered. The contractual nature of the work also placed limits on the employers' powers of command and prohibited the employer in transferring the social and economic risk to individuals (Deakin 2002). Furthermore, for individuals, traditional employment patterns resulted in stability as they incorporated their employment stability into their future plans. In contrast to day-labour, long-term jobs created predictability for an individual life course. Thus, stable employment relations enabled workers to plan their futures in the long-term. Job security has been and still is the number one priority in working conditions from the workers point of view (Clark 2004).

Employment stability, and thus security, has been one of the key elements in building the institutional welfare state. The stability of employment relations has been a goal of many social security institutions; furthermore as such aims of long tenures were accomplished, the social security system was built around it. Welfare state institutions, such as pension systems, unemployment insurance, and medical coverage, have been based on the premise of regular and stable employment tenures. Secure employment and social security institutions integrated with each other to deliver individual lives a certain degree of stability (Rodgers and Rodgers 1989). A system of combined welfare state institutions and employment stability has been a composition that protects those who fall out of this particular way of life, and therefore, are in need of publicly provided aid.

Within the social sciences, the labour market has classically been seen as the fundamental element of modern industrialized societies. The division of labour

(Durkheim), the bureaucratic form of work (Weber); and the way in which work, time allocation, and value creation moulds social relations (Marx) are the cornerstones of sociological labour research. These classic views place an emphasis on how social life is arranged around work, and how the organisational structures around work changed the pre-industrialized social system into an industrialised one. The stability of social structures has been created and maintained through the allocation of populations into societally important categories, hierarchies, and occupations by the division of labour. Cohesion in society is maintained by these groups and their functions in the social structure. Solidarism, bureaucratic normative structures, and later Fordism have all maintained this sort of cohesive society; and employment stability has been the norm behind it. Thus, all in all, employment stability has been rational in the sense of security for both enterprises and individuals. However, within the current changes in the labour market, these modern structures have been collapsing and are being replaced by new forms of social organisation.

Sociological thinkers have been predicting and outlining theory toward the end of the era of life-long employment relations. Amin (1995), as well as Lash and Urry (1987) and Beck (1992, 2001), argue that society is leaving behind the era of Fordism. Castells' (1996) thesis on Network Society promotes the idea that the traditional forms of work – which were based on full-time employment and had clear occupational tasks and career advancement opportunities – are being slowly eroded away. He argues that, "We are witnessing the end of historical trend towards salarization of employment and the socialisation of production that was the dominant feature of the industrialised era" (Castells 1996, 267). Richard Sennett (2007) sees that the change in society is due to free markets and the loosening of regulations for labour processes in global economic fields. All of these theories embrace the idea of transforming labour markets and societal structures, but they differ in where they seek a reason for the change. Some argue that this change is a consequence of corporate restructuring, for example, due to technological advancement and increasing competition in global markets. Others see labour markets as fundamental mechanisms that actually generate institutional restructuring in the Western world. Some scholars provide a more detailed analysis, in that they explain the changes with the crumbling of traditional industries and stable employment that was prevalent particularly in these industries (Mingione 1996; Sassen 1996; Giddens 1998).

These manifestations have three different aspects; firstly, traditional employment patterns are seen to be declining in importance; secondly, traditional employment patterns will decline further in the future; and thirdly, some scholars argue that traditional patterns are not even worth defending, while others, to the contrary, state that the new flexibility of labour is a threat to individuals and the social structures of Western societies. Explanations for the antipathy towards traditional employment patterns are based on notions of the

paternalistic structures of the male breadwinner model; in addition to the notion that the rigid regulation (formal, informal, bureaucratic rules etc.) behind such a system is causing trouble for free markets, and constrains social mobility. The new flexibilisation paradigm has seen employment stability as being dysfunctional for markets and for individual action in the labour market. Furthermore, it has been argued that new generations are not afflicted with concerns of social security, as previous generations were. The reasons behind much of the disfavour towards flexibility stem from notions of increasing individual insecurities and the genesis of new inequalities between social groups in Western society (see also Bosch 2004).

New grand theories have also produced rich scholarly discussions on whether labour markets have actually become more fragmented or flexible. However, there are different notions, empirical results, and even conceptualizations, of different flexibilities in Western labour markets. Scholars are not uniformly convinced of the tendencies or practical realities that are occurring in industrialized societies and in labour markets. Thus, it is vital to assess the extent and generality of the flexibilisation or fragmentation of the labour market. It may be that these changes have more to do with other changes in Western society. Notions of possible change necessitate clear statistical examination on how possible structural change is linked to simultaneous changes in economic trends, industrial restructuring, ageing of the labour force, and growing educational levels in society. It is vital to see how these changes are connected longitudinally and then generate understanding of the change.

This research targets a specific case within the Nordic welfare state labour markets, namely Finland. In both, Finnish public and scientific discussions, the idea that lifelong careers are vanishing has gained much attention during the last few decades, with the debate intensifying during the 2000s. But there seems not to be any joint view on whether this is actually true or whether it is profound in all employment sectors. Some argue that the labour markets in general have become worse for individuals and that the working environment has become more demanding (for example Siltala 2007). On the other hand, some have pointed to the new forms of work attached to flexible working arrangements and the security that Finnish Employment Law gives to workers (for example Alasoini 2010). Labour market institutional structures have also been in slight turmoil since legislative and social security institutions have been modified to fit the new demands of flexibility. These changes aim to make dismissals easier and their purpose is to break down the rigidity of institutionally set boundaries of labour mobility. However, in Finland, from a statistical point of view, there is little to no evidence that the accumulation of risk by individuals (for example over-education, spells of unemployment, non-typical working arrangements, fear of losing employment, and difficulties to obtain new employment) has increased since the 1980s (for example Ojala and Pöyriä 2012).

There is no doubt that Nordic welfare state structures and social security institutions have had an impact on the flexibilisation of the labour markets. In Finland and other Nordic countries, the welfare state institutions have been considered as social investments, and it is argued that equality via redistribution leads to a more cohesive society. Society is then capable of making difficult political and economic decisions and preventing some social groups from falling behind; it gives everyone a chance to participate in the market economy. Investments in stability enhancing institutions, such as unemployment benefits, pension institutions, public education, and childcare, are seen to have long-term benefits for the social and intellectual development of a country. Furthermore, expenditures that aim to increase the labour supply by decreasing barriers to participation in employment are seen as investments in economic growth. Thus, the view is that the Nordic welfare state model brings long-term benefits to the economy and prevents potential losses of human capital (Arjona, Ladaique and Pearson 2002, 10, 20.) The Nordic welfare state model has been criticized for being economically discouraging for individuals. It is argued that redistributive legislation directs individuals to pursue material gains through redistribution and not through human capital accumulation or innovation (for example Lindbeck 1975; Ehrenberg, Danzinger and San 1983; Killingsworth 1983). On the other hand, in a Nordic welfare model, individuals are insured universally against risks, which the private sector finds hard to manage. Such insurances enable individuals to take more risks in their economic endeavours. Thus, the insurance offered by the state may also foster growth and up-ward social mobility (Ahmad et al. 1991; Esping-Anderssen, Rohwen, and Sorensen 1994).

The Nordic welfare states' responses to the growing demands for a flexible labour market have been slightly different from the rest of the Western world. The new Nordic model may be described as a flexicurity model, where both high employment protection in so called typical work and the creation of a more flexible and unregulated labour market co-exist. Nordic countries have paid much attention to creating active employment policies rather than passive ones. Active labour market policies try to use spending for such employment policies that would encourage individuals towards economic activity in labour markets, rather than passively only increasing consumption (Arjona, Ladaique and Pearson 2002). These policies have an empirical research background; as a combination of active measures, certain categories of public spending in unemployment insurance, and social protection institutions, do actively increase economic growth. However, high taxation in general decreases growth; yet this belief has also been contested (in defence: Bassanini and Scarpetta 2001; Arjona, Ladaique, and Pearson 2002; Cashin 1994; Castles and Dowrick 1990; Korpi 1985; McCallum and Blais 1987; Perotti 1992, 1994; Scarpetta 1996; against: Gwartney, Lawson and Holcombe 1998; Hansson and Henrekson 1994; Atkinson 1999; Nordström 1992; Weede 1986, 1991).

Furthermore, there are also critiques of the overall insecurity or flexibility thesis. For example, Doogan (2001) argued that in the UK there is actually a growing tendency toward long-term jobs. Fevre (2007) makes the claim that when the theorists behind the 'age of insecurity' made their predictions, the labour markets they thought to be presenting, were not those that empirically underwent profound changes. Fevre says that if this new age is dawning, it is in Spain, Portugal, Mexico, Turkey, Poland, and Finland. Thus, with these countries being so different in relation to their national structures, the explanations for the changes are likely to be found in more complex, multi-factorial situations than purely in the age or ethos of insecure employment. It might be that the thesis for a new era of insecurity is not explained by compositional changes in the labour force or in labour market restructuring, but is actually best understood in its institutional and ideological context.

The paradox between growing insecurities individuals in the labour markets face and the actual continuing stability in employment durations may cumulate from differing societal aspects. There is a well-founded argument that individual fears in labour markets, and public perception of fragmentation have grown (for example Turnbull and Wass 2000). In actuality, feelings of insecurity may cumulate not from the statistical situation of job stability and long-term employment alone, but from a wider set of anxieties that are generated in individual encounters in working life. The scope of insecurity may be wider and considered as greater exposure for the worker to market forces – intensification of work, loss of status, and loss of control by workers over their own work (Burchell et al. 1999).

Heery and Salmon (1999) define insecurity as being a property of a job and the environment where the job exists, and as a property of the subjective experience and attitudes of workers towards security (see also Erlinghagen 2007). Individual perceptions of job insecurity seem not to be connected so much to national social institutions, but more to long-term unemployment rates of societies. However, there remain a great many national differences in self-perceived insecurity that may not be explained by individual nor national characteristics (Erlinghagen 2007). Theories on insecurity may also be related to public perceptions that have been manufactured by public debate. This refers to when the media promotes an agenda and the news creates public uncertainty – such as with downsizings, mergers etc. – but at the same time the media neglects to point out stability in labour markets; the symbolic importance of job gains and losses is highly imbalanced. Furthermore, manufactured insecurity arises from the removal of national planning and security institutions, and from the introduction of non-predictable 'blind forces' of the market (Doogan 2001).

One important feature in fragmented labour markets is the growth of social inequality. This phenomenon may be linked to discussions about high-quality vs. low-quality jobs and differences between age groups, genders, and the positions of immigrants in labour markets. There is a notion that high-quality

jobs seem to be vanishing and are being replaced by low-quality jobs. High-quality work often infers relatively high wages, full-time employment, substantial fringe benefits, and substantial job security/stability. Low quality jobs, then, are those that have low salaries, part-time employment, absence of fringe benefits, and low job stability. These discussions have led to notions of polarized labour markets; labour markets are divided in a dualistic manner into good and bad jobs. This discussion is similar to the 'old school' segmentation theory and internal labour market discussions.

The polarization thesis is based on notions of growing inequalities in wages and polarization of wage structures, their linkages to occupations, and new global divisions in work tasks. It is noted that globalization, instead of making the division between differing firms in the Western world and others in growing economies, is actually a division between tasks – those that may be performed in distant locations and those that may not. Simultaneously, technological change has had an impact on job tasks because the higher hierarchical tasks with more demands on individual expertise are growing at the same time as tasks requiring lower level qualifications are diminishing. Together, these two phenomena create a situation where middle class tasks and occupations are vanishing in the Western world, thus, leading to a middle-class squeeze in salary structures. These discussions have concentrated mainly on questions of national economics and are preoccupied with concerns of the relationship between changes in salaries and overall productivity of national labour markets with economic development being the main focus of debate.

However, I argue that employment stability is an important feature of pay structures in Western social structure because the notion of employment stability brings forth social dimensions to labour market changes. When we look at the function of national labour markets as a whole and the role of labour in our social system, we understand that stability has been a key element for a cohesive society. Thus, if indeed polarization or new flexibilisation is occurring in Finnish labour markets, it might actually be more visible in employment stability rather than in the structures of salary. Employment stability is a fundamental key behind industrialized societies' structures and social functions, and targeting it in research is of enormous importance when analysing current tendencies in flexibilisation, both socially and economically.

In this research I ask: What influences the change of employment tenures in Finland during 1991–2007? Theoretically, I place this research in the context of labour market structures, and individual and establishment level patterns of action in labour markets. I place possible influencing attributes on three levels of social reality and, empirically, tie in influencing factors as follows:

1) *National economic and social structures*, such as the restructuring of Finnish industry, changes in the size and compositions of company organisations, and rising levels of education in Finnish labour force. At

the structural level, I also include welfare state institutional settings and national legislation. Furthermore, the structural level incorporates local labour market indicators. Hypothetically, in changing labour markets, the economic cycles and institutional features may also influence the change of tenures.

2) *Middle level explanations*, such as corporations and enterprise actions in relation to their labour force and their economic situation. Enterprise actions may change according to surrounding economic contexts or in relation to labour demands. Also, at the firm/company level there exist features of internal labour markets, as well as patterns of social action and organisational norms, such as bureaucratic rules.
3) *Individual level* explanations, such as the attributes of individuals that influence their possibilities for action in labour market. Hypothetically, individual determinants of action may change their influence in relation to institutions and enterprise actions.

The philosophical and sociological adherence of this research is built around the tradition of social critical realism; critical realism emphasizes the research of change and the social mechanisms behind the change. In this research tradition, the phenomena under investigation are seen as emergent constructs that may change in time. They are situated at different levels of social reality, but, at the same time, are connected by differing social mechanisms. The change may occur only at one level of society, or it may cumulate to other levels, as well. The levels of social reality are seen as being interrelated and interlinked; however, social change and levels of social reality are linked differently with time. The changes in time, their time bound patterns, and notions of change may also influence the overall analytic understanding of the phenomenon.

The ongoing and contradictory scientific discussions of change in labour market structures and functions are divided into paradigms, where argumentation is often generated from differing empirical data. Since the profound factors behind this change have been linked to large and general phenomena, and also, to very narrowly conceptualised factors, it has been rather hard to analyse the relationship between them in detail. There are difficulties in linking the frames of reference in empirically convincing ways. My data is from a longitudinal register base from Finland for the years 1986–2010. It is a follow-up register on individuals which is linked to employer registers. It includes a sample of 1/3 of working aged persons in Finland, where 1/3 of the incoming labour force, both those who turn 16 and immigrants, are added to the basic sample annually. This data has 159 variables yearly, including a multitude of social-economic data on individuals regarding their employment, incomes, education, family situation, housing, and more. Individual level variables are combined with the annual accounts of employer establishments. Thus, the data enables the analysis of three levels of social reality and labour markets.

Next, I will take a look first into the sociological theorization of how social change may be explained and understood. In particular, I will create a theoretical picture of how change in employment stability may be sociologically analysed. I will then present scientific discussions and empirical definitions of employment stability, mobility, and transitions in labour markets. I will explain how matching process, labour turnover of firms, and individual employment transitions are all linked together. The key purpose of these chapters is to understand what the main empirical factors connected to employment stability and work tenures are at different societal levels, between the levels, and the possible social changes within them. After this discussion, I will move on to explaining the methodology of this research, discussing the data used and its benefits and limitations in relation to the statistical methods used, and also in relation to social change and time in society. Finally, I will present the actual data analysis, results, and conclusions. In the empirical part of the thesis, I will show how employment stability in the Finnish private sector labour markets has changed during the period of 1991–2007, and how different social levels have had an impact on employment tenures. I will delineate the firm level from the individual level and see how much the firm level overall has had an influence on these perceived changes in labour markets. Secondly, I will describe and explain the new structure of Finnish private sector employment stability with the help of delineating the changes with two types of exits from employment: job-to-job transitions and job-to-unemployment transitions. Finally, I will discuss the application of the results to international scientific discussions of employment stability and flexibility, as well as how the Finnish labour market has changed and what implications it has for Finnish society.

In general, I assume that labour market structure and functions have always included a dynamic composition of stability and mobility. Numbers of job matches are broken down each year and new ones are formed, yet at the same time, a certain number of jobs last continuously for a long time. This labour market structure of continuous movement, balanced with stability, makes the labour market quite an appealing social structure. In this research, I target my efforts to empirically and theoretically uncover, comment, and reflect upon the paradox between stability and flexibility in post-industrialized society. Because labour markets are tightly connected to social structures, we will be facing some radical changes in them if flexibilisation in labour markets is truly occurring. Economic and political ideas are connected to the labour allocation process; institutional measures try to balance social development that might be endangered by growing inequality as firms and organisations are dependent on a stable workforce. Furthermore, individual actions, family structures, life decisions, and feelings of uncertainty or trust are tied to this phenomenon. If this balance – between movement, stability and the structure of industrialized societies – is in transition, it will have major implications for our entire society.

2 Theoretical Approach

2.1 EMPLOYMENT STABILITY AS A SOCIAL PHENOMENON

The basis of this research is that the employment stability is a social phenomenon that may be called as social fact (Durkheim 1966). I base this argument in empirical research on employment stability. In practice employment stability presents itself as an extremely constant and recurrent institution that has similar tendencies throughout the Western industrialized labour markets. It also has similar linkages to other labour market factors throughout the Western labour markets. In spite of national institutions the same phenomenon known as employment stability is present in every national labour market. Besides the empirical foundation of employment stability, in the sociological theoretical chapters of this thesis I will deal with the emergent nature of the phenomenon of employment stability.

2.1.1 General Tendencies of Employment Stability

In industrialized societies, there are three major empirical results about employment stability. *First*, long-term employment relations are common. *Second*, most new jobs end early. And *third*, the probability of a job ending declines with tenure. In general long-term employment has been prevalent in labour markets and this finding is consistent throughout the Western world, in different societies and at different times of industrialized society (except at the very beginning, in the formation period). However, of all new employment relationships roughly half end during the first year. The proportion of the tenures ending during the first year differentiates between societies, but the basic phenomenon is found in all societies and at all times during the industrialization era. But of those who survive in employment more than one year, the probability of the employment ending declines the longer the tenure becomes. This finding is also consistent throughout different societies, but its magnitude changes slightly in relation to national institutions and economic trends.

In employment stability, which is measured by the duration of employment tenures, international comparison has found that inter-country differences are fairly constant over time. For example, OECD measurements find that contrary to widespread assumptions that labour markets are shifting towards less stability and more numerical flexibility, there is not any universal trend towards increased labour market instability. It seems that there has been no change in male employment stability, but only a slight lengthening of female tenures (Auer and Cazes 2000). However, if we compare different social systems and

their differentiation in employment stability, we should make distinction between North American and European labour markets. The US has in general and historically a much higher proportion of short tenured employment than in European countries. The difference is that in US the share of employment lasting over 5 years is about 40%, while in Europe it is in general 50–60% (OECD 2013; Bishop 1993, 339).

Average employment tenure tends to be counter-cyclical in relation to economic cycles. It diminishes in upswings of the economy and increases in downturns. Thus, the reduction of voluntary employment termination is higher than the increase of dismissals during downturns (Boeri 1996; ILO 1996, 2000). However, this effect might be due to data biases from cross-sectional measurements, when in upturns there are more new jobs with zero tenure and less lay-offs. The resulting information is then an equation of these differing features (see also Auer and Cazes 2000). However, it appears that when individuals have enough confidence to leave their jobs, and if they at the same time benefit from institutional protection during their transition to other job; they are less locked in to their current employment relationships and they are more mobile in labour markets (Cazes and Tonin 2010).

Employment tenures have been studied in relation to major labour market indicators, such as gender, age and industrial differences. In general male workers tend to have longer tenures than female workers, except in the Nordic countries. The duration of tenures rises sharply with age and there is a slight change in this trend. The tenures for the youngest age group of 15–24 years old has decreased at least in Belgium, Denmark, Finland, France, Germany and Greece during the 1990s (Auer and Cazes 2000). Higher-skilled white-collar occupations tend to have the longest tenures, while semi-skilled and unskilled occupations, as well as low-skilled white-collar occupations, tend to have short tenures. Tenures also vary considerably by industrial branch as the longest tenures are found in electricity, gas and water supply and in public services, and the shortest are found in hotels and restaurants. The degree of dispersion of tenures by industry and occupation is rather similar across countries and the distributions shows only little change over time (Ayer and Cazes 2000). Furthermore, it is generally hypothesized that tenures should be longer in large establishments. However, the empirical results of this phenomenon are mixed. In some data the influence is varied, and in others the hypothesis is abandoned, while sometimes it gains support (Bookmann and Steffes 2010; Auer and Cazes 2000; Bellman, Bender and Hornsteiner 2000; Burgess, Pacelli and Rees 1997).

There are no general and systematic signs of shortening of employment tenures in Europe. According to OECD records, the failure rates of new job matches from 1 year to two years stayed roughly the same in Finland during 1985–1998, being about 45% (Auer and Cazes 2000). According to Eurostat records, the average job tenure in Finland has slightly grown during 1999–2006 (from 9.8 years to 10.0 years). A slight decline is observed in Italy, Spain and

Sweden, and Poland. Yet, the averages should be studied in relation to the age structure of the labour force, since the younger people are the less time they have been in the labour force. Eurostat records show, that there is a slight trend towards a decrease in job tenures among young workers (aged 15–24) in many European countries (Cazes and Tonin 2010). Thus, once age is taken into account, 18 out of 20 European countries in the sample have some reduction in average tenure (Cazes and Tonin 2010, 264).

Regardless of the average numbers in job tenures there is much discussion on whether the tenures have actually been declining for some particular labour force groups. Especially in the North American context the large amount longitudinal statistical data available has allowed researchers to uncover possible changes in employment stability. Diebold, Lee and Weinbach (1994) found that in general the tenures in United States have stayed the same, but the tenures of high school drop-outs and high school graduates were declining in relation to college graduates in 1980s. Farber (1999) has then studied the changes in tenures in the US during the 1990s and he finds that first the prevalence of long-term employment has not declined, but the distribution of long-term employment has changed. Low-educated male workers have experienced declines in their tenures, but at the same time female workers have had prolonged tenures. These two instances then balance each other. However, these tendencies might also be due to differences between private and public sector labour markets (Farber 2008, 23). These effects might also be hidden in that the shortest employment tenures have increased among the young or those who are laid-off from their life-time employment positions. Farber argues that in the US male workers in their thirties have become less likely to settle into long-term jobs. This effect is still strongly pro-cyclical as this the churning between two or more jobs is stronger in good economic times and lower in bad economic turns, when people do not change jobs so easily. On the other hand, there are results indicating that the job stability is declining in the US. Swinnerton and Wial (1995) found that there has been a gradual decline in job stability in the 1980s. Other data has shown relatively high displacement rates due to slack work, abolition of positions or shifting jobs, and of plant closures during 1993–1995 (Valletta 1999; Kletzer 1998). There is also an upward trend in involuntary job separations for males with strong labour market attachments during 1962–1992 (Boisjoly, Duncan and Smeeding 1998; Valletta 1999). Some scholars still argue that there have not been any changes in the duration of tenures (Jaeger and Stevens 1999; Neumark, Polsky and Hansen 1999; Gottschalk and Moffit 1999). It might also be that job-to-job transitions have increased, but the number of job-to-unemployment transitions has decreased, as shown by Steward (2002).

In European liberal labour market countries it seems that the generation of young workers is divided in two: (1) highly-skilled in stable employment, and (2) low-skilled in fragmented careers (Fenton and Dermott 2006.) In Sweden the active labour market measures taken are predicted to have influenced higher

exit rates for the older workforce during the recession of 1990s (DiPrete et al. 2001). DiPrete et al. (2001) also note that France seems not to have the standardly presumed insider-outsider labour market drawn from the bases of welfare state theories and conservative country delineation, instead having quite high entry and exit ratios.

Thus, I conclude that the basic phenomenon of employment stability is quite constant and the changes in it have depicted mainly changes in the general economic situation. The differences found in employment stability mainly present the industrial differences or labour force segment differences. However, this variation is also longitudinally and structurally quite stable. Still, the research results of changes in employment stability are rather varying. The wide ranging research results do not form any uniform nor coherent viewpoint of whether employment stability has declined in Western labour markets. Rather, the results create confusion. It is impossible to draw any conclusions about changes either in employment security or about the possible changes in Finnish labour markets in relation to the phenomenon. One source of this confusion is in no doubt the differing data. The definitions of tenures might differentiate and the inclusion of co-founding factors is extremely varied. Based on the previous international research it is impossible to draw any reliable conclusions about the situation in Finland. Further, the research seems to be contradictory in the results of employment stability and employment transitions.

In this study, I have a dataset that is not only truly representative of Finnish society, but further; it includes all the vitally important co-founding variables of this phenomenon. I can include much of the features that have only partly been studied in different research settings internationally. In addition, I am able to study this phenomenon in relation to transitions and draw together the frames of employment stability and transitions. In this research I will be able to include not only the age influences on the tenures, but also industrial branches, individual job resignations and dismissals; and furthermore, the differences between differing labour markets (cities and rural areas) and also different labour market segments.

2.1.2 Employment Stability in the Frame of Sociological Theories

In this work I aim to describe the structural changes that have happened in Finnish labour markets in the private sector. Since labour markets have both social and economic determinants and mechanisms and economic research has found important systematic and continuous empirical patterns of employment stability, I will aim to include both of these traditions in this research. Economic analysis is mainly presented in the empirical description of the phenomenon of employment stability, but I will aim also to describe and analyse employment stability as a sociological and social construction. Sociologically, I approach the concept of labour markets through the idea of the actions of individuals and organisations. Theoretically, I link this research to social scientific theories of

change. I want to see which levels of social reality, structural changes, firm level patterns of action or individual level patterns of action, influence the changes most in labour markets. The notion of linkages between these levels and their empirical presentations as variables are also important to our theoretical understanding of social change.

In labour market research, as in all other areas of social research, micro behaviour or action is defined as something happening at the individual level of action as an individual psychological process or individual behaviour or action. Macro level behaviour or action then is defined as something happening at the level of populations, as social structures. Profound to all macro issues is that they put weight on coercive structures in determining individual action. The situating of employer organisations and employee collective action (labour unions for example) is more difficult. Some situate it at the micro level of labour markets, other see it as something like a meso-structure and others prefer to refer to it as a macro structure since it may create coercive demands for individual actions. By these delineations, labour market research may be divided into individualistic or collectivist research lines that take differing positions towards levels of social reality. Individualistic theories acknowledge that there do appear to be extra-individual structures in society, and they certainly recognize that there are intelligible patterns. However, these patterns are seen as results of individual negotiations or actions. It is argued that structures are carried by individuals and it is individual action that produces these structures. Individuals then do not carry structures inside them but they follow or rebel against the social order according to their individual desires. According to collectivist theories, each individual actor is pushed in the direction of a pre-existing structure. The social order exists as much inside as outside the individual. The order or structure of the labour market is not a product of purely this-instant consideration.

For research dealing with different levels of social reality, an important question is also what kind of concepts these dimensions are dealt with. It might be wise to decide, whether I wish to take a closer look into theories (for example like Smelser 1982) or whether my interest lies more in the sphere of empirical research and maybe levels of social life (Alexander 1998; Coleman 1990; Collins 1981; Ritzer 1981). Understanding the differences between these approaches is important since an empirical approach often emphasis that the links between levels should also be understood in a theoretical sense. But the theoretical approach tries to create an analysis of these links, even though it might not be possible to gain any empirical proof of the links. It also creates ambivalence in understanding the levels; they could be understood in an interactional way, when the levels are dealt with as something independent (but interactive) of one another, or they could be seen as one social whole and the levels lie inside that totality. Theoretical insights also attempt to combine different theoretical schools, and wish to include both hermeneutical and structural or functional sociology.

Thus, both ends of the spectrum, extreme micro and extreme macro, have been seen as being impossible to sustain at the same time in one piece of research. The debates between these lines of theorizing and one-sidedness of both, also made it impossible to carry out research between them (see also Alexander 1998, 163). But for now it is understood that neither macro nor micro theory is satisfactory in understanding social change, but we should be able to create a full understanding of societal action in order to map the changes. Structure and action must be interlinked. In sociological theorizing the integration of micro and macro theories has been debated since 1980's. Some of these theoretical considerations have stemmed from the micro to macro perspective (for example Coleman 1990; Collins 1981), whereas others stem from the macro to micro issues (for example Alexander 1998). Lately the interest has lain in the theories that aim at giving the two dimensions same importance (for example Archer 2000).

In the philosophy of social science two fallacies of action and structure are embedded in the old debate between methodological holism and methodological individualism. Currently, these lines appear to be followed by a new debate between structuration theorists and social realists. Despite the notion that these two schools tend to be in contradiction, the central task of both is to advance a framework which links 'structure and agency'. There are some differences between the 'duality of structure', advanced by structurationists, and the 'analytical dualism', defended by critical realists. Archer (2000, 1) sees that these schools will continue to divide practical analysts of society.

Next, I will look into both these traditions and fit the notion of employment stability in them. This way I will determine the phenomenon of employment stability and its place in the social world. Moreover, this situating of the phenomenon in the social world defines its possibilities for change and, further, the possible overall impact of its changes on Western labour market and social systems.

Analytical Dualism

Empirically the division between micro and macro may be impossible. Some scholars argue that micro and macro cannot be referred to empirically because they are emergent levels, understandable only through analysis. This means that every empirical phenomenon entails in itself both levels. They also exist in relation to one another, so what could be defined as macro in some situations, is micro in another, or vice versa. For example, in my thesis this means that companies form a macro structure in relation to individuals and at the same time they are agents on a micro level in relation to labour market or local economic structures. Moreover, local economic structures or labour markets, individual behaviour in labour markets, and organisational actions are all phenomena that include in them all the levels of analysis. For example, recruitment in companies includes the actions of individuals in searching for

work and macro structures of culture and social norms (such as discrimination). Emergence means that in analysis the same phenomenon can be seen in different ways so it has different interpretations, which all still convey the same profound understanding (see also Archer et al. 1998).

In the creation of theories for combining micro and macro elements, many scholars have proceeded by dividing the levels of social reality into two dimensions. In the horizontal dimension the subjective-objective continuum is often put, for example the phenomenon might be situated in the psyche of the individual or outside an individual. A phenomenon might be a social pattern of behaviour or inherently a feature of social groups. Sometimes, the focus of the research may be objectively describable as an organisation or it might be situated in the minds of individuals as values or consciousness. In this framework, the dimensions of micro and macro, or action and order, and the depth of the phenomena are vertically are situated (Ritzer 1992; Alexander 1998) (Figure 1).

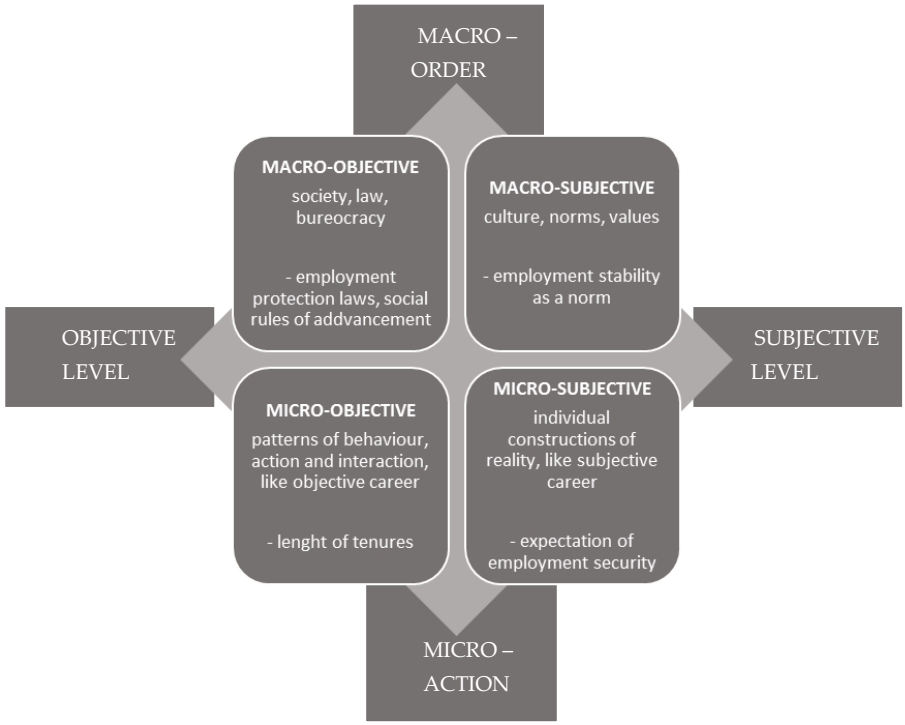


Figure 1: Two dimensions of social analysis

If we frame these two dimensions in labour market research, I first position, for example, solidarity and division of labour (Durkheim 1964), Finnish ethos of work (Kortteinen 1992), the spirit of capitalism (Weber 1970) and the demand

for economic rationality in the sphere of the macroscopic, the ruling level, but situated in the internal realm of the individual mind. Employment stability may also be situated at the macro-subjective level, since it may be seen as a social norm that is the framework behind labour legislation, social protection institutions and individual notions of a good life. These manifestations of Western industrialized social and economic systems are the foundation of societies' norms and values. They stir the action of individuals. On the microscopic level of these grand social and cultural structures I situate the individual perceptions and understanding of a good life. These are the ways that individuals construct their lives. It is the internalization of social structures. Thus, the notions of rising individual insecurities are positioned on a micro-subjective level, and these individual level insecurities are the manifestation of employment stability at the micro-subjective level. They reflect both the individual level strivings for a secured life and at the same time the individuals have a growing need to negotiate their place in the surrounding structure of new labour norms and their place in the labour market.

The phenomena situated within individual minds also need some representation in objective reality. The representations of the empirical depicters of these structures are on a macroscopic level, for example, that we can have notions of laws and bureaucratic rules, or other social facts that we may detect with research. These social facts govern the actions in the labour market. Thus, the manifestations of employment stability on a macro-objective level are the labour laws, social protection institutions and system of bureaucracy, for example. On a microscopic level these objectively noticeable representations of structures include patterns of work search behaviour, individual job stability/mobility or organisational usage of the labour force. These patterns are products of individual agency and at the same time products of structures. In this research, I will deal with individual tenures in one organisation, the individual career in particular establishment, as manifestation of employment stability in micro-objective level.

Micro-macro theories of sociology often point out that there are not rigid lines between these different social realities, rather each blend imperceptibly into the others (Ritzer 1981, 63–69; Hedström and Bearman 2009; Hedström and Ylikoski 2010). On the other hand, it is important to make those differences visible since there is a fine line between inter-relating the levels and failing to keep them distinct. If this happens, research slips back into an undifferentiated view of the social world. A phenomenon may exist in many different spheres simultaneously, but it is important still to keep the spheres distinct (Ritzer 1981, 207–208). It may also be that all social phenomena are either objective or subjective (Ritzer 1992). They cannot be both at the same time. The same phenomenon exists on one level of social world, but it has some other form or it is created in another way on other levels. This is the emergent system. In this research, the emergence means that the phenomenon of employment stability

may be empirically and/or analytically found at every level of society. However, it is not the same construct in every layer; rather, it has differing manifestations, which are in a dialoguous relationship with each other. Possible changes in the phenomenon may occur only in one level of social reality, and then cause disturbances in relation to other realities. For example, if the micro objective manifestation of employment stability – the individual career in organisations – is in contradiction of individual expectations of employment stability, or the labour laws, contradicting the expectations. Furthermore, labour law may be in contradiction with the basic social norm of security in society and so on. If such a contradiction emerges, the other social realities may via dialoguous negotiation change similarly or they may resist the change (Elster 1998; Gambetta 1998; Hedström and Swedberg 1998).

This research is situated mainly in the objective sphere of the labour market and social world. It focuses on the interaction between objective macro structures, such as the general economic situation, or the educational and age structure of the labour force in national labour markets. It also notices action patterns at the firm level partly as objectively observable characters such as annual turnover, but at the same time it acknowledges the possibility of unobservable firm level actions. The firm level action patterns may delineate between different firms in that they occupy differing social norms inside their organisations. These norms may include things such as the differing attitudes towards bureaucratic advancement systems, or varying attitudes towards different genders or age groups. These socially driven action patterns are in this research referred to as the (unobserved) internal labour markets of firms.

Furthermore, this research aims at delineating the firm level influence on the durations of tenures from individual level action patterns. These individual level action patterns are seen as being socially divided between differing social groups. The question is how much the firm and structural level influences the creation of these social groups with differing magnitudes of employment stability in the labour market and thus in society. Changes in tenures may cumulate straight from structural level changes and individual and firm level actions may be merely adjusting to those changes. However, it might be that the individuals or firms change their actions unrelated to the changes of the structural forces.

Structuration

We may define changes in Western labour market stability system with theoretical lines of structuration, also. Antony Giddens takes an empirical starting point by stating that the basic domain of social research is neither the experience of individual actors nor the existence of any form of societal totality. The point is to study social practices ordered across space and time. This is the structuration of the social world.

In structuration, it is stated that human social activities are recursive. They are continually recreated by social actors via the ways that human beings express themselves as actors. This is possible because of reflexive 'knowledgeability' in human action. To be a human being is to be a purposive agent, who both has reasons for her activities and is able to elaborate discursively upon those reasons. But terms like 'purpose', 'motive' etc. have to be treated with caution, since, their meaning is often associated with hermeneutical voluntarism. This, in Giddens' view, separates these concepts from context, time and space. In his view, human action (and purposes, motivations etc.) occurs as a *durée*, a continuous flow of conduct. Purposive action is not composed of an aggregate series of separate intentions, but it is a process where an individual agent reflexively monitors his own and others' behaviour in social time and space contexts. He rationalizes and attempts to understand his own reflections in relation to his previous notions and understanding. Giddens' concept of the 'stratification model' of the acting self involves treating the reflexive monitoring, rationalization and motivation of action as embedded sets of processes (Giddens 1984, 2–5).

In Giddens' structuration theory, structure exists only in its instantiations in such practices and as memory traces orienting the conduct of knowledgeable human agents (both conscious and unconscious). They are marked by the seemingly 'absence of subject'. They can be hierarchically organized in terms of a time-space extension of the practices they recursively organize. The most deeply embedded structural properties (seen in the reproduction of society, in the continuity of society) are structural principles and institutions. This does not prevent the structured properties from stretching away beyond the control of the individual actor. Nor does it compromise the possibility that actors' own theories of social systems may reify those structures. Giddens explains this idea with the duality of structure. Structure and agent should not be separated and dealt as independently given sets of phenomena, rather in his view they both represent the duality of structure. Structure has no existence independent of the knowledge that agents have (Giddens 1984, 16–27).

The actions and action paths must be located in a certain position; they are situated in time and space. The structure – representing institutionalized features of social systems – emerges from regular, routine features of actions. Even though action can be routine it has to be worked out continually by those who sustain it in their day-to-day conduct. These settings are locales that refer to the use of space which is essential to specifying actions contextually. Locales may range from being rooms in a house to factories or to towns or to nation states. But locales are typically internally regionalized, and those regions are of critical importance in constituting the context of action and interaction. Context then connects the most intimate and detailed individual components of interaction to much broader properties of the institutionalization of social life. Regionalization is not merely a locationalisation but it is a time-space zone of

routine social practices. Context is inherently involved in the connection of social and system integration (Giddens 1984, 68–73, 116–119). Connections between social and system integration can be traced by examining the modes of regionalization which channel the time-space paths that the members of a community follow in their day-to-day activities. Such paths are strongly influenced by, and also reproduce, basic institutional parameters of the social system in which they are implicated (Giddens 1984, 142–143).

From the perspective of structuration in this research, the individuals are agents, who perceive their surrounding and context. Agents have knowledge of the past and current and they base their actions on that knowledge. They also reflect the possible outcomes of their actions in the future. They are located in the context of Finnish national labour markets, which is then divided into smaller units and differing temporal contexts – local labour markets, employer organisations, and family situations etc., which are also situated in differing times. In this research I will divide these contextual times into economic upturns and downturns and into individual lifetime spheres (such as the time of studies, entering labour force, primetime employee periods and ageing). The societal time level (economic upturns and down turns) offers differing opportunities for individual action, also depending on the individual time-space.

The structure of the labour market is a creation of a continuing restructuring process between contexts, temporalities and individuals. Employment stability and the possible changes it may undergo, as well as its importance and the meanings that are given to it individually and collectively, all depict changes in contexts, times and locations. In industrialized society employment stability became a social institution or a norm that was supported by individual and organisational actions. This institution was and is continuously being observed by individuals (also individuals in organisations) and they reflect it upon their own values, knowledge, thoughts and actions. Upon those reflections the individuals either recreate the structure of employment stability or they change it. This process is more than just an aggregation of action because the social norms and individual reflections of them create alternations in individual action.

Employment stability becomes a dynamic flow of change and reinterpretation. For example, when thinking of resigning from a job a person may reflect on a stream of bad past experiences even though the situation in the present might be good. The person may also focus on the future and on the risks associated there which he may acknowledge in reflecting on the past experiences. Also, he may ponder between his different life phases of home and work; and may ponder his values in relation to those and which one he wants to give more importance to. The actual decision and action of resigning from a job is then a balancing action between past experiences and the anticipated future – with the risks that the future involves – and the present, but also with values in society, norms and structures. For example, previous experience of unemployment or other hardships related to income may direct the individual

to seek more security and perhaps even account for not being willing to take the risk of changing job (for more about the effect of unemployment in structural changes see Gallie and March 1994).

In the same way, organisations make decisions about recruitment and dismissals. They ponder their economic situation in the past, present and future, and they consider their organisational structure, their need for new skills etc. The experiences of firms about their economic situation have an effect on their behaviour and choices that the organisational level makes. Furthermore, national institutions regulate these actions. There exist also other contending norms and institutions in industrialized society. In this research the interest lies in the contradiction between the norms of employment stability and economic rationality. In the industrialized era these norms directed the action in the same direction, but once competitive rules gained more power in the creation of national economics they were in contradiction with each other. In society there are always differing and even contradictory institutions that maintain dialogue or compete with each other in individual minds. The labour market becomes a socially constructed and politically mediated structure of conflict and accommodation among contending forces (Giddens 1981).

2.1.3 Policies Towards Employment Stability

From the theoretical constructions of society ideas of differing social systems may be outlined. Western societies are structured and managed in differing ways and the most broad outlines have been made in the styles of societies' governance. We may delineate between liberal and continental systems or between Nordic, continental, liberal and Latin-rim welfare state models (Esping-Andersen 1990). The differences between these models are in many ways down to how the societies aim in advancing their populations' possibilities for action, and what norms are placed at the centre in the societies and how the national institutions then serve as a means of securing these norms. These differing systems try to incorporate economic value creation and other societal values in slightly different ways, and they place different emphasis on individual action and free market functions. However, the notion of globalized economic competition has created a similar urge for these national systems to reflect upon flexibility in society and especially in the labour market.

The discussion on flexibility has been one of the main topics in social sciences in Europe throughout the 1990s and 2000s. In the 1980s, European labour markets were argued as being too strict in their abilities to react to recurring common shocks, such as growing oil prices and the slowing down of the economic productivity. The stabilizing national institutions and mechanisms were indicated as being the institutional bases for the European labour markets' inability to re-employ the unemployed (Layard, Nickell and Jackman 1991; Grubb and Wells 1993; OECD Jobs Study 1994; Nickell 1997; Bertola 1999; Blau and Kahn 1999; Layard and Nickel 1999). These difficulties then led to European

wide national politics placing attention on the supply side of labour markets and to a generalised understanding at the European level that the welfare state institutions were the primary cause of the persistent unemployment. There was especially a need to decrease the cost of low skilled labour (Blanchard 2005, 37). This led to a consensus that competitiveness in a global economy requires flexible labour arrangements, such as limitations of protection against dismissals, the ability to place long-term workers alongside part-time workers or a temporary workforce, and move from national level union bargaining to company level bargaining (ILO 2000; similar demands for diminishing inequalities Jamet, Chalaux and Koen 2013). The aim of these adjustments was to give employers an opportunity to expand and reduce their workforce in accordance with product demand. There were some cautious or critical stands noting the benefits of the Nordic welfare model and delineating differing types of active labour market measures (Calmfors 1994; Korpi 1996).

It seems that in European labour markets flexibilisation was mainly done for the sake of employment security instead of increasing flexibility in wage setting. While wages were adjustable to shocks in the United States , in European labour markets it was the tenures or working time that had to adjust (Maurin and Postel-Vinay 2005; DiPrete et al. 2006; Barbieri 2009, 621). Continental European countries, such as France or Germany, especially did not welcome wage inequalities as easily as for example as the United Kingdom or Ireland, but they could accept more inequalities in employment security. In continental Europe, the adjustment to macro-economic shock has in some part been implemented with rising wage inequalities and falling low-skilled real wages, but also more notably, through low security jobs and the allocation of low-skilled workforce to these jobs. Furthermore, the southern European countries more easily tolerate job insecurities (Maurin and Postel-Vinay 2005, 241). This has led to rising inequalities in job security in these particular countries. DiPrete et al. (2006) see this as the reason the skill component has become important predictor of job security in Europe; and this also equates with growing returns on skills (or education) in terms of employment security attached to jobs. These returns are then parallel to the US development regarding returns to wages (DiPrete et al 2006; DiPrete et al. 1997). So the rising inequalities on both sides of the Atlantic is due to the same phenomenon, but directed differently by the institutional arrangement in each society (for example Barbieri 2009, 622). DiPrete et al (2006) argue that in both societies (in Europe and in US) the change in these inequalities has been created by institutional changes. However, on the contrary Boeri (2011) argues that the institutional changes were targeted mainly at Europe, and inside Europe the reforms were done with differing emphasises in different societies. He sees that these reforms, despite all, had a converging effect on the European labour market.

While flexibility was set as a target for many welfare state institutional reforms, there was confusion of what flexibility actually means. Most basic

conceptualizations divided flexibility into three models: (1) (numerical) functional flexibility, (2) temporal flexibility, and 3) wage flexibility. Functional flexibility refers to the ability of work organisations to re-organise work tasks so that production inside the organisations is the most efficient. Temporal flexibility refers to the possibility for the employers to adjust working times and hours in accordance to the need of production, but also in accordance to the needs of employees. It was noted that the flexible arrangements might be a benefit for the worker as well, if it would be possible to organise the working hours in relation to other individual life spheres. Wage flexibility is the possibility for a firm to adjust wages instead of working time or tenures of employment. Yet, all these types of flexibility do not necessarily lead to insecurity for the worker. Temporal flexibility has mainly been addressed by part-time working contracts, but the lion's share has been implemented via numerical and functional flexibility.

Problematisation of European labour market functions and demand for higher flexibility in labour markets led to deregulation of both so-called non-standard as well as typical employment relations. This was done mainly by altering employment legislation in relation to dismissals, as well the modification of unemployment benefits and other conditional incentives, and the addition of active labour market measures. However, deregulation was not carried out on a general level of the European labour market. The regulation of the core of the labour force, mainly male and unionized, was left largely unchanged (Esping-Andersen and Regini 2000). This flexibilisation of the labour market was actually a process of flexibilisation in the margins of the labour market. Some scholars argue that these changes were a result of the power play between strongly established (labour unionised, aged workers) and the new cohorts of the workforce, with the winner being the established groups. Others state that this is a result of political power plays in Europe and neo-liberal power politics (Saint-Paul 1996; Boeri 2011, 1187, 1190; Barbieri 2009). This process has also been called as partial and targeted deregulation (Esping-Anderssen and Regini 2000) or a partial reform strategy (OECD 2006).

This partial deregulation and flexibilisation has led to a two-tiered labour market in Europe, one of the good employment security and the other for flexible arrangements. The flexible arrangements mainly concern young people, women, and new entrants to the labour market, as well as immigrants, and unskilled workers. The result has been a division between strongly segmented insider-outsider labour markets in Europe. This new division then leans on new institutionally based inequalities in European societies. However, Boeri (2011), for example, argues for a more theoretical economic understanding of what effect these dual labour markets then will have in the future on the functions of labour markets.

Inside Europe, national states have placed differing emphasis on the policies of deregulation and four types of deregulation systems can be separated: (1)

liberal or Anglo-Saxon, (2) familistic or Mediterranean, (3) corporatist or Continental European, and (4) the flexicurity or Nordic model (for example Boeri 2011). These models differ in how they incorporate the national social security institutions and in what instances the flexibility occurs. Further, they have different implications for the national social structures and inequalities inside national labour markets. Barbieri (2009) sees that the major trade-offs have been made in the relationship between cohorts, wage and insecurity. The Nordic model falls in this categorization in the flexicurity model, where both high degrees of flexibility and high levels of social protection were targeted. The discussion on flexicurity is in line with the discussion about transitional labour markets (Madsen 1999; 2002; Madsen, Bredgaard and Larsen 2005; Schmid 2006; Muffels and Luijkx 2008; Goodin et al 1999.) Muffels and Luijkx (2008) see that it is possible to gain the best results with a model that combines a high level of flexibility and employment security at the same time. They are mutually reinforcing. However, they also warn against the insider/outsider scenario, where strict regulation protects the insiders too strongly creating dual labour markets.

In the Globalife project Blossfeld et al. (2006a, 2006b, 2006c, 2008) made a distinction between open and closed European labour markets. Open ones are those that do not have high employment protection but have more flexible employment systems, whereas closed ones have strict employment protection legislation and strong internal labour market mechanisms. Of these two, the closed system gains employment flexibility at the expense of the young, who have not yet gained their position in employment, and at the expense of women, who are forced into an atypical labour market and fragmented career development, and thirdly also at the expense of older workers, who are pressured to retire. These social groups serve as a back-up labour force and they are hired only temporarily. In relation to Esping-Anderssens' (1990) welfare state regimes typification, Blossfeld et al. identify the open labour market systems as liberal and post-socialist models. Additionally, social democratic countries belong to an open system, since they tend to have flexible labour markets, but at the same time they have lots of social protection for mid-career brakes (flexicurity model). The conservative and familistic welfare regimes tend to have closed labour market systems. This scenario might have detrimental effects to the societies under such a structure. The instability and insecurity of employment for young people might lead to other socially difficult problems. The young are at the same time founding families and these processes might be endangered.

I draw together these two delineations of open and closed labour markets and the division of flexibility via inequalities in salaries or in employment stability (Figure 2). I also situate in the picture the sociological theoretical notions of order and action.

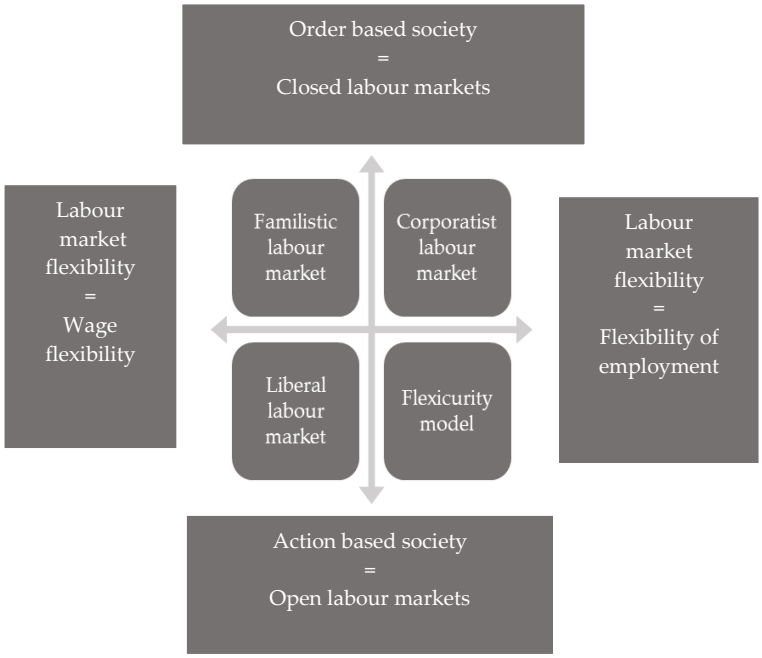


Figure 2: Stability and flexibility systems in Europe
Source: Author's modification of Boeri 2011; Barbieri 2009; Blossfeld et al.2006a, 2006b, 2006c, 2008; Ritzer 1992; Alexander 1998.

The flexicurity model might be situated in the action sphere, since it targets more individual self-management of employment mobility and stability, as the employability concept suggests. Flexicurity substitutes life-long-employment or the internal labour market as sources of employment security with employment security offered by sc. employability. Employability is the capacity of worker to be re-employed, and it is tied to general education, possibilities for life-long learning, multiskilling etc. (Collins 2005). Employability is also discussed in careers research, and here the agency perspective on career mobility focuses on a person's qualities shaping his or her career. These individual qualities may be understood as being one type of capital, an individual's movement capital (Trevor 2001). Movement capital encompasses the skills, knowledge, competencies, and attitudes influencing an individual's career mobility opportunities. Lane (2011) calls this employability an individualistic strategy to find and keep jobs. It is a form of individualised 'career management'. Forrier, Sels and Stynen (2009) claim that the extent to which someone with a specific movement capital encounters opportunities or runs into risks in the external and internal labour market is affected by structural factors or the structure of risks and opportunities. This structure of risks and opportunities is characterized by

(1) the demand in the internal and external labour markets and (2) mechanisms determining the match between the supply and demand in these labour markets. Several mechanisms determine which (types of) individuals will be offered the work roles available.

In research for example Allvin et al. (2013) found that 47% of Swedish jobs can be characterized as flexible. It seems that in Sweden, deregulation is mostly tied to well-paid, male-dominated, white-collar, knowledge economy jobs that are mainly located in large cities and in the expanding service sector. From this notion they conclude that almost half of the Swedish workforce is subjected to working in conditions of no eligible requirement for self-government. Almost half of the workforce needs to recognise and manage their own employability in labour markets. Further, there seem to be some form of generational change in the labour market that implies new agency in those markets. Research has rather new evidence showing that individual careers have become more fragmented than 20–30 years ago. For example, Nyhagen Predelli and Cebulla (2011) compared two different generations in relation to their labour market behaviour by using narrative interviews. Their conclusion is that indeed the younger generation is much more individualized in their decisions about labour market attendance than the older generation. Also, the younger generation are more aware of their agency in the labour market and the risks involved in their decisions. But it is not that self-evident how this agency is actualizing. Nyhagen Predelli and Cebulla (2011) speak rather about surfing than about agency. By this they point out that the labour market is very uncertain and the younger generation's reflections of labour market are flexible. They modify their action according to what they encounter.

These concepts embed the idea that when worker is more capable of job shifting, he/she will test his/her capabilities in the external labour market more and, thus, also bring new competition into the market. It is expected that this way the labour market will become more productive (Muffels and Luijkx 2008, 223). In sociological research it has been shown, how the hardest hit of these kinds of policies are the low-skilled, low status workers, who seem to be trapped in low-quality jobs resulting in poor stability and earnings, and this applies to the future as well. (Giesecke and Gross 2003; Blossfeld, Mills and Bernardi 2006c; Breen 1997; Scherer 2004; Booth, Francesconi and Frank 2002; DiPrete et al. 2006; Gangl 2003; Golsch 2003; Kalleberg 2000.) It also seems that temporary workers need to take more responsibility for their further training themselves and they get fewer opportunities to enhance their employability than permanent workers do. Thus, the employment security of the temporary workers is not fostered by the employer. Furthermore, on the job training is actually more oriented to building up job specific skills rather than targeted at the employability of individuals in the open labour market (Forrier and Sels 2003; Dolado, Garciá-Serrano and Jimeno 2002).

Gianelli, Jaenichen and Villosio (2009) argue that one aim of the labour market reforms in Europe has been to shorten the durations of first job contracts particularly, so that it would be possible to change job after the first one easily into one that has longer tenure (the stepping stone idea). This should then generate a trade-off between job opportunities and job stability. However, in their analysis they do not find such trade-off. It seems that this phenomenon has differing consequences in different societies. In Germany temporary working might serve as a stepping stone to a permanent one for men (Gianelli, Jaenichen and Villosio 2009). Men seemed to increase their employment stability with their second job. But for women there was a decrease in their job durations. In Italy there has not been any trade off, rather employment stability of the new entrants, and also later in their careers, seems to be decreasing. Additionally, in Sweden it seems that it makes no difference to the unemployed in relation to future job stability whether they are hired in temporary or permanent jobs (Swedish longitudinal Survey among unemployed) (Korpi and Levin 2001). For example Gebel (2010) found that in Germany a short-term period of employment at the beginning of a career has clear salary penalties and increased risk of temporary employment cycles. Whereas in the UK these disadvantages do not exist to a large degree. The penalties also appear to vanish in Germany in about 5 years into a career.

Furthermore, mainstream economics has now admitted that this partial labour market reform at the margins has long-term counter effects on the performance of the labour market (Blanchard and Landier 2002; Dolado, Garciá-Serrano and Jimeno 2002; OECD 2004, 2006; Demaret 2013.) This reform, where standard employment was kept under strict regulations, led to a situation where employers mainly recruit based on temporary contracts and are reluctant to convert them into permanent ones. In line with this thinking are notions that employers do not have a large commitment to workers anymore. For example Breen (1997) argues that the re-commodification of risks means that employers are not interested in long-term employment relations anymore and the risks are carried by the workers in the secondary labour market. Furthermore, employers are more willing to pay for the repeated training of incoming workforce. It is noted that this might have created a group of people which is represented in growing employment turnover and transition figures. They are possibly trapped into a precarious situation in the labour market. Furthermore, Barbieri (2009) fears for under-investment in human capital and wasting this way part of the production potential.

In the flexicurity discussion it is seen that insecurity creates a need for social protection (Rodrik 1997; Garret 1998). Anderson and Pontusson (2007) studied the link between welfare state social protection programmes and individual level attitudes to job insecurity. They find that welfare state policies on strict dismissal laws, high unemployment benefits and measures to improve unemployed peoples' employability do actively decrease both cognitive and

affective individual job insecurity. Similar results are found with ECHP data by Clark and Postel-Vinay (2009) with the distinction that strict employment protection laws decrease job security. Finnish flexicurity policies are lagging behind other Nordic welfare states in several respects. Unemployment benefits especially and social protection in general are weaker in Finland if measured per unemployed person. Despite that, the spending on labour market policy as a percentage of GDP is higher in Finland. Accordingly the labour market functions in Finland are also lagging behind other Nordic welfare states as the employment rate is lower, the poverty rate is higher, labour markets transitions are fewer and the market is quite segmented. On the other hand, the poverty rate of the employed is extremely low in Finland (Alatalo and Torvi 2009).

Thus, the new models of flexibility, and especially the flexicurity model, aim at adding individual possibilities for mobility and action in the labour market, at the same time they aim at maintaining the stability and social security in society. The notion of security or stability has to be replaced by new formulations of individual agency or employability that cumulate from the sphere of individual action. However, the counterbalancing result of this new governance structure might be that once the formal structural institutional barriers are lowered, the informal division of the labour force, its segmentation, may also be given room in society at the same time that individual agency is celebrated. It might actually be that once formal management is lowered the informal part of the social labour allocation system gains more foothold, thus creating inequalities between differing labour segments. This socially formulated structure and functioning of labour allocations might actually be as tight as, or even tighter than, the formal institution's regulative mechanisms.

2.1.4 Conclusions – Employment Stability as a Social System

Theoretically, I define that employment stability is an emergent institution that has its manifestations in micro, macro, subjective and objective levels of society. This research is situated in the objective sphere of the labour market, but it has analytical significance also for the subjective sphere of the social world. The differing layers of society are in dialoguous relation to each other and changes of one level may contradict the phenomenon of employment stability in other levels.

I include the structuration as one form of dialog between the levels. The structuration shows the way changes in one level are transformed into changes in other levels. However, this is mostly analytically depicted. The research setting and frame define how these interlinkages may be empirically detected. In this research the focus is placed on the objective sphere of employment stability, on bureaucratic order and on organisational and individual employment patterns in the view point of careers inside firms, transitions in employment, and in organisational usage of labour force. Which level of the objective social world has linkages to employment tenures will be analysed. If the aim was to

study how the normative subjective structure changes the research would have been framed so as to study the individual feelings and constructions of employment stability. Or if it was wanted to see how the subjective sphere of social world influences objective behaviour patterns, a frame would have been created, where the people's feelings and constructions of social norms are studied and how these internal negotiations then are turned into objective patterns of action. In all of these possible research settings the structuration would form the basis of how the duality of structure and agency are related to each other and how the changes are transformed from one social reality to another.

The social structure of industrialized societies is formed differently nationally. We may divide different typed systems in the Western world. These systems are historically, institutionally and socially constructed and they place different importance on slightly differing instances of this wholeness. The latest formulation of the Nordic welfare state institutional labour market system is the flexicurity model, where individual agency and mobility is targeted more than before. The formal regulative nature of social security institutions is lowered, and they aim that the new system would allow more economic competition in labour markets, and thus, supposedly, more productivity. In the flexicurity model, the strict normative structure of labour market organisations is lowered, but at the same time it is attempted to fill the resulting gaps in social security with some new social protective mechanisms, such as employability.

Even though individual feelings of insecurity have grown in Finnish labour markets, there is not enough empirical research on what the current situation is either for employment stability or about polarization in Finnish labour markets. Hypothetically, it might be that since in Finland, as in continental European countries, wage inequalities are hard to accept, flexibilisation might be situated more in the sphere of employment stability. This would mean that the employment tenures have shortened in the same manner as the wages have adjusted in liberal labour markets. However, I argue that at the same time that old formal regulations are lowered, other informal or social normative regulatory systems might have become stronger and that we might be witnessing some unexpected changes in the composition of Finnish labour markets, for example new inequalities between labour force segments, and thus, in the structure of the whole society.

2.2 EMPLOYMENT STABILITY AND SEGMENTATION

In the theoretical chapter I defined employment stability as an emergent social institution. It has manifestations on a macro objective level in legislative norms and for example in bureaucracy. On an individual level it manifests in different patterns of action of individuals and organisations. These patterns of action have

in scientific research been referred to with differing concepts, such as careers, organisational bureaucracy, internal and external labour markets, employment transitions etc. However, these all concepts cohere in that they have the same fundamental notions behind them and they discuss these issues through individual action, social structures and social norms. Next, I will present a hypothesis about what other social institutions might have influenced the change in employment stability besides the legislative and social security institutions.

I argue that the empirical definition of employment stability in terms of durations of employment tenures holds significance for the analytical and interpretative results of research. Even though employment stability is widely studied in relation to national economic structures its definition also has meaning as a social research concept. In the next chapters will be examined: what economic and social determinants play a role in influencing the length of tenures. I will explore the social, historical and institutionally set segmentation in the labour market and aim to find out what determinants might have influenced employment stability. I will also draw a hypothesis of the previous labour market research to see the most prevalent findings of labour market segmentation and which of these are hypothetically linked to length of tenures.

Socially, the durations of tenures can be seen as the individual careers inside one organisation. In modern industrialised societies the term 'career' has traditionally meant a linear trajectory of interconnected jobs in a single organisation, with upward vertical mobility, and a sense of inevitability and closure. Progress in career was expected and jobs represented changes in responsibility, status, and authority (Wilensky 1961, 523, according to Halford and Strangleman 2009). Advancement within a hierarchy of power or prestige was central and considered to be positive. Accounts of careers make reference to stages, phases, steps, and turning points (Barley 1989, 44–46). Metaphorically, such careers have been depicted as 'ladders' or 'tracks'. The traditional or industrial societies' vision of a career is that individuals enter the organisation at low hierarchical positions and then build up from there, gaining promotions and finally ending up at some higher hierarchical position (Cuzzorea and Lyon 2011). At the same time, the power, responsibilities and salaries rise to go with the promotions. However, individuals' career pathways may involve intra-firm mobility as well as inter-firm mobility. Intra-firm career mobility (promotion or demotion) is more subjected to the employer's decision, whereas inter-firm mobility, and its optimal timing, is determined by the individuals who choose the time of job resignation in relation to their labour market options and hiring decisions of other employers. Still, macro and organisational level factors have a strong impact on individual promotion. One presupposition in promotions is that the individual skills are transferable across occupations in an intra- and inter-firm manner.

The increasingly fragmented and discontinuous nature of careers has been at the centre of attention in current career research (Arthur and Rousseau 1996; Hall 2002). The new career paradigms focus on the growing uncertainty and unpredictability of careers, the crossing of traditional career boundaries and the increased importance of individual agency in shaping careers. Although, these career concepts differ in their main focus of attention, they endorse the idea that mobility becomes more central to our understanding of how careers develop (Ng et al. 2007; Sullivan, 1999). Career mobility focuses on individual transitions from one position to another. These transitions can take many forms. For instance, Feldman and Ng (2007) differentiate between job change, organisational change and occupational change. Ng et al. (2007) focus on six types of mobility based on two dimensions: status (upward, lateral, or downward) and employer (internal, or external). In essence, there may be a sixth mobility type, the softer transitions, as individuals may understand other features of working conditions also as promotions or demotions. These soft transitions might include, for example, safer working conditions, inclusion in occupational health care packages, widening of working tasks or adding more responsibilities to individual work assignments. The soft transitions may not show in data since they might not instantly lead to better wages or a better occupational category, but from the individual's point of view they might make the work seem more meaningful or worthwhile.

In this research I focus on tenures, which may include advancement inside the organisation. This tenure ends with the external mobility of the individual, out of the organisation. I will divide this phenomenon in two: firstly, the internal processes of establishment in relation to the labour force and secondly the external transitions which mark the beginning of the tenure and the end of it. On the firm level, the individual aspirations and organisational demands for economic productivity are in a dialoguous relationship. At the same time, both, the firm organisation and individual workers need to comply with the contextual and legislative structures. These levels of social reality intermingle. This interplay then creates pressures on the workforce and firms, and demands particular actions from them.

2.2.1 The Employer and Employee Matching Process

The matching process is key concept in understanding the linkage between employer and employee. It may be viewed as a two-person or two institution game. Once the decision regarding an employment relationship is made, the two parties start to match their needs together. They learn about each other's skills and needs and build up a relationship where both parties should be content. They fit together the working effort of the employee and the returns for this working effort in terms of salary from the employer. The employer expects some returns on his investments in the employee. It has been hypothesised that this game is a joint wealth maximising process (Mortensen 1978). Ending of a

particular employment relationship is not in interest of either party before some more profitable or otherwise tempting relationship opportunities come along. So basically, if a worker makes a decision to resign he considers his choice will lead to being better off, and if an employer makes the decision, he considers himself to better off by making that choice. In economic terms this is often seen as being a calculation between wage and individual productivity or wage and individual effort (see for example Hall 1995).

The idea of the employer-employee game with the continuous dynamic of maximising joint wealth is also questioned. Practice shows, that the long-term employment are much more resilient against outside temptations than purely maximising joint wealth. Individuals stay in employment relationships even though they are unhappy about the equilibrium of the effort they put in and wages they get out, and employers tend to keep their workforce even though they are unhappy with the production. Hidden factors, like social norms and organisational behaviour patterns, direct the action of both parties. In labour studies literature these kinds of links are referred to as 'specific human capital'. This specific capital is created in the particular relationship and it is not transferable to other relationships (Becker 1993). Workers develop skills that are related to the particular ways of a particular employer; and they also create personal relationships with their co-workers, and they choose places to live in the vicinity of their employer's location, etc. Furthermore, employer organisations accumulate valuable knowledge about their workers skills, and with this knowledge they try to steer the employee into such tasks where their productivity is best. Furthermore, the employer invests in employee skills in the form of the socialisation of the worker and cumulating his tacit knowledge (Hall 1995; Farber 1999; Parsons 1972; Mortensen 1978; Jovanovic 1979b).

Specific human capital is understood as something in the employment relationship that links or matches the worker and employer together for a long-time. It is argued that, since the prevalence of long-term employment is so strong in industrialised societies, there must be some value in the long-term commitment on both sides. The employer specific human capital argument states that this match has extra value, but only usable in this particular relationship. It would not have value in other relationships between the worker and another firm. The workers' productivity must be somehow better in this particular relationship than in another. Also for the worker, there has to be some extra value in staying in the same relationship. For worker, the firm specific skills and human capital do not match other employment relationships. Specific human capital may also be the quality of the match between the employer and employee. During the tenure both the employer and worker have learned how to use best their capital in this negotiation (more in Jovanovic 1979a). The existence of firm specific capital is argued to be visible in empirical results when longer tenures with current employer improve earnings. Workers with similar labour force characteristics and similar general working experience but from

different employers (the job shifters) gain less returns on their employment (Abraham and Farber 1987).

The cumulating wage returns of tenure, both for the employer and employee, have been under scientific investigations for decades. Previously it was seen that average returns on tenure in the U.S. was approximately 0.02% per year (Borjas 1981). Later the studies have become more complex and these models find smaller returns in relation to tenure (Abraham and Farber 1987; Altonji and Shakotko 1987; Marshall and Zarkin 1987; Williams 1991; Manning 1997). However, some argue that this strong cross-sectional relationship between wages and tenure is primarily due to a heterogeneity bias. Thus, the partial effect of tenure on wages is small, and the experience in labour markets and job changing accounts for most of the wage growth during an individual career (Altonji and Shakotko 1987; Marshall and Zarkin 1987). It is also found that the levels of wages grow at the beginning of a particular job match and stagnate after that period (Williams 1991). However, in economics literature the general result is that there must be some sort of specific capital in employment relations, because even though those who terminate their jobs more often tend to gain more wages in the short run, but over the life-time the earnings are higher for those who stick to one employer (Borjas 1981).

However, when the option of ending an employment relationship occurs, it might not be in line with the hypothesis of maximizing joint wealth, because neither party in making the decision of ending the relationship takes into account the losses that the other party faces. It is also a situation where the joint capital of this particular employment relationship does not play any role. It is not apparent and it is not recognised. The worker does not know how the new employment relationship with the new employer will be structured and what kind of social or human capital he/she is putting at stake. Similarly, if the terminating decision is made by employer, he does not know what type of relationship he will have in future with the other candidate and how the specific human capital will cumulate in that new relationship (Mortensen 1978, 573–574; see also Hall 1995, 223). Mortensen (1978) actually argued that the tenure (the beginning of it or the ending of it) does not depend on the actual relationship, but it has more to do with outside opportunities. The importance of outside temptations for both parties may be linked to the empirical findings that during economic up-turns, when there are many employment possibilities for workers in the labour market, the changes of job do increase and in bad economic times they tend to decrease (for example Hall 1995). Furthermore, some researchers find that firm level heterogeneity has more effect on the probability of ending employment than, for example, the effect of local labour market conditions, namely the unemployment rate in local labour markets (Bookmann and Steffes 2010, 13). Despite of multitude of research done on specific human capital and tacit knowledge, it is still difficult to separate it from other types of human capital, especially in a statistical manner. Lazear (2003a) conducts an analysis of

the term and concludes that all skills are in fact general, but employers vary in how important those skills are in their particular situation.

Interesting points of the matching process are related to questions of over-education. Over-education is a situation where an individual worker has more formal education than his/her employment relationship (tasks or job) requires or than the salary level implies. It is a situation where the individuals' human capital is wasted and it is a bad match from the workers' point of view. Often, it is assumed that the situation of over-education will be corrected quite soon once promotions take place. Mismatch is in this way corrected either in the internal or in external labour market. Thus, in general it is expected that the problem of over-education is a transitory one in the labour market and which the market operations will correct (Sicherman 1991; Sicherman and Galor 1990; Becker 1980; Becker and Tomas 1986). It is quite true that the highly educated are more mobile in labour markets and their change their employer is more often that less educated workers. It may be that highly educated individuals have more job market possibilities and get more job opportunities (Mincer 1988). Additionally, higher education leads to higher expectations for the individual career, thus leading to more mobility across and inside firms (Sicherman 1990). It may also be that even though high-educated individuals face more voluntary mobility, they face less involuntary mobility. There are national differences when school-leavers in countries that have vocational training face higher levels of mismatch that those counterparts in countries which have more general educational systems (Wolbers 2003). However, the mismatch situation of over-education, has received more nuanced results in the current context of changing structures in labour markets. Some notions have been made that staying in current, secure employment, increases even if there is a mismatch between the worker's higher-education and job requirements (Ortiz 2010). It seems that over-qualification might not be a temporary factor anymore in individual careers or in labour markets in general, but it has been growing mainly among the youngest generations (Brynin 2002; de Vries and Wolbers 2005).

For the purposes of this research, I conclude that employment tenure or stability is fundamentally a phenomenon between two parties, the employer and the employee. It is a relationship where both parties should be content and the relationship between the two should be good. A mismatch may be the result of collisions between the working effort or levels of production and the returns of the work; or it could be down to individual unhappiness cumulating from the family-work relationship, social contradictions in the working place etc. If there is a mismatch, the employment relationship should and will be ended. The negotiations between the worker and employer are seen as being continuous and repeated continually during the tenure. However, these negotiations are not directed by wage levels and human capital alone.

Some amount of job change plays a positive role in the labour market and in society, when bad employer-employee matches are terminated. However, there

might be some workplace practices that aim at reducing the contradictions. Still, I maintain the notion that the two parties (employers and employees) are not fully equal in this matching relationship. The two parties face different risks when ending the employment relationship. For the worker it means possible loss of income and it might mean a loss of livelihood, yet for the employer it might mean only losing one employee, who may be replaced with another. Hence, in welfare societies this gap between power relations has been filled by social security institutions and social insurance.

Employment tenures are, also, representations of the matching process. In this narrow definition the tenures represent the matching between employer and employee. If the tenure is short, it might be that the recruitment has gone wrong or that the matching is otherwise poor. Long tenures also indicate good matching. However, tenures are not only about matching, but they are also about the notions of human capital accumulation, the capital accumulation for the employer, organisational practices for eliminating contradictions and legislative and normative order in society.

Once we realize that a job is fundamentally an employment relationship, we understand also, that the returns on tenure go beyond wages to also include employment security, individual fulfilment of creative needs, and survival in economic and social terms, and these all types of returns of work have as profound an importance in individual and social life as wages have in the economic sphere (see also DiPrete et al. 2006). Employment in Western industrialized society has more functions that merely wage and capital allocation. It is a fundamental part of the social system and employment stability, and thus the security that employment offers for workers, is one important category of return gained from working. Losses of employment stability or security have social and economic costs. Economically, for example, if long-term employments especially are ended, there will be a loss of specific human capital. On a general level, it may be that long-term employment has been an important component of productivity growth in the modern era, and the dismantling of this institutional or structural element might have long-standing effects on society's well-being, instead of short-term anticipated positive economic impacts (see also Farber 1993, 75; Auer, Berg and Coulibaly 2005). The losses of stability and security on the level of whole society might lead to less coherence and less generalized trust between co-workers, and co-citizens. Individual insecurities will grow and this might lead to changes in power relations in politics etc.

2.2.2 Patterns of Segmentation

One hypothesis behind the notion of employment stability is that firms are also social organisations which have their own normative structures. A basic notion of internal labour markets theories is that there is an institutional structure in labour markets that is reflected in the sharp division between internal and external labour markets. The internal labour market is defined by some social

category, such as being an enterprise, or part of an enterprise, or a craft or professional community. Entry into such internal labour markets is limited to particular ports of entry, the wage levels and transitions to other jobs is somehow guided by the internal rules of the particular social entity. These rules and customs differentiate the insiders from outsiders and provide the insiders with privileges that the outsiders do not have. Typically these internal privileges include some guarantees of job security, opportunities for career advancement, and equal treatment rules at the workplace. Specific firm related bureaucratic rules and organisational norms govern the allocation of labour in addition to competitive rules, societal norms and social groups (Doering and Piore 1985, 1–2; Osterman 1984). Doering and Piore (1985, xii–xxiv) see this as a fundamental distance taken from neoclassical economics, since internal labour market theory does not take the individual as the primary actor in markets, but deals with the formation and interaction of socially cohesive groups. Groups are not only aggregations of individuals, and they are not traceable back to individuals that form the groups.

Job specificity is important in internal labour market theory, because it is the basis for many of the group characteristics. Job specificity is defined by its skill content. A job utilizes a set of skills, and the set may be more specific or less specific. This means that some jobs require very targeted skills and others are based on general skills such as basic literacy, the ability to communicate or customisation to industrial working rules. Almost every job requires special skills. For example, the use of very routinely operated machines may be importantly aided by bettered familiarity with the machine. Experienced workers may detect troubles and diagnose possible break-downs by a particular smell coming from the machine. Furthermore, there exists technology specificity, which means that a technology utilises skills of varying degrees of specificity. It refers to the fact that in any job there is a particular mixture of these skills in the most productive way and these technologies may only be learned through working in the internal labour markets. Thus, on the job training does not merely involve formal training, but more importantly it includes the guidance of supervisors or colleagues. It is about gathering experience on the job (Doering and Piore 1985, 13–17).

Doering and Piore (1985, 22–40) define custom as an important feature of internal labour markets. Custom concerns the rules and the manners of social behaviour that guide the workers behaviour. These may be formal rules such as a set of bureaucratic rules or the rules that trade unions set inside establishments, but they may also be informal and understood as being right or wrong, as a normative structure inside organisation. Breaking these rules may be sanctioned by formal or informal punishments or approvals, and individuals entering the organisation are socialised into this internal social structure.

The empirical research into internal labour markets, however, suggests that the phenomenon varies enormously between countries and contexts, and that it

is not seducible to features of labour availability. Even though, in almost all countries, the effect of internal labour markets has been observed, the rules associated with entry, exit, and internal labour allocation tend to be nation-specific (Doering and Piore 1985, xi–xii.) The theory of internal labour markets has developed into theory of dual labour markets. Empirical findings on the internal labour market rules were noticed to apply mainly in one part of the labour markets, namely in the primary sector. In other parts of the labour markets such internal arrangements were not that strong, nor dictating, hence these parts of the labour markets were named as secondary labour markets. The work in secondary labour markets was determined as low paid and associated with menial social status, and it had low employment security, career possibilities and relations between supervisors and workers were direct and unmediated by social rules, customs or procedures. Further evidence was presented that the secondary labour market was occupied by women, young, and ethnic minorities (Doering and Piore 1985, x–xi).

Segmentation theory combines economic ideas of the function of labour market to institutions and social regulations. Segmentation theory holds that the social space of the labour market is divided into submarkets and that the rules governing the behaviour of labour market actors differ from one submarket to the other. This does not deny the existence of competitive rules, which still play a crucial role in labour market segments, but rather it represents a view where the socially created contradictions, social structure and functioning of the labour markets are understood. Segmentation theory sees the labour market as being comprised of social constructs, incorporating various rules and forms of organisation which condition their mode of operations and provide structure for the actors themselves (Castro, Méhaut and Rubery 1993). The segmentation theory was created from the foundations of the dual labour market theory. Segmentation theory enlarged the notions of differing types of labour markets. Segments of labour markets may be differentiated by differing firms' internal labour markets, but also inside firms in occupational categories and production units, as well as in general labour markets in differing industrial branches, etc.

There are numerous empirical findings that propose the existence of internal labour markets and segmentation in labour markets. It has been found that gender, educational level, wage level, race, and organisational features may create different segments in a labour force. From the viewpoint of employment stability, segmentation is important. It represents how the agents acting in labour markets are members of social groups, rather than individual agents, and these groups create boundaries for actions. There is also a multitude of empirical research depicting these social groups' patterns of action in Western society and also how these possibilities might then hypothetically stir the employment tenures inside firms. I will divide the differing features that create segmentation in labour markets into individual, organisational and labour market level

features. In the next paragraphs I will go on to introduce the empirical findings for differing segments.

Segmentation Based on Individual Level Attributes

Segmentation in labour market occurs in the way how individuals are grouped into different categories by their attributes, like gender, age and occupation. In this section I will introduce the most commonly analysed segmentation patterns which are traceable to individual level features. I will discuss the research results of gender, age, occupations, salary, and skill segments in labour market.

Gender differences in tenures are seen to be linked to the bureaucratic nature of internal labour markets by two contrasting views. First, gender equality should be better in job promotions because the logic of bureaucracy undermines sex-based ascription and reduces subjectivity in personnel decisions. But on the other hand, bureaucratic rules may obscure or legitimize gender inequality. Some find evidence that bureaucratic rules improve employment prospects for women (Baron et al. 2005). Mumford and Smith (2004) find that segmentation exists based on gender and race in Britain. Gender might be a segmenting feature in employment stability, when first of all females might face more obstacles due to the internal rules of the employers, or on the other hand the bureaucratic rules might protect the females employment security in some establishments. Further, the social security institutions might have differing influences on female and male tenures, if for example family allowances are targeted especially at females. For example, once individuals start to build their lives, they do not only choose their living area close to the employer, but they start to develop friendships and other social relations, which often are linked to the employer and the employer organisation. They form relationships with co-workers and so on. These social relationships then introduce new sets of social norms to the processes of internal labour markets. Furthermore, the social relationships outside the internal labour markets, for example the family, may influence how the internal labour markets are structured. Some firms may be more pro-family and they might have more flexible strategies for their workers to combine work and family, and these manoeuvres might aim at directing the internal labour market structures. They may also be linked to the economic branch or social structures of firms. In order to hire and maintain their workforce they might have to create benefits. For example, even though in Finnish labour markets much of the family-related benefits are arranged by public institutions and they do not act as a major device in forming the internal labour market of organisations. It has been stated that one reason for the short-term employment of females is due to the family allowance institutions. Female workers in their 20s or 30s are a potentially 'hazardous' labour force since their risk of leaving employment to take family leave is strong (for example Sutela 2013). The employer pays for the first three months of family allowance and also the replacements for the mother. This might be quite costly and thus, employers

try to diminish this risk by hiring women of this age only for short-term contracts.

The age of workers seems to bear some influence on wage increase and work promotions, and thus on the length of tenure. Topel and Ward (1992) found strong evidence that wage growth is linked to job switches especially with young workers and not so much for older ones. Munasinghe and Sigman (2004) found that young workers especially with a history of less frequent job changes (stayers) earn higher wages and will change jobs less frequently in the future than their more mobile counterparts (movers). They also found that the mobility effects on wages and turnover are stronger among more experienced (thus slightly older) workers. They show that whether stayers earn more than movers depends on the distribution of external labour market wage offers and firm-specific wage growth rate. Also, Jovanovic and Moffitt (1990) suggest that the wage growth is related to transitions in external labour markets. Career mobility (upward or downward) is also related to the age of the worker in manufacturing in Finland as Kauhanen and Napari (2011, 10) found in their research. Mobility decreases as workers comes close to the age of 50. Mobility is higher inside firms than in external labour markets in Finland for all age groups. Further, for younger age groups it is more likely to have upward mobility in hierarchy whereas for older worker groups both upward and downward mobility is equally rare.

Occupational groups are one of the clearest segmentation features in industrialized labour markets. The notion of a "job" or occupation is standard in modern societies. It presents a category of people whose position is marked in the socio-economic structure of society. Additionally, the labour force is generally differentiated by referring to the names of occupations. At the same time these occupations indicate the skills and educational levels required in the job, and furthermore, occupations ascribe some working conditions related to the jobs. This conceptualisation of jobs has been linked to career discussions about promotions and demotions in individual careers. It has implications for how tenures and careers can be studied, and it is closely tied to the structure of labour markets. If careers take place largely through organisations and the positions within them that individuals can occupy, it makes sense to study career structures, such as salary scales and employment contracts, which define them or career routes in which employees are the central unit of analysis (Evetts 1992). However, these approaches reify structures which over determine career outcomes, and establish norms of expected career patterns. Since they have a focus on the workplace, personal circumstances are seen to influence careers but not to constitute part of career development or career success. This way career research used to sustain an idealised version of a male career free from any domestic demands (Halford and Strangleman 2009; Evetts 1992; Halford and Leonard 2006). Further, strong points have been made that domestic work has an enormous influence on women's careers (Hochschild 1989; Halford and

Strangleman 2009). A different viewpoint was placed by the Chicago school of sociologists, who treated career as 'a heuristic' term applicable to a much wider range of situations than was typically referred as career (Hughes 1937, 1958; Becker et al. 1961; Barley 1989).

Despite the understanding that has been achieved in career research and in classical sociology about occupations, in empirical research occupation has been found to be highly volatile concept. In reality, jobs are tailored as an attempt to fit the worker into a preferable place in the company organisation. Further, for some the definition of occupation is only a collection of tasks. The tasks do not need to be hierarchical or compensated in any particular way. Other ways of understanding the concept of job or occupation is the human capital argument. The human capital argument focuses on the supply-side of the labour force and states that workers invest in skills which they bring to the labour market. This means that job in itself is unimportant and the human capital accumulation is more important (Lazear 1990, 3).

Yet, there are difficulties in the conceptualisation of occupations. There are numerous studies done about the labour market and occupations. These results suggest that organisations do have some aspects of internal labour market behaviour in individual career advancement. Individual tenures inside one organisation might be long, but during the tenure they hold many hierarchically different occupations. For example in Finland, the internal mobility is more important for higher hierarchical positions than for lower positions. Up to 50% of the entrants into higher positions came from organisations' inner labour markets whereas only approximately 20% of the entrants in lower positions were recruited through internal labour markets (Kauhanen and Napari 2011). The existence of internal career mobility is in relation to external labour markets. New entrants come into the lower steps in the hierarchy of organisations and then build their way up to the higher positions.

In economic research the basic hypothesis is that wages are in equilibrium to the productivity of an individual. In social/economic research it is hypothesised that a salary is in relation to an individual's situation in the organisational hierarchy of a firm. The higher an individual is situated in the hierarchy, supposedly the more responsibilities and skills he/she has, and thus the salary levels should be higher. Furthermore, it is often hypothesised that the wage level is indicative of the hierarchical structure of an organisation, and of individual position in this structure. However, legislative and labour unionisation has aimed at pre-describing some aspects of occupations. In modern society it could be said that salaries were set on the basis of job characteristics and individual performance. This means that on certain job ladders there were pre-set wage levels that were linked to occupational characteristics. These (bureaucratic) rules were followed regardless of who fulfilled those positions, regardless of the individual performance or individual human capital. In this type of organisation salaries were good indicators of the

existence of internal labour markets. However, salaries had some fluctuations in relation to individual capabilities and performance. At least, after the very beginning of employment tenure, there might be changes in the salary depending on the individual characteristics.

The theory of internal labour markets supposes that wages are good indicators of job characteristics. Thus, it might be tempting to suppose that inner-firm occupational promotions are linked to increases in wage levels. As mentioned before, the concept of job is vague and thus, the problems of occupations could be dismantled by using wage levels instead. However, empirical research has found that employers often broaden the job characteristics (but do not promote the worker) and at the same time they keep the wage level stationary. Individuals may gain promotions of occupational category, but the wage stays the same, or in some cases the wage increases but there are no visible signs of changes in the tasks or occupational levels. To conclude, empirically promotions happen equally at all wage levels and are not tied to certain wage levels (Baker and Holmstrom 1995). The linkage between wage level and occupations is also ambitious because there are considerable differences in wages within the same job categories (Lazear 1990; Baker, Gibbs and Holmstrom 1994b). Furthermore, even though job promotion and wage levels have a positive correlation, the promotion of wages does not follow the promotion in job, but they seem to work differently and in different phases (Baker and Holmstrom 1995; Treble et al. 2001; Pena and Mehay 2010).

Segmentation theory predicts the selection of low-skilled workers for unstable, low paid jobs. Yet, the findings in previous empirical studies of this area are mixed (Battu, McMaster and White 2002; Dostie 2005; Holzer and LaLonde 1999; Dustmann and Meghir 2005; Naticchioni and Panigo 2004). In Germany internal labour market effects have been found on the tenures of different educational levelled individuals. Workers without vocational training or university education, and also unskilled blue collar workers, are among the most mobile groups. The effect of university education disappears when firm level heterogeneity is included, which points to a sorting process of these workers into firms with high job stability (Bookmann and Steffes 2010, 12). Interview studies from organisations imply that many of the traditional pillars of the internal labour markets, especially promotional ladders, have been dismantled. Grimshaw et al. (2001) see that while employers develop new means of adjusting production to external labour market pressures, national policies and target on developing a well-functioning external labour market, these manoeuvres might fail in the aim of building long-standing development in the labour market. This failure especially concerns the individuals' possibilities and attitudes in fulfilling skill or career expectations. This trend applies especially to traditional working class careers. In the beginning of the 2000s the reasons for these new tendencies were due to several occurrences: downsizings had shut-down the expectations for life-long employment, there

were prevalent rationales for flatter organisations and individualized reward systems, and furthermore the use of temporary employment had been growing for some time.

A generally well known aspect of the labour market is that the salary levels are consistent with the external labour market at the beginning of the employment tenure. But after that, the increments in salary increases do not follow the external labour market salary level but the internal rules of the employer. This then leads to lower levels of salary inside firms than in external labour markets. Yet, in internal labour markets wages have seniority based elements. This may be explained with reference to national institutions, such as three party negotiations in Finland setting the general wage levels and in specific human capital accumulation. Older workers may also have more bargaining power at the firm level and in wage setting. According to the deferred payments argument, lower pay in early careers is repaid by the firm later in the career when wages exceed productivity (Lazear 1990; Lazear 1979; Hutchens 1986). However, due to differing data it has been hard to analyse the firm level effect on inter firm wages in relation to external labour market wages. Abowd and Kramarz (1998) modelled different inter firm wage levels and those for external labour markets and came to the conclusion that the size-wage effect of large firms tends to be a result of the high waged individuals being situated in high paying firms.

One interesting research line connected to internal labour markets is the "fast tracks" hypothesis (Rosenbaum 1984). In this hypothesis the internal labour market may be constructed with distinct career ladders through which promotions take place. The research has found evidence that indeed some particular employee groups can be situated on such ladders that lead faster to promotion than other ladders (Baker, Gibbs and Holmstrom 1994a; Baker, Gibbs and Holmstrom 1994b). These kinds of fast tracks may lead to longer tenures inside one firm than we might suppose to be the case in more competitive external labour markets with the same individuals. However, the fast advancement inside firms seems to occur at the beginning of employees' careers and there seems to be negative tenure effect after the initial years. This means that the promotions or increments in salary at the beginning of the career do lengthen the tenures, but the longer the employee stays in the firm the less likely he/she is to get promoted later in the same inner-firm career and also the more probable it becomes that he/she will end his/her employment relationship (Baker and Holmstrom 1995).

The positive dependence of wages on the tenures and the notion of differing wage levels inside organisational and external labour markets indicates that in terms of wage increases the employer organisations have their own rules of action. These rules are somehow different from the competitive rules of the external labour market (see Parent 1995; Baker, Gibbs and Holmstrom 1994a; Baker, Gibbs and Holmstrom 1994b). What then could account for these

contradictions: is it so, that the individuals who change jobs get bigger increase in their salary at first, but those who stay in the same job get smaller increases in the long-term? In this case the higher salaries at the end of long tenures within one firm (higher returns for long tenure) might be attributable to the small repeated salary increases. Some empirical research brings up the notion that the human capital or specific capital accumulation does not have as much effect on the actual return of tenure for the worker as has been theoretically expected (Williams 1991; Manning 1997). It might be that the returns on specific capital are more linked to internal labour markets of industrial branches than to the firm/company level (Parent 1995). We can try to understand this phenomenon also by addressing the demotions in wages and occupations. Demotions have a stronger effect on wages than promotions (Belzil and Bognanno 2008).

The strong cross-sectional connections between hierarchical levels, promotions and wage increases imply that there may actually be a third influencing factor, a latent phenomenon, which drives both promotions and wage increase separately (for example Belzil and Bognanno 2008). This latent factor is often postulated as being the individual's abilities or the learning process related to employer and employee matching. Furthermore, the "Peters principle" (Peter and Hull 1969; Fairburn and Malcomson 2001; Lazear 2003b) suggests that individuals are promoted to their level of incompetence not to their level of competence. This means that individuals that are good in their current job might not be as good in their new job after promotion, and thus, they would perform slightly worse in their new job, at least in the beginning. This might then lead to notions that those who are promoted inside firms do not get promoted again as easily as their externally hired counterparts (see empirical findings Baker, Gibbs and Holmstrom 1994a, 1994b; Chan 2006; Acosta 2010). This view challenges the ideas that promotions are markers of higher productivity or a higher amount of firm specific capital of the worker and for the fast-track hypothesis. In my view, however, I see that these notions are related to the idea that the promotions are situated at the beginning of individual tenures, and that it is most likely that it is a process of matching that is related to this issue. It is most likely that in the beginning of the tenure the match is bettered with promotions.

Several theoretical models have been made in attempt to include individual ability as an explanatory latent factor in promotion and wage increase dynamics. Gibbons and Waldman (1999) tried to find a model that would help in understanding the difficult link between occupational promotion and wage dynamics. They included in their hypothetical model a factor for learning and found out, that their model incorporating promotions (and demotions), wage increase (and decrease) and learning factors explains that (1) real-wage decreases are not rare but demotions are, (2) wage increases are serially correlated, (3) promotions are associated with large wage increases, (4) wage increases through promotion are small relative to the difference between

average wages across levels of the job ladder, and (5) workers who receive large wage increases early in their stay at one level of the job ladder are promoted quickly to the next. Also Ghosh (2007) creates a theoretical explanation model in which he includes both wage and promotion dynamics and employee turnover. His model brings together: employers learning about worker productivity, human capital acquisition, job-assignment and resolution of worker uncertainty regarding disadvantages from a job. This model might shine a light on some of the issues as to why the probability of employee turnover decreases with individual labour market experience, why wage changes during a job is more concentrated in earlier periods in the job, why serial correlation in wages happens and why probability of promotion increases wages.

Individual and firm wage effects are often interpreted as reflecting individual, general or firm specific, productivity; also for example efficiency suggests that firms may pay high wages as motivational device. Firms do this in order to motivate the workers in more productivity (Akerlöf 1982). So, the firm-specific wage effect does not have to reflect individual productivity alone, but it may also reflect firms' wage policies, implicit contracts or compensating wage differentials. The basic model of compensation wages (Rosen 1986) states, that undesirable job characteristics (such as job insecurity and poor working conditions) are compensated for individuals through higher wages. Compensation theory presents the idea that the job demands and working conditions are in equilibrium so that the poorer working conditions are compensated for in the salary. The workers may also accept or compensate for better working conditions or other work related benefits by requiring smaller salaries. Additionally, implicit contracts and social norms inside organisations may include, for example, risk-sharing arrangements. It could well be that one of the unspoken rules of industrial society is that the employer pays stable wages, which might be lower than the offers from the open labour market. As a form of compensation for lower wages the employer offers workers stability of work and other benefits, such as health insurance (Malcomson 1999). For example, with German linked employee-employer data, Cornelißen and Hüber (2007) found that high-wage workers tend to be low-tenured workers. They suppose that at the firm level there exists a trade-off between wages and tenures. High-wage-providing firms tend to have shorter tenures. Researchers conclude that the low job stability may be compensated by higher salaries.

However, the empirical use of the compensation theory is still quite limited, as it cannot explain the influence of wider social groups such as race, class or gender in job or wage discrimination. The salary is not the single predictor of the work related conditions, rather the individual willingness and ability to change jobs is related also to other spheres of life, as well as psychological, social and physical determinants of well-being (Kalleberg and Vaisey 2005). Besides salary the research should be able to describe other rewards that individuals gain from work. Furthermore, a compensation equation should include also the notion that

the same salary means different things to different people (Daw and Hardie 2012).

In the literature there are some results on how the social structures or other individual variables than learning, productivity and capability might affect the returns of tenures. Blau and Devaro (2007) found that the paradox of differences in wage and promotion dynamics remains the same if gender is taken into account. Gender seems to be linked to male promotions, but it does not have an effect on their wage increases. This particular employer survey data also included job-specific worker performance ratings indicating the ability of individuals. The performance ratings were made by employer side supervisors, so they might be biased in a way that is correlated with gender. Yet, the authors claim there is no visible bias in the data and state, that women have lower probabilities of promotion and expected promotion than men do but that there is essentially no gender difference in wage growth with or without promotions. On a general level the resignation rates are higher for women than for men, but if personal and job characteristics are the same, there is no difference between the genders. Lazear and Rosen (1990) argued that it might be that women and men are situated on differing career ladders with different promotion probabilities because women have ex ante evaluated higher probabilities of resigning from their jobs. Pena and Mehay (2010) find no evidence for this in their case study of one organisation. They find that females situate equally with men in fast- and low-tracks. Furthermore, resigning improved the current earnings and earnings prospects for both genders equally. In addition to these aspects the opportunities for learning in a job were found to be important implication for young persons in making the separation decision for both genders (Blau and Kahn 1981).

Segmentation on an Organisational Level

Besides the general social groups such as gender, age, education, and branch, there is need to analyse the firm level effect as a group phenomenon. The organisational structure of the firms may have some effect on the tenures and job mobility inside the firms. Kauhanen and Napari's results (2011, 20) show that an individual has better chanc¬es of being promoted within a firm if his co-workers are less educated and have only short tenures in the firm. The gender of the colleagues turned out to be unrelated to promotion probability. The characteristics of the co-workers correlate significantly with promotions taking place when changing employers in external job mobility. The size of the firm instead was found to be important in relation to job tenures and individual career mobility, because in Finland internal promotions are more common in larger firms. This might indicate that larger firms are more likely to rely on internal labour markets with well-de¬fined career paths than smaller firms. When promotions in external labour markets with employer changes are

investigated, the firm size effect is less significant (Kauhanen and Napari 2011, 20; see internationally also Chan 1996).

Wage setting is linked to general labour markets in the first entry of an individual to an organisation. The outside recruiting process sets a wage level that is in relation to the general wage levels of the labour market. From this point on, the changes in individual wages are set in the environment of internal labour markets and the most important differences inside firm and job categories seems to come from the entry point of the individual worker and then continue as the same throughout the career in the same firm (Baker and Holmstrom 1995). This finding suggests that there is a relationship between wages and general labour markets and also a strong inter-firm effect on wages. The availability of linked employee–employer data has made it possible to study the role of firm organisations in the determination of employees' earnings. The findings overwhelmingly suggest that firms play an important role in explaining the variations in individuals' earnings (Acosta 2010; Groshen 1990; Bronars and Famulari 1997; Abowd and Kramarz 1998; Salvanes, Burges and Lane 1998).

For example, the size of firms seems to be indicative of differing types of internal labour markets. Often the large establishments have better internal promotion probabilities because they have more employment opportunities to offer for the worker in different hierarchical levels of the organisation. This is linked to the findings that in large establishments there is more internal employment mobility than in smaller ones. The structure for job promotion and opportunities, as well as employment ladders that exist in large firms influence individual chances for gaining promotions inside firms. (Brüderl, Preisendoerfer and Ziegler 1993). There are also some complimentary, more nuanced, pictures of how firm size may be linked with internal labour markets. For example, in Canadian research links were found between firm size and returns for workers for special skills. The returns are higher in medium-sized firms in relation to larger or small firms. The authors explain this by referring to better sorting of ability in medium sized establishments. In larger firms there are more monitoring costs and they are not able to monitor the specific skills of workers (Ferrer and Lluis 2008).

Hypothetically, firm level institutionally created social support may prolong the tenures inside firms. In order to keep the workforce the employer organisations may create social support channels that help for example in balancing work-family relations. There is evidence that paid sick leave schemes prolong the duration of tenures (Hill 2013). In general, these measures help individual workers to ease the stress between work and home and, further, they create possibilities for continuing in a job even if it otherwise would be impossible. Hypothetically, these types of measures might be useful in such industrial sectors where the workforce is somehow segmented for example by gender or age. If the firms are dependent upon its current type of labour force,

they may keep this labour force by adding some supplementary forms of support.

Additionally, the social structure of a firm organisation is linked to internal labour market development and procedures. With the social structure of an organisation I refer to the proportions of different age groups, educational levels, gender composition and the occupational hierarchical structure. For example, an organisations' age structure may be the creation of internal labour markets, when the norm of seniority protects the longest standing employees. Those who have been in the organisation the longest are protected by not only by legislation but also by firm level practices against dismissals and those who have shortest tenures are often the first to be laid-off or dismissed. Thus the existing age structure may have an influence on the internal labour markets in promotions and in recruiting practices. There is empirical evidence of the seniority rule. For example, in Sweden von Below and Skogman Thoursie (2010) conducted a study of the effects of legislative change in seniority rule. They found out that those employers, who belong to the legislative group in which the lowering dismissal definitions applied to, used this opportunity and employee turnover increased by 5% more than in other companies.

Furthermore, internal labour markets may have some influence on the economic success of the firm or organisation. The age structure of the firm implicates, also, different types of human capital in the firm. We might expect that younger workers are less experienced, but usually they have more up to date formal education. Older workers, instead, may lack in some physical dimensions of their work, but they might compensate for it by having more experience and tacit knowledge of firm specific tasks. In research it has been found that the productivity of the firm is in relation to its age structure, it is an inverted U shaped relationship. The highest productivity is situated in firms that have workers at their prime working age and firms with higher or lower medium age structures are less productive (for example Skirbekk 2004; Ilmakunnas and Maliranta 2007). Thus hypothetically, when the age structure of establishment and economic productivity are linked, it might steer the usage of the labour force towards the use of particular aged workers, and they might have longer tenures.

However, there still exists the unobserved influence of social norms within organisations that might direct the tenures in differing ways in different organisations. These norms exist rather locally, inside one employer or establishment and create patterns of behaviour, justifications for rules etc. that remain unobserved in general categories of age, gender, education etc. From a sociological point of view, one may argue that there exist social norms that direct the action of individuals inside firms. One such empirically found norm is, for example, the norm of a 'fair day's work'. This refers to idea that some organisations appear to have the social norm of doing exactly the amount of work you are paid for and no more (see for example Akerlöf 1982). In relation to

tenures, one might hypothesise that there are norms regarding stability and expectations of continuity of employment. These norms may have manifestations in manners of traditional bureaucratic organisation promotion or in favouring particular social groups within organisations. It might also be that some segments of the labour force are used as a temporary workforce. Thus, values and norms in society and inside organisations influence the possibilities that individuals have. They determine what is considered to be socially acceptable behaviour for individuals or social groups. They may also affect institutions and employers and shape their behaviour in recruiting, firing, or in promotions.

Workplace norms emerge from interactions and negotiations among organisational actors, through which patterns of behaviour, attitudes, and perspectives become defined as legitimate. The different means of action and social support are used by informal collectives of workers – whereas on the side of formal structures, such as unions, organisational level formal rules may be used. Formal organisational rules create possibilities or boundaries for the creation of informal organisational environments. These informal rules may also fall under the definition of organisational culture, where Schein (2010) differentiates three layers, going from what is observable to those norms that are hidden and difficult to put in words (also Hammer et al. 2004). Karasek and Theorell (1990) model the amount of work related stress as being a combination of individual abilities to adjust or manage the demand that the employer put on them. This perspective has been criticized for being too narrow and more phenomena are currently encompassed in this view including: individual characteristics, work process variables, social and economic variables, the degree of worker-employer fit, organisational culture and workers' opportunities for mobility, organisational context factors (Bliese and Castro 2000), quality of social environment, learning climate and workplace norms (Hammer et al. 2004). Saksvik, Hammer and Nytrø (2013) argue that the psychosocial work environment should be dealt in two ways by examining: individual level perceptions and the collective experience. These theoretical ideas have importance for my research. Firstly, they tie together the action of individuals in organisations and structural level changes. Secondly, the social element is seen as part of the organisational level influence on tenures. In many ways in this research the social structure of the internal labour market is not explicable by the variables, but it is part of the empirical model that is left without explanation. Yet, this unexplained aspect of tenures is as important as the aspects which are explained.

Organisational commitment is one feature of individual job shifting behaviour. Lincoln and Kalleberg (1996, 42, 54) argue that longer employee tenures are associated with greater workforce commitment. Tenure also associates with firm-specific socialisation, which ties the worker into organisation's core values. Friendships may also occur inside the organisation

and lead to more commitment. Apart from the possible investments that the employer has made in the workers' skills, on the part of the employee there are also investments. Cognitive dissonance is created for example when the worker considers the 'costs' of losing foregone possibilities (Lincoln and Kalleberg 1996, 44).

Organisational commitment also changes in relation to not only employer-employee matching but also with the age of worker, social relations in the working place and family situation. For example, in Britain, in period of 1992–2000 organisational commitment dropped significantly most in the age group of over 50 (White 2012). White sees one of reasons for this in the growing expectations of employers and work flexibilisation. Hult and Edlund (2008) found in Sweden, using cross sectional data from 1997, that good social relations at the working place increases males' work commitment. Lincoln and Kalleberg (1990, 55) found in their study that marriage proved to be a powerful determinant for commitment to the organisation both in Japan and in the US. They found that marriage limits American workers' opportunities for changing job and elevates the costs of leaving. Still American firms do not have any special services for the married or families contrary to Japanese firms. Researchers then continue to ponder whether marriage increases commitment because it adds to individual responsibilities and dependence on the job.

On an individual level employment security or stability means trust in the future and possibilities for building up a life. Two ideal types of psychological contracts have been outlined in the respect of how the industrialised labour markets function. Within the framework of traditional relational contracts, workers expect long-term employment in exchange of their loyalty to the employer (Rousseau 1996). But as a different type of psychological contract Rousseau (1996) defines a balanced contract, where the implicit promise of employment security lies in how well workers are able to meet the employer's changing performance requirements. This type of contract might still be viewed as being as secure as the other type. Bernhardt and Krause (2013) argue that this type of psychological contract is actually one way to understand internal flexicurity, as it is a way of safe-guarding the long-term employment relations inside organisations, at the same as time being able to adapt the workers within the organisation.

Segmentation in Labour Market Level

Monopsony in the labour market refers to a situation where there is only one employer, but a large number of potential employees. A typical example of this would be a mining town in the early industrialised period. Of course, there were no local labour markets that actually faced this condition, since there were also other possibilities and the individuals could move to other locations. Monopsony was never the literar condition. Better in relation to labour markets and local labour markets is the definition that there are few potential employers

within a reasonable distance of the workers, so that, from the perspective of the worker, the labour market appears to be 'thin' (Manning 2003). Monopsony might also be suggested, if there are many employers but they collude in wage setting so that there are only few effective employers in local labour markets. It might also be a situation, where some particular educational groups of some branch of workers have only limited opportunities.

I view that the idea of a monopsony is that the workers face barriers to their opportunities in labour markets. Monopsony then places these barriers at a regional level, and the barriers may be created via distances or other means that are related to locations. Manning (2003) argues, that labour markets may be 'thin' when there are only few actual opportunities to choose employer in the immediate geographical locality. However, these barriers may be created more subtly than just by the effect of distance, but may exist as multifaceted conjunctures of limitations. The size and history of regional labour markets and the firms' locations shape the availability of different types of jobs. Empirically, there is much research done in this regard. Larger metropolitan areas tend to generate greater numbers of good jobs (i.e. better paid jobs) than the medium sized regions. Furthermore, there seems to be the latest trend of almost vanishing manufacturing employment for less skilled workers in small metropolitan areas in the US (Holzer et al. 2011). Wheeler (2001) shows empirical evidence that thicker labour markets lead to better productivity, greater wage inequality and higher returns for skills. Andersson, Burges and Lane (2007) show that there is more ranking matching between high quality workers and high quality firms in thicker labour markets (where in small location many similar employers are situated), thus, the matching is better. Therefore, the type of the local labour markets, the amount of potential employers there, and the prevailing competition, are all important in how long the tenures are. (See from Finland Pekkala and Kangasharju 2002.) The tenures do not only depend on the internal practices in the establishment, but also on the surrounding structure of possibilities which exists for individuals. This structure of possibility might influence tenures in two ways. Firstly, it is possible for individuals to change jobs. Secondly, however, employers might face more competition for particular labour segments, such as for highly skilled or experienced workers, and thus, they might introduce some internal mechanisms to hold on to their labour force.

Labour market segmentation may actualise on many levels or parts of the labour market simultaneously. Even though segmentation may be formed on the basis of gender or educational group , for example – and much attention is paid to inter-firm patterns of behaviour – the industrial branches delineate the flows of labour and potential for individual labour market mobility, simultaneously. In Finland, most of the mobility between industrial branches is sc. churning (mobility back and forth between branches) (Aho and Mäkiaho 2012). Hypothetically, from the perspective of employment stability the labour

force flows between industrial branches might indicate that the structure for mobility for individuals in some particular branches is higher or lower. If the structure for this possibility is small, it might lengthen the tenures in one establishment. This means there are not sufficient possibilities for changing employer in some branches. However, the inter linkages and labour force flows between industries indicate that it is more possible to change jobs in a larger industrial settings.

Maliranta and Nikulainen (2008) studied how Finnish industrial branches are linked with in- and out-flows of labour. They argue that the structure of the Finnish labour market is delineated by industrial branches. The education industry is a kind of 'ancestor' for the most of the industries and labour force in them. The education industry is not an employment destination of labour flows from any other industrial branch, but instead, it is a relatively important source of labour for the research industry. The research industry in turn is a major source of labour for three important industries in the Finnish economy: (1) the energy, (2) chemical, and (3) telecommunication equipment industries, which, then in turn, have strong linkages to other parts of ICT cluster. Far downstream in the labour flows from the education and the research industry is situated the machinery cluster that has thick inside mutual links (basic metal, metal products, vehicle, transport equipment, and rubber and plastic industries). The third cluster, that Maliranta and Nikulainen found, is the energy cluster. The fourth cluster is construction and has direct or indirect links with the mining, mineral, chemical and the machinery rental industries. All these industries are mutually linked by labour flows either directly or indirectly. There are 8 other industries that have no significant downstream or upstream employment links (agriculture and forestry, food and tobacco, textiles and leather, trade and repair, technical services, public administration, health and social work and other social services). The notion of unlinked industries indicates that the segmentation in these particular industries might be stronger.

Labour markets are also divided into segments by differing transitions, as well as differing patterns of starting tenure and ending it, and patterns of individuals. Based on practice, we may delineate differing segments of the labour force by inspecting their transitional types. Some individuals tend to have long- and full-time tenures in employment, while some then have shorter tenures in chains, while others have chains of combinations between unemployment and employment spells. Then there are distinctive groups which have chains of education, unemployment and employment in combination. Thus, differing entry and exit types into and from organisations (between two jobs, between unemployment and employment and between outside labour markets and employment) follow clearly differentiated processes (Jolkkonen, Kilpeläinen and Koistinen 1999). In Germany, individuals entering employment from previous unemployment or non-employment face a significantly higher risk of exit as compared to the reference group of job changers. However, when

the selection of these groups into differing firms is accounted for the influence is clearly reduced, indicating that these worker groups are selected into low-duration firms (Bookmann and Steffes 2010).

Moreover, the industrial restructuring of Western labour markets and the legislative changes in the flexicurity model may have influenced the structures of mobility and employment transitions. Yet, Aho and Mäkisalo (2012) see that the mobility between industrial branches has not been influenced by industrial restructuring in Finland (at least during 2003–2006). Mobility between branches is not linked to the labour demand side of the branch, rather some industrial branches tend to be more mobile and other do not. The most mobile sectors in Finland are the branches of construction, tourism and catering and education. The least mobile are basic productions, basic industry and financing sectors. The notion that labour flows do not cross the boundaries of industrial branches suggests that there are some mechanisms that prohibit it. These mechanisms may include, for example, particular educational demands or industry specific capital, but also that these sectors may have some inner regulating rules or norms that make reinforce these divisions. In practice one might actually hypothesise that the trade sector, for example, would have strong links to other economic branches since this type of knowledge might be useful in different branches, as well. Yet, this seems not to be the case in Finland according to Maliranta and Nikulainen (2008).

For this research the notion of labour flow divisions by branch gives indications that also the tenures might be differentiated between industrial branches. If there are more flows inside one branch than outside, this suggests that individuals have fewer opportunities to choose a job. They have fewer options, thus, they are forced to act in the submarkets of one branch. The low number of opportunities might then, in turn, have an effect on the tenures of jobs in two ways. Firstly, on an individual level, the options for individual mobility become smaller and this might actually make the tenures longer because individuals cannot change their jobs so easily. Secondly, on an organisational level, this particular closed segment might function in a way that the use of short-term contracts may be tempting, because the labour force of that segment is known to be available and the employer does not have to compete so much for the labour force.

These mechanisms may have many different ways of working in society, but we may look at this interplay with agents and structures for example in a Giddensian way. The structures are incorporated into actions of individuals by individual learning and understanding of their surrounding opportunities and possibilities. Individuals also act in labour markets according to the boundaries of their resources, which may be economic, social, skills, health etc. For example, March and Simon (1958) define the possibility of mobility as being an individual perception of the available work-role alternatives. They focus on the perceived ease of movement instead of the actual ease of movement, and they validate this

argument by stating that individual actions are often more driven by the perception of a situation than by the actual reality (see also Price 1977; Martin 1979; Roberts, Hulin and Rousseau 1978; Mobley et al. 1979; de Witte and Näswall 2003). Determinants of the perceived possibilities for may consist of the local unemployment level or level of vacancies, the level of the current firms' business activity, the numbers of organisations visible, the visibility of the individual's possibilities to search for a new job, the multitude of personal contacts and individual attributes and resources defining the individual's value in the labour market. This value (employability rank) refers not only to inherent capacities of individuals but also to the selection mechanisms of organisations, for example the segmentation of workers.

For instance, wage setting may impact reservation wages and consequently the willingness to accept work-roles at lower relative wages. Also, turnover research has added 'shock events' as one explanatory factor in individual mobility. Shock events are very distinguishable events which lead an individual to make judgments about remaining or leaving their current labour market position. These shock events are actual risks or opportunities a person is confronted with at a specific moment in time. They can be expected or unexpected, and can be perceived as being negative, neutral, or positive (Lee and Mitchell 1994; Allen and Griffeth 1999). Shocks may include events outside the job (in the family sphere etc.), personal work events (dispute at work etc.), or events affecting the employer (mergers etc.). The occurrence of shocks is also studied with particular occupational groups such as accountants (Donnelly and Quirin 2006), Air force officers (Holt et al. 2007), IT professionals (Niedermann, Sumner and Maertz 2007), and nurses (Morrell et al. 2008). These studies find that shock events regularly play an important role in the decision to quit. The literature on careers often ignores the importance of these specific voluntary and involuntary events in shaping careers.

Besides the structure of the possibility of mobility, the perceptions of it and shock events, actual mobility is defined by the perceived desirability or subjective understanding of the possibilities of being mobile (March and Simon 1958; Gunz, Peiperl and Tzabbar 2007; Hui 1988). The individual wish to change from one work-role to another and attractiveness of either is crucial. The attractiveness is interlined with perceptions of possibilities because when new positions might entail more risks or risky outcomes they become less desirable. Several studies support the hypothesis that economic conditions influence individual willingness to take on new job opportunities (Ng et al. 2007). For example Hui (1988) found out that the *objective* situation of the labour market had no effect on the individual withdrawal process. Furthermore, it did not affect individual job satisfaction. However, *subjective perception* of alternative employment opportunities, as well as, job satisfaction and intention of withdrawal, were predictive of voluntary termination.

Conclusions – Segmentation and Employment Stability

I have now outlined the possibilities for how social security institutions, the local labour market conditions, the basic structural and normative social categories might hypothetically influence the durations of tenures. Labour market segmentation directs the structures of opportunity differently in different occupational and demographic groups (see also Callaghan 1997). Certain occupations and positions offer more opportunities than others. For example, promotion is possible only for some positions in organisations. Also, strong internal labour markets may inhibit the entrance of outsiders to certain positions in organisations (Davis-Blake and Uzzi 1993; Doering and Piore 1985). Furthermore, employers can select people on the basis of individual or group characteristics. Lawrence and Tolbert (2007, 402) use the term 'opportunity structure', by which they mean the set of probabilities that individuals with given attributes will gain access to career-related rewards. Career-related rewards are for instance promotions or assignments to critical tasks. Further, the labour costs are a mechanism that determines the individual agency in careers. The wage setting in organisations determines which individuals have the possibility to change jobs in internal or external labour markets (Forrier, Sels and Stynen 2009). In addition, individual agency and mobility in labour markets have institutional incentives and barriers. Institutional policies and incentives may stimulate or temper the demand for and supply of certain individuals in the labour market. Governments and social partners have a whole repertory of possible measures influencing labour market behaviour of employers and individuals and affecting the match between supply and demand in the labour market.

For the purposes of this study, I conclude that employment stability might be segmented in the same manner as labour market structures in general. Gender might present differences in tenures, in relation to family and family allowance policies and, also, in relation to internal labour market functions and the bureaucratic nature of the organisation and advancement structures there. Furthermore, age might produce segments in labour markets, especially in relation to the young and the old labour force. These segments are not only products of internal labour market structures and firm economics, but labour market institutions might also influence these segments of the labour force. Thirdly at an individual level I link the occupation, salary groups, and skills or education. However, these features are interlinked in many ways in relation to employment stability and their interplay influences promotion probabilities and also the lenghts of tenures. Based on previous research results I conclude that (1) in general the wage level is connected to external labour markets at the beginning of the tenure. (2) An increase in wage level and promotions has the influence of prolonging individual employment tenures. (3) These promotions are still influenced by internal labour markets structures, such as compensation for skills, abilities, working conditions etc. and they mostly occur at the

beginning of the tenure. (4) The tenure might end if there are drastic differences between the open labour market salary levels and the inside firm salary levels. However, while it seems to be widely accepted that the latent factor behind wage increases and promotion dynamics is the individual learning and individual ability, there is more to be done in understanding the actual dynamics between employment tenures and promotions and salary increases. For example, much more research is needed in order to understand the impact of social groups and social norms in relation to job tenures and internal occupational mobility. The important issue here is to see whether the group effects of social groups (such as gender or age or branch), different firms, or the societal effects of institutions have some part, and what kind of part, in explaining the dynamics of inner-firm career mobility and job tenures. Furthermore, it is important to examine how this dynamic has changed or whether it has links with the overall structural composition of employment stability in labour markets.

Further, at an organisational level (establishment level) there might exist segmentation between differing economic situations of organisation and in relation to the size of the organisation. Also, the organisational level encompasses notions of internal normative structures of the establishment that might differentiate between each other. Some establishments might favour particular labour force segments more than others and this way create segmentation in employment stability. Additionally, local labour market factors might influence these segmentation patterns, as they create differing opportunity structures for mobility and stability.

In this research I will distinguish differing internal usages of labour force by researching gender, age, education, monthly salary, salary increments, family type and housing region influence on tenures. I will further examine the labour market types in order to understand the changes in employment stability and differing opportunity structures of individuals and employers. I also divide establishments based on their size, capital turnover and industrial branch. These divisions give us results for the structure of tenures and employment stability in Finland. Additionally, in this research, I will briefly examine the other practices at the establishment level, those social practices that do not show as the explicit variables in my data. Rather it is only pronounced in differences between the firm heterogeneity and the influence of the observable variables. I call this unobserved heterogeneity as the social (unobserved) patterns of behaviour in internal labour markets.

2.2.3 Polarization Thesis

Globalization may have countervailing pressures on welfare states. Globalization has radically changed the capital/labour ration, by doubling the amount of workforce not involved in agriculture. Freeman (2005) argues that this has made capital more precious than labour and, thus, the power of capital

has risen. Furthermore, capital can move easily from one country to another making the labour force a more important national resource. However, the quality demands for the labour force have changed under the pressures of globalization. Once low level tasks may be offshored, the demand in Western labour markets is placed on the highly skilled labour force. This has made the Western nations invest in education. Furthermore, globalization has put downsizing pressures on social protection systems when nations are constrained in deficit spending or tax mobile factors of production. On the other hand, globalisation increases the demand for social protection as it breeds economic insecurity (Rodrik 1997).

The effects of globalisation on national labour markets have been hard to detect statistically. For example from Finland, Piekkola (2008) divides the globalisation effect in two: those impacts that produce offshoring and those that include international firm founding in Finland. He argues that about 45% of the jobs in largest Finnish companies are situated outside Finland; however, the rates of job creation and job destruction remained the same throughout the 1990s indicating that there is no severe effect from the offshoring of jobs. Furthermore, there appear to be no radical differences between foreign owned and Finnish owned firms. The foreign companies, however, grow slightly faster (personnel numbers rose approximately 4% more annually and turnover grew approximately 7% more (Ali-Yrkkö 2007).

Over the last two decades there have been notions that earnings tend to increase at the top and at the bottom of the wage distribution, but not in the middle in Western societies. At the same time, there is a substantial decline in employment in middle-skill production and clerical occupations. This tendency is called the job polarization hypothesis. This effect is seen to be due to a drop in demand for the middle skilled labour force, when these particular jobs may be offshored or replaced by technological innovations. Also, some institutional changes in Western labour markets may lead to this "middle class squeeze". The increases in minimum wages, de-unionization and deregulation of the middle class occupations are put forth as explanations for this phenomenon.

The polarization hypothesis stems from the notion of technological change in the Western world. The argumentation was previously that increases in technology would depress the relative demand for the less skilled workforce (Rifkin 1995; Berman, Bound and Grilliches 1994). Later this view has become more nuanced and it is further developed and states that technology has depressed the demand for especially routine tasks, which might need even more skills. This nuanced understanding may help to account for the polarization of wages that has been observed (Autor, Katz and Kearney 2008; Goos and Manning 2007). The polarization thesis incorporates in it the idea that offshoring particularly concerns middle hierarchical level tasks. The low skilled, routine tasks or occupations, that don't require physical attendance at the location (like manufacturing), are offshored. These jobs are replaced in local labour markets

by service production tasks which do not require many special skills, but they require attendance (such as care services) (Autor and Dorn 2013). In the US there are findings that if we measure the job characteristics especially with wage returns the good jobs provided by the manufacturing industry fell by one half during 1992–2003 and most of the good jobs were created in professional, information and financial services (Holzer et al. 2011). This means that good jobs have become less accessible to those from disadvantaged labour market positions. Also, those workers, who had less education but worked in a good job, were at greater risk of earnings decline if they were displaced.

The new polarization of labour market thesis has drawn attention to occupations or tasks in defining and presenting the changes in the labour markets. It still seems that a task based analysis might be fruitful in understanding the effects of globalisation on national labour markets (Autor 2013). The task based approach offers a model by which it is possible to separate interaction among skill supplies, technological capabilities, potential trade, and job offshoring opportunities (Acemoglu and Autor 2011). Nonetheless, this model of tasks or occupations is still faced with the data shortcomings in that the data seems to have loose and inconsistent task definitions that brings about confusion (Autor 2013, 14–16).

In Finland it seems that there has been a gradual change towards a more polarized labour market, where employment is growing in highly skilled and well paid jobs and in low skilled, low paid jobs. The middle quality jobs are declining. Asplund explains this with the changes in the way individual and workplace attributes are valued in the labour market (Asplund 2009; Asplund et al. 2011). Kauhanen and Napari (2011, 9), however, argue that even though during 1991–2006 the relative size of lower level occupations was higher than upper levels, there was change in that the relative size of middle hierarchical levels was actually increasing. This happened mainly at the expense of the highest levels of hierarchy. Kauhanen and Napari present some explanations for this change. They suppose that the increase in the average level of schooling in Finland over the last two decades has had an influence on the change. Furthermore, structural changes in the Finnish economy have taken place during the observation period, and have led to rapid growth of knowledge-intensive sectors in Finland, such as the ICT sector. The study of Kauhanen and Napari might be seen as being contradictory to the hypotheses of the polarized labour markets. Yet, their study concentrated on the manufacturing industry which gives a picture of only one slice of the labour market.

The notion of polarization has been strongly linked to a general understanding of globalization but at the same time, there might be explanations coming from the national labour market structures or from national institutions. For example in United States, Boehm (2013) found evidence to support the polarization hypothesis especially in the top bracket of wage distribution, but he states that there remains room for alternative

explanations in the lower part of the wage distribution. His results suggest that neither technological change nor globalization, which both coincided with this trend, fully explain the polarization (Boehm 2013, 40; similar results in Kim and Sakamoto 2010). Additionally, returns for education have had clear impact on polarization. This means that in the US labour markets the education and skill levels became more important in relation to wages during the 1980s and the 1990s. But since then the offshorability of jobs has played the major role (Firpo, Fortin and Lemieux 2011). In actuality, the polarization hypothesis is strongly linked to changing educational structures of Western world. Since the 1970s the labour market has been characterized by an increasing supply of workers who have completed high school level education. In addition to this, the demand for skilled labour force has been growing as a result of technology advancements. Kruger (1993) sees that this has led to wage premium that have been monotonic, and that indeed, the growing amount of skilled labour may be seen as the driving force behind wage inequalities.

Institutions probably at least shape the impact of globalisation, but they may actually be the modus operandi behind polarization. For example, Fortin and Lemieux (2011) find that one third of the growth in wage inequalities (the polarization of wages) during the 1980s in the US may be traced back to institutional changes, mainly to de-unionization and minimum wages. Technological change and de-unionization played a role in the polarization of wages during the 1980s and 1990s. Nikolawa (2010) in turn, shows how the general level of wages in labour market is in relation to firm organisational structure and creates a model where firms adjust their organisational structure into a polarized one. First, when general education is low, also the wages are low in national labour markets. As the educational level rises the wage structure also rises. Later as the supply of the skilled labour force increases the wages go down again in labour market and the medium skilled will be put down in organisational hierarchy. This creates a condition where firms move into a two layered job structure (highly skilled and low skilled), because they hire only extra high skilled to do the specific tasks but other jobs in the organisation are paid the same.[1]

In this research the polarization of wage levels proposes two differing hypothesis for the changes in employment stability. First of all, it might be that in a situation where the middle level tasks are diminishing, their employment stability might also be in decline. On the other hand, if the employment stability and wages are in relation so that lower employment stability is linked to higher wages, then the middle hierarchical levels may face increasing employment stability.

[1] Acemoglu and Autor (2011) create a task based model to explain the recent changes in Western labour markets. In this model importance is paid to interactions among worker skills, job tasks, evolving technologies, and shifting trading opportunities, and it treats the assignment to tasks as endogenous and technological developments which may involve substitution of labour by machines.

2.2.4 Conclusion – Segmented Employment Stability

This research focuses on employment stability from the view point of durations of employment tenures. It has only little to do with notions of occupations that the individuals holds or how the firm organisation is structured, but looks more at the notion that during their stay in one firm individuals may change their positions from job to job. The overall duration of tenure is a sum of the time spent in all these positions. The duration starts from the event of entering an organisation and ends only when the relationship with the firm is ended. Both the entry and exit are due to external mobility of the individual. The entry and exit mark the phenomenon, and they are events that delineate a particular social empirical construct from another. Time in between the events is the tenure, which is the actual focus of the study. However, internal mobility is to be taken under consideration with salary increments during the first 5 years of the tenure inside establishments. Hypothetically, functions of the internal labour market might prolong the tenures. Thus, this influence is partly targeted in this research. Yet, the occupational promotions are not considered here due to data biases.

This study focuses on the functions of internal labour markets. It incorporates notions that the labour markets are segmented in social groups and these segments have historical institutional backgrounds. Further, these segments direct the opportunities of the workforce and also their employment conditions and returns to work, such as employment stability. In this research the segments under investigation are related to gender, age, education, income, local labour market functions, family types, and industrial branches. The internal labour market factors are dealt with in terms of size of establishment, annual capital turnover in the establishment, industrial branch and economic situation of the establishment. Further, the unobserved internal labour usage patterns are touched upon in the empirical part of the research.

However, the segmentation theory has always struggled to establish and maintain its theoretical integrity (Peck 1996, 47–48). On the one hand, it has embraced a wide range of causal explanations and has been rooted in the material, institutional and historical realities of labour markets. But on the other hand, it has related to mainstream neo-classical economic sciences. The segmentation theorists have begun to experiment with econometric testing. Further, economic labour market testing has taken input from segmentation theory more seriously. At the same time the traditionally rigorous historical analysis of the original segmentation theory has been undermined. This might be seen as absorption of the segmentation theory into a positivist orthodoxy of economic labour markets research where segmentation no longer has the integrity of the competitive alternative model for economic theorizing.

Still the different view of the labour market processes is steadily adopted by some theorists (Marchington et al. 2005; Rubery et al. 2003; Rubery and Grimshaw 2003; Anxo, Bosch and Rubery 2010.) They continue to defend the nonorthodox position of segmentation theory. In addition, the current notions of

polarization in labour markets might be regarded as a newly nuanced continuity of the segmentation argumentation. It has brought back to the table the socially driven divisions in labour markets that are constructed by the historical and social institutional rule setting of the labour market. Here the argument is stated that economic, social, and political forces combine in globalisation and start determining how national economies develop. The result is a dynamic non-equilibrium process. Further, after or during globalisation, there cannot be universal, a pre-determined social structure of the labour market, a so called true system, to which underlying economic forces are tending (see also Wilkinson 1983, 413). However new types of labour markets are moulded also by the national institutions that combine with new globalization tendencies.

Besides globalization there have been other structural changes in the Finnish labour market during the observation period of 1991–2007. The educational level of the labour force has increased, the aging of population is actualizing, and there has been an industrial re-structuring (the ICT sector and service sector especially have grown). These changes might be push factors for shortening tenures. First, the rise of educational levels might push labour markets into polarized structures. Secondly, the aging of the population with simultaneous changes in employment protection institutions might be a push factor towards dualised labour markets while the older generation holds onto lifelong contracts whereas new generations are forced into fragmented labour markets. Thirdly, it is generally hypothesised that enlarging the services and ICT-sectors leads to a more project based society and, thus, to temporary employment patterns.

In this research, segmentation theory creates the hypothesis that job tenures differ on an organisation level in a way that is not explainable with general economic information or individual level information. The organisations have certain manners of social behaviour that also govern the length of working spells. Additionally the segmentation theory points out that while one part of these governing rules is created in the shop floor practices, the other part is a construct of national level institution building. However, it might be that these social behavioural patterns have changed in time and that some other phenomena have become more important in defining the social rules and norms as legislative ruling has become weaker. Furthermore, it might be that in the context of globalisation and increasing economic competition the social norms of seniority or social/human capital might be viewed differently in organisations.

2.3 LABOUR TURNOVER – CONTINUOUS FLOW OF TRANSITIONS

Employment stability is also a phenomenon that is defined by the mobility in labour markets. Not only have long standing employment relationships been prevalent in industrial labour markets but also, two other findings are prevalent:

firstly, most new jobs end early; and secondly, the probability of ending a job declines as tenure gets longer. Both the starting of employment and its ending event define the time that is left between these two events. Thus, there are three different constructs in the phenomenon of transitions in labour markets and employment stability.

I define the starting of employment tenure as part of the recruitment process. For me, empirically the period starts on the date that is marked on the employment contract and recorded in registers. However, the whole processes of recruitment influences the tenure. Moreover, in relation to segmentation theory, I hypothesise, that the transition from the previous status of the worker to the next status might propose the existence of differing transitional segments in the labour market.

The ending of employment is an event when an employee stops working for an employer, and may result from death, resignation, retirement, lay off, non-renewal of a temporary employment contract, or discharge from the work. In this research, empirical analysis of deaths and retirements are excluded. As the analysis goes further, I will concentrate on two types of transitions: job-to-job transitions and job-to-unemployment transitions.

Next I will describe the mechanisms leading to different types of transitions and how they differ. This is important since if I am looking at the social action patterns inside firms, as well as the patters of the firms and of the individuals; we need to understand how these patterns affect the events of the transitions. Moreover, it is important to differentiate these transitions, by what instances they are markers of individual agency and in which situations they are more marked as establishment actions.

2.3.1 Transitions Into and Out of Employment

Recruitment is the process of selecting the right individuals for an organisation. The focus is on matching the capabilities of prospective candidates against the demands and rewards in a given job. Recruitment is important process for the duration of the following working spell as it defines some of the matching likelihoods of the employment. Recruitment channels can be classified according to two major criteria. (1) We may distinguish internal and external recruitment channels: those that spread information about vacancies internally in firms and externally in open labour markets. According to this criterion the use of internal channels gives rise to an internal flow of information and it is linked to promotions inside the firms, while the use of an external recruitment channel generates an external flow of information and opportunities for external hiring. The usage of internal information channels may also lead to external hiring if people from the lower job ladders are promoted and external hiring is used to fill in the gaps lower down in the organisation afterwards. (2) On the basis of institutional dimensions, one may distinguish between informal and formal recruiting channels. Informal channels use the personal social networks and

formal channels uses institutional networks (the media, employment offices) in conveying information. Informal channels may be used both for internal information distribution and for external distribution, so the two major distinctions often overlap (Russo et al. 1995). In Finland during the year 2011 the most used channels of recruitment were informal and internal channels. Most problems in recruitment were put down as being due to lack of formal education or lack of previous working experience (Tuomaala 2012).

Different types of recruiting have different outcomes at the organisational level, both in productivity and in job tenures. These procedures also have differing mechanisms in differing settings. For example, in Finland hiring workers from other companies' research and development units is actually not a significant knowledge spill over channel. Instead, hiring persons from other companies' research and development unit to work in a company's non-R&D units boosts both productivity and profitability (Maliranta, Mohnen and Rouvinen 2007). The informal recruiting channel uses the word of mouth, which is often done via existing employees. The information about an open vacancy is spread across the friendships of employees and via relatives etc. This type of recruitment channel places the possible applicants in same social groups as the existing employees and in this way the employer may try to narrow down the group of applicants swiftly to find the best fitting persons for the application. Research has found for example that this channel finds employees who stay longer in the organisation and who are less likely to be dismissed (Kirnan, Farley and Geisinger 1989; Russo et al. 1995). Hypothetically people recruited by word of mouth stay longer because they have a clearer idea of what the job really involves and they are from similar social groups as the existing workers. Also, applicants acquired through this channel have been pre-screened by the referent (usually a current employee), who has the advantage of knowing both the job demands and the applicant's attitudes (Kirnan, Farley and Geisinger 1989). The informal recruiting channels may actually be one reason for segmentation in labour markets. For example Drentea (1998) states that female employees especially are in worse positions in searching for job than males because they are not included in the social networks of those who decide on the executive level job allocations.

The notion of 'fit' or a good match relates to an employee's suitability for certain organisations and a certain position. 'Fit' may be defined as the degree to which the goals and values of the applicant match those of individuals considered successful in the organisation. Also, in relation to flexible organisations applicants matching this 'fit' should be able to change and find new positions inside the organisations as situations change. In Finland Vaahtio (2000; 2004) has studied recruitment from the perspective of individual characteristics. The decisions were mainly made by referring to the applicants' previous experience, their degree of fit to the field of the job, whether the applicant was an acquaintance of the employer from earlier occasions and

impressions of his/her personal being. Employers used much of their tacit knowledge in making these sorts of decisions. This meant that the most experienced or most qualified candidates may not have been chosen because the employers were looking for a good 'fit'. Even pre-set conditions might be abandoned and the rationally set criteria for the applicant might be turned aside if the correct 'fit' was found (see also Koistinen, Salin and Tikka 1987; Koistinen and Suikkanen 1990). A similar result has also been observed internationally. Townley (1989, Hallier 2001, 332 according) reported that hiring, which is tied to personal characteristics, often falls into the 'good bloke syndrome', rather than concentrating on dealing with the capabilities or qualifications required in the task.

Mismatches between worker and employer in recruitment arise from imperfect information (Bishop 1993). An analysis and information about a potential employee's work habits, occupational skills and the ability to learn new occupational and job skills would generate improvements in matching workers to jobs. This means that worker productivity and match appear to be better when employers have obtained recommendations from individuals that know the candidate well. In fact, workers who were employed based on recommendations of previous supervisors were better matched than those who were employed on the recommendation from the personnel office or by friends, relatives or current employees (Bishop 1993, 336). All in all, the 'good bloke syndrome' might be creating ill-suited matches in the labour markets or it may result in better matches when employers use their tacit knowledge in choosing a candidate whom they feel would fit into the organisation the best. Thus, the 'good bloke syndrome' may create more labour market turnover and lead to shortening of tenures.

Firm economy is an important aspect of the recruitment process. For the employer organisations recruiting is expensive and it requires a major economic decision. Not only the distributing information, but also the interviewing process, hiring and making a contract, orientation periods and possible training, and finally, the possible firing are each quite expensive operations. The recruitment process of companies is affected by the financial situation of the company and also by the labour supply situation in different labour market segments and the aims, structure, habits, values and history of the organisation (Rantala 1999). The traditional action patterns and the ways things are used to being done direct the recruiting process. For example, recruiting is different in newly founded firms than in older firms. Often a new firm recruits younger workers in general. This is explained by the fact that in new firms it is possible put formal qualification criteria to side and take new types of procedures into account (Hallier 2001). Results of a US survey (De Varo 2008) show that changes in recruitment strategies represent an important channel through which changes in the economic environment affect the starting wages and vacancy duration for new hires. However, the recruitment is also a dialoguous relationship between

the employer (needs for labour force and economic situation), employee and the structures. Koistinen and Suikkanen (1990) and Mortensen (1978) see recruitment as a game between the employer and employee. In this game both sides try to develop their own strategies to protect against the moves of the other party. This game may be also pictured as employees attempting to protect themselves against the structural forces of the labour market (see also Koistinen 1989).

We can picture the interplay between surrounding labour market structures, the employer organisation and employees with an understanding of the skill demands inside the organisation and the organisation's power over the surrounding labour markets (Windolf 1986). The employer, who can use its dominant position in the external labour market can, for example, set the wage levels as it pleases. It may also set the levels of other work related benefits, as health care services etc. Whereas those employers who are in subordinate positions in external labour markets are forced to modify their actions to the general level of the labour market. The skill requirements of the organisations refer to how much the employer organisation needs some specified professional know-how, and thus, how flexible it can be in its intakes (Figure 3).

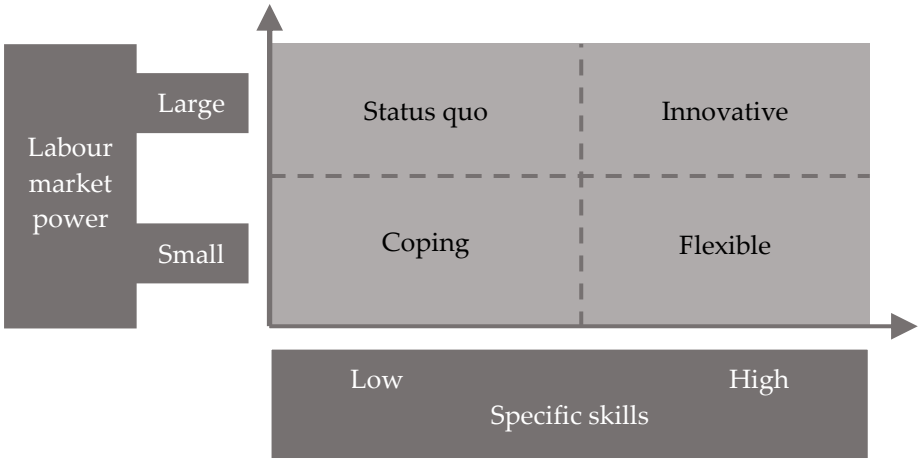


Figure 3: Recruitment strategies
Source: Windolf 1986

Those employers who use an innovative strategy aim at gaining highly skilled human capital for their organisation. They use as many recruitment channels as possible and organisations hire a very heterogenic labour force. An employer who is in a 'Status quo' position aims to renew its labour force by recruiting. The new hires are highly homogenous in relation to their education, skills and social backgrounds. 'Status quo' recruitment often uses informal channels and internal

labour market recruitment. Those employers who use 'flexible' or 'coping' strategies mould their intakes to suit the surrounding labour markets. They may also change their inner organisational structure to be compatible with the environment. These employers are in trouble with acquiring a suitable labour force as they offer worse salaries and working conditions than the previous two employer organisation types. They cannot pre-set any strong demands for example regarding the skills of their labour force and they need to educate their labour force for their own use (Windolf 1986). For employment stability these differing recruitment strategies might imply that if the industrial restructuring has made the employers more dependable on new skills they might need to recruit more or change their strategies in relation to labour market structures.

Research has found many results in relation to links between the organisational determinants of recruitment and the external labour market. In Finland the labour market age structures has an effect on firms recruiting and firing decisions because firms seem to adjust their own labour demands in relation to forthcoming labour shortages. The employers seem to be preparing for possible smaller age groups in labour markets and holding on to the older work force, but concentrating recruitment on the younger generation. (Ilmakunnas and Maliranta 2007, 3–4.) Wheelers' (2001) research showed that those companies who have more capital or who are more productive also hire a more qualified labour force. Small companies seem to recruit more via informal channels whereas large companies have more bureaucratic manners for recruitment (Curran et al. 1993; Millward et al. 1992).

From a firm organisational point of view, but also the individual workers point of view, a successful recruitment process is vital. For firms one result of effective recruitment is reduced labour turnover and good employee morale. Recruiting ineffectively is costly, since poor recruits may perform badly and/or leave their employment, thus requiring further recruitment. From the individual's point of view, it is good to have found a place, where the worker feels himself 'fitting' in. On the other hand labour markets as a mechanism need some mismatch in order to continue their function.

Yet, increasingly, many organisations are being transformed from structures that are built on functions and jobs, to those where self-directed multi-professional work teams are replacing traditional specialized workers. Furthermore, as companies downsize, simplify their organisation and try to boost productivity with fewer people, those that remain are being asked to assume more tasks, roles and responsibilities. This also brings new challenges to the recruitment as the process should be able to identify those who are the most flexible in this new internal labour market environment. The change in the surrounding labour markets (the restructuring of industrial branches, firm sizes and educational levels of the labour force) may affect how often and how much the labour force is recruited from the external labour markets and also the length that individuals build their careers inside firms or at what point they start to

look for outside opportunities and how they hear about those opportunities. The concentration of the economy into particular branches or the spreading of the branches has different impacts on segmented labour markets and this may result in branch specified labour turnover or in a more generally competitive labour market.

Oyer and Schaefer (2011, 1771) describe the research into the personnel economics of hiring with two differing theoretical traditions: (1) incentives in firms (contract theory) and (2) the agency-theoretic model. The incentives of firms in hiring situations (such as pay, promotions, opportunities to enhance employability or other benefits) are seen to induce firms' opportunities for gaining new labour. In the agency-theoretic view of personnel economics the agent selects from a set of actions with the objective of maximising her expected utility. In the absence of some means to match the two parties' interests, the agent might take up on an action that does not produce the most efficient outcome for her. In this theory the action is changed to utility. Further, the theoretical model might include the considerations of a trade-off between the risks and incentives for the both parties. However, the theory struggles with the modelling of these trade-offs. Since it seems that there are not only difficulties in empirical definition of risks, but also in that there seem to be a large number of unobservable aspects in this trade-off process. Furthermore, the theory works differently in different occupational hierarchical positions, for example in the understanding of pay for CEOs (Oyer and Schaefer 2011, 1773–1784).

The empirical results of these theoretical lines still follow the subjective-action sphere of argumentation. I place these results in the objective-action sphere, where the principal guiding norm is seen as being economic rationality. The empirical proof that incentives change action/utilitarian behaviour is strong (see for example Oyer and Shaefer 2011, 1773–1774; Lazear 2000; Bandiera et al. 2009; Besanko et al. 2009). Hypothetically, incentives could be also something other than just monetary (pay), for example employment security might be viewed as an incentive.

Recruitment and ending employment are intertwined processes. In Finland, of the jobs started between years 1991–2007 roughly 30–36% end as a result of changing jobs (results later in this research). Thus, once the new job is started the old one needs to be ended. However, the remaining 70–64% of employment ends with other types of transitions. There are two different types of endings instigated as an action of the employer: (1) a discharge or lay off or (2) a non-renewal of a temporary contract. The end of tenure as an action of employer may be due to the employers' economic situation or the employees' behaviour. These mechanisms may lead to job-to-job, job-to-unemployment or job to outside labour market transitions. When it comes to ending a job instigated as an act of the employee, on the other hand, there are also two different types of mechanisms: self-resign and the ending of a temporary contract. These can both also lead to one of three transition types. However, in the empirical analysis

some differences between the ending of work as an act of the employer or the employee may be differentiated. Next, I will tackle these different types of endings of employment relations and the mechanisms behind them.

If the ending is executed as an act of the employer, the cause may be firm related or employee related. Firm related *terminations* or *firings* are by law defined and they are mostly related to the economic performance of the firm. In employee related reasons, the termination of an employment relationship will relate directly to an employee's performance in the company. The three most common reasons are attributed to employees' behaviour, mainly defective job incompetence, violation of company rules, or interpersonal incompetence. *Lay-off* means temporary interruption of the employment relationship instigated by the employer. It occurs because of a lack of work or lack of funds. Lay-off may also mean a reduction in the number of weekly working hours. In many corporations downsizing by cutting employment costs by firings and using lay-offs has become a strategy to improve short-term profits and to make businesses appear financially healthy (Collins 2005). As an action of the employee a termination refers to situations where an individual decides to end the contract, in order to change job or for other reasons. The reasons may be related to personal situations such as starting education, family, or just general unhappiness in the current job.

Most new jobs end during the first year of tenure. In the US, about 50%, and in Europe, on average, 40–50% of new jobs end during the first year. In Germany Bookmann and Steffes (2010) found that more than fifty percent of all new employment relationships end in Germany after the first two years. The strongest and most consistent finding in all studies is a negative relationship between resignations and discharges and job tenure. This means that the probability of termination is highest at the beginning of tenure and it decreases as the tenure gets longer.

Generally this negative relationship is caused in many societies by seniority rules, which protect the longest standing employees in the company. Further, it is often hypothesised that the specific human capital accumulation and learning of the job specific skills make the longer durations more profitable for the firm. However, attempts to explain why these results exist are multifaceted and there are various hypotheses them (Farber 1999; Parsons 1972; Hall 1972; Blau and Kahn 1981; Mincer and Jovanovic 1981; Abraham and Farber 1987; McLaughlin 1991; Farber, Hall and Pencavel 1993; McCall 1990). These hypotheses overlap in many features, but they differ in some points. In the previous chapter I described the major hypotheses for the discussion on the matching process and internal labour markets.

The paper by Jovanovich (1979a) concentrates especially the likelihood of future job separation in relation to firm-specific human capital when both the human-capital investment and difficulty of finding other replacement job from the external labour markets are endogenous. He argues that the tenure effect is

caused by the growth of firm-specific capital, while the effect of experience per se works because a growth in experience is associated with a shortening of the worker's remaining lifetime. In another paper (Jovanovich 1979b) he looks into more firm specific indicators for turnover of employees. The presumption is that a worker's productivity in a particular job is not known ex ante and becomes known more precisely as the worker's job tenure increases (the learning process between employer and employee). He concludes that job turnover is generated by the existence of a distribution of the worker's productivity across different jobs. The no degeneracy is caused by the assumed variation in the quality of the worker-employer match. Thus, the lag in information both in individual level decisions about ending a job, and at the firm level about whom to hire, become important. Further, the learning process inside the firm and during the tenure of the job becomes important factor for permanent job separations.

The efficient separations view of job mobility implies that only inefficient matches are dissolved, thus, resulting in mobility that benefits both the employer and the employee (McLaughlin 1991.) So, the matching process might explain why many new jobs end during the first year. In general, an ill-suited match is most likely to be discovered at the start of job and thus it leads to quick separation. However, if employer manages to prohibit endings by solving pressing issues at work it also lowers employers' costs and raises productivity. (Freeman 1980.) Laughlin finds strong support for the hypothesis that especially lay-offs optimize worker-firm matches (McLaughlin 1991). Valletta (1999, 171) argues that the efficient separations view has limited implications for changes in turnover outcomes beyond those caused by productivity shocks, because they alter the relative value of existing job matches. He looks into the probabilities of ending a long-term job by dismissals and finds negative effects of tenures on the probability of dismissal during 1976–1993.

The exit type also differs between different social groups. The self-initiated resignation is hypothetically differentiated by gender, as females more probably will leave a job for a variety of non-market reasons. Sicherman (1993) found out that women are in general more likely to leave a firm in the beginning of the tenure and in tenures over 5 years women are less likely to quit. The reasons for their exit also differ since women resign more often because of poor wages, and not because of poor opportunities (Sicherman 1993).

Although, there seems to be only slight changes in job tenures, the transitions in labour markets seem to be declining. This notion is slightly in contradiction to the idea that tenures have not shortened, because if tenures are the same the transitions should also be the same. Nevertheless, in the US in 1988–2010, there seems to be decline in transition rates. Available evidence suggests that the decline in employment dynamics is an *acceleration* of a downward trend; job-to-job transitions declined by a half (Hyatt and Spletzer 2013). Changes in the labour force and employer features explain relatively little of the decline. Nonetheless, the decline in job-to-job changes explains the declining rate of

hiring and separations. The situations of increasing worker reallocations have been associated with higher economic growth (Jovanovic and Moffit 1990; Lentz and Mortensen 2008), which is hypothesised to be a product of a Schumpeterian creative destruction process of new and expanding businesses replacing the old ones, and of course, by the process of the labour market aiming at making the most profitable matches. If the decline in job-to-job changes is a product of labour market flexibility then this would be worrisome to any economy (Hyatt and Spletzer 2013, 2).

There may be inefficient separations in response to external economic shocks (Hashimoto 1981; Hall and Lazear 1984; Hall 1995). The dynamics of the accumulation of separations in downturns and of new hiring in uptrends is excessive to the contextual economic situation. This means that these phenomena are overly presented in different economic trends in relation to the actual economic situations of firms. Hall and Lazear (1984) argue that this is due to imperfect information on both sides of the actual situation and the productivity of the current match. This means that these events or actions accumulate and accelerate in different economic trends. Furthermore, this might provide an answer to why the "normal" explanation models do not seem to work and why there are so many differing results. Actually, it might be that the labour markets are in a state of potential downturn all the time and they cannot predict the actual situation correctly. The social acceleration then even increases this behaviour.

The ending probability for tenures is also connected to social groups and internal labour markets. Women, young workers, production workers, those with less schooling, and those in the private sector tend to be more mobile and end their tenures early (Farber 1994; Aho and Mäkiaho 2012). Also, those who work in industries with lower concentration ratios or industries with smaller average firm size tend to be more mobile in external labour markets. In addition, the ending of tenure is tied to more subtle delineations in labour markets. For example, mobility is strongly related to mobility before current employment (Aho and Mäkiaho 2012; Farber 1994). The ending probability in current jobs is smaller if the previous job tenure has been long (Aho and Mäkiaho 2012; McCall 1990). Bartolucci and Devienti (2013) find robust or general evidence (data linkages are not straight forward) in Italy that positive selective matching is happening in the labour market. This means that the better workers shift jobs.

Furthermore, the ending of a job has differing outcomes to individuals depending on the type of the exit. Much research has been done from the view point of displacement. Displacement causes long standing economic losses to individuals. Their future salaries tend to be lower and they tend to have more unemployment in their future career. They also have lower occupational statuses than they would have had if their employment had continued. In addition, these losses are socially divided. While the less educated face losses in

benefits related to long tenures, the more educated face losses of occupational status, job autonomy and job authority (Brand 2006).

2.3.2 Labour Turnover

At firm level the mobility of the labour force is called labour turnover. Turnover refers to the overall situation of how many tenures are started and ended in one company. Labour turnover is an important part of the firm's labour usage and is also important in relation to working spell durations. Human resource management research has focused on the total turnover of the labour force and its impact on firm economics. Still it is not clear to say how firms act in relation to labour turnover and what kinds of strategies they use. It is hard to say whether low or high labour turnover is good for firm economics or not.

Firms may try to manage their labour turnover with different strategies. For example, they may use the threat of working contract termination as a means to motivate employees to work harder. They may use wage setting as motivational or dis-motivational tools. They could use increments in salary – if they pay better salaries than are set in external labour markets, this could be inducement to the current job for their employees. Firms might react against losses of the labour force by offering higher wages. These notions of firm wage setting might lend support to the theory of relative deprivation (Runcimann 1966) and the theory of multiple discrepancy (Michalos 1985), which both emphasize the individual dissatisfaction is a gap between individual hopes set for work and the realisation of these hopes. Research has gained supportive information for this standing point (Pisarik and Shoffner 2009; Carr 1997). Also Kalleberg (1977) showed that the expectations set for work were negatively related with satisfaction at work and that if these expectations were met it would have a positive effect on job satisfaction. Daw and Hardie (2012) show that compensation theory works better in practice if it is added to satisfaction to work.

At the individual level labour turnover is in essence seeking for a better match for individual skills and returns on them (Killingsworth 1982; Jovanovic 1979b). At the firm level it is seeking for a perfect match and job creation or destruction (Davis and Haltiwanger 1990; Caballero and Hammour 1994; Mortensen and Pissarides 1994). The turnover literature has made attempts to formulate both these dynamics together (Burgess, Lane and Stevens 2000, 2001; Anderson and Mayer 1994; Mumford and Smith 2004). In research it is widely studied how firms adjust their labour costs when facing external shocks in their production or in profitability. Firms have to adjust their labour force in upward economic turns and in situations with growing demand for their products. They need to recruit more labour to be able to produce the output. In recessionary times firms may have to reduce their labour costs and this may be done by ending employment, diminishing wages or other wage related costs such as bonuses and non-pay benefits, such as healthcare insurances, on-the-job training

of the workforce etc. (Babecký et al. 2012). Firms may also freeze promotions and wage increases during recessions.

In the labour turnover literature, much attention is paid to individuals' resignation (or quitting) behaviour and how to prevent it. Quitting has been considered as a negative phenomenon; because if high-productivity workers are leaving organisations it is dysfunctional for the firm (e.g. Dalton, Todor and Krackhadt 1982). It involves costs in the re-hiring of a new person and in the losses of tacit or firm specific knowledge. Also, the dismissals are seen as negative for the productivity of firms, as firing costs may be high (for example Hamermesh and Pfann 1996). In essence, hiring costs together with firing costs, training costs and quitting costs are part of the broader firm's cost category labelled turnover costs (Dube, Freeman and Reich 2010; Hamermesh 1993).

At firm level, the reduction of turnover costs is desirable and avoiding this cost category is one of the main interests. The turnover costs are seen as tightly bound to the firms' wage setting. It is assumed that firms set higher wages and use increments in salaries in order to commit and motivate their workforce, as postulated also by the efficiency wage and internal labour market theories (Solow 1979; Lindbeck and Snower 2002). Alternatively, a commitment effect could be targeted with fringe benefits, bettering job conditions, promotion guarantees, job security and access to training. Some scholars even argue that this feature of a firm is the primary driver for the creation of internal labour markets (Creedy and Whitfield 1988).

In contrast to the view that turnover effects are negative for firms, some management research has emphasized that labour turnover can be functional and in the interests of the employer organisation. This kind of situation may occur when low productivity workers quit or bad matches are ended. Replacement of the leavers by new workers brings new knowledge and skills to the firm. However, if all new hired employees would be perfect substitutes for the old ones, worker turnover would be dysfunctional. It would just cause recruitment and human capital costs without having a positive impact on productivity. Worker turnover may bring a particularly good boost for productivity when technological change is rapid and firms need the latest knowledge of technological advancement (Aghion and Howitt 1996; Ilmakunnas and Maliranta 2007). In relation to turnover costs are other human resource management costs that relate to managing the continuously dispensing the labour force. It is argued that there are hidden costs like more expensive governance structures monitoring the output of temporary workers, matching of workers and resolving coordination problems inside the organisation (Geary 1992; Graham 1995; Uzzi and Barnsness 1998). The use of short-term employees requires for more socializing, training, monitoring, rewarding the performance and reducing transaction costs.

In macro economical contexts labour turnover is studied as to how it affects the supply and demand of the labour force in open labour markets. At the macro

level, turnover costs affect labour demand by causing time lags in the adjustment to economic shocks and structural economic changes (see Nickell 1986; Bertola 1991). One important feature of the turnover literature is how quitting and dismissals affect the recovery of labour markets after recessions. It is suspected that during economic downturns firms lay-off and fire workforce, but in upturns they hire more and thus, there are shortages of labour. However, there are also hypotheses that in recessions a firm that normally would have fired a substantial part of their workforce, now hold on to, or even hoard, the labour force that will become useful once the recession is over. It might be that firms have learned from previous recessions, and understood that once the bottom of the cycle is reached and demand rises again the firm will avoid possibly incurring labour shortages and hiring costs. Then, during upswings of the business cycle, firms might actually, instead of hiring new personnel who would be soon dismissed, would rather make use of different flexible working arrangements and human resource strategies, such as overtime, thus saving the hiring and the subsequent firing costs once the downturn begin again.

Job related satisfaction or job well-being may be considered as one indication of the matching process. They refer to the worker side of the matching process and they are situated in the individual-action sphere. The research that links job satisfaction to quitting intentions operates inside that sphere (see for example Asford, Lee and Bobko 1989) but the research that ties satisfaction to actual quitting behaviour occurs in finding the links between these theoretical spheres. However, job satisfaction is often depicted not by measures of the match but by psychological measures. Discussion has focussed on how the job satisfaction is created in individual minds, though comparison groups and the normal levels of satisfaction are hard to place. Thus, the interpretations of job satisfaction in utility setting have been difficult. The empirical results seem to suggest that the impact of job satisfaction is largest in the low levels of job dissatisfaction (see also Green 2010). This implies that the definitions of job satisfaction are in relation to structural determinants and the job satisfaction literature needs to take into account the structures of possibility, the institutional boundaries and normative boundaries of action.

Also, in relation to employment turnover, temporary employment contracts are one type of labour usage pattern of the establishment. At the establishment level there might be a move towards the use of the workforce on temporary employment contracts. Temporary employment contracts are also one aspect of the phenomenon of employment tenures, flexibility and stability. However, temporary contracts may be made for long or for short period, so they are not a clear indicator of the possible shortening of the tenures. Yet, there has been found a strong relationship between the two. It seems that there is a statistically strong interrelationship between the ratio of temporary to total employment and the incidence of employment tenure below one year ($r2=0.7$) (Auer and Cazes 2000). But there are countries that have both high proportions of temporary

employment and comparatively high average tenures (Finland, Sweden, Portugal and Greece). Similarly, permanent contracts do not necessarily mean long tenures. For example, in Denmark, permanent contracts account for roughly 90% of employment but mobility is still high and tenures comparatively short (Madsen 2002). Thus, the prevailing employment contract type in a country might be a misleading indicator for tenures.

Still, legislatively temporary contracts differ from continuing ones in that there are not any obligations for the employer once the contract is ended. Temporary contracts hypothetically offer advantages to employers. One hypothesis is that firms have begun to use temporary contracts in order to avoid dismissal costs (Osterman 1987). Further, benefits for employers might be, that the temporary contracts offer flexible staffing arrangements, expertise, and presumed labour cost savings. Temp workers provide firms with numerical flexibility enabling firms to adjust staffing levels to uncertain market demands (Atkinson 1984). The permanent workforce does not allow this adjustment as easily because it is more regulated by national laws. In addition, social expectations and bureaucratic rules determine permanent employment more (Abraham 1990). Temporary contracts also offer firms expertise that might be costly and difficult to develop or maintain inside the firm, especially, if it is needed only sporadically (Christensen 1991; Pfeffer 1994). In relation to job tenures and the recruitment of temporary workers Amuedo-Dorantes (2000) found that in Spain employers recruit temporary workers because they want to adjust to quick production changes more easily, but also because the high unemployment rate implies extra supply of the labour force and permanent employment contracts would mean better work-related benefits, higher firing costs and the wage differences between the two types of contracts.

Temporary working arrangements are found to exist more in large establishments and firms (Abraham and Taylor 1996; Davis-Blake and Uzzi 1993). This might happen because of many hypothetical reasons. It may be that large establishments have more human resource expertise and monetary opportunities to manage high turnovers of staff or there may be more highly developed organisational structures that allows hiring for external tasks some outside knowledge. On the other hand, in might be that small companies are more dependent on their workforce and, thus, they pay more attention to not losing their workforce. Also, firm age may be connected to the use of temporary contracts. It is argued that job routines and practices tend to become resistant to change over time at the individual level. Thus, as employee tenures increase, the establishment level becomes accustomed to and rewarded for applying particular procedures, which become standardized as the organisation ages. This happens particularly if organisations were founded in and designed for a stable environment and long term job holders (Hannan and Freeman 1989; Zhou 1993; Rousseau and Libuser 1997; Smith 1997).

During 1989–2003 permanent working contracts diminished in number by 61,000 in Finnish labour markets, and temporary working arrangements increased by 56,000. The decrease in the number of permanent contracts is mainly concentrated in the over 45-year old employees and this corresponds to the general aging of the labour force. Temporary working contracts have increased in all age groups but most notably on 25–34-years aged groups and over 50-years old (Haataja 2006, 39–40). In OECD records the share of temporary contracts in Finland rose from 10.5% to 17.7% during 1985–1998 (Auer and Cazes 2000).

However, a great deal of literature exists on whether the temporary jobs actually are only transitory situations in gaining permanent employment. Some research finds that, at the individual level, this is actually the case (Booth, Francesconi and Frank 2002; Gash 2008; Giesecke and Gross 2003). The potential for temporary contracts being stepping stones to permanent employment has implications also for job satisfaction and feelings of insecurity among the temporary workforce. For workers temporary contracts have been found in general to be undesirable in relation to permanent jobs. Temporary workers have lower levels of job satisfaction, receive less training and are less well-paid (for example Booth, Francesconi and Frank 2002). In Italy Bruno, Caroleo and Dessy (2013) found that lack of job stability is the most serious cause for lower satisfaction in short term employment, but this is divided between different types of short-term jobs. In temporary jobs workers may compensate for the satisfaction drop with other job aspects, like opportunites to be 'promoted' to a permanent position, while a contractual freelancer could not compensate for the lost job satisfaction in the same way.

Individual level cognitive job insecurity refers to an individual's estimate that he will lose a job in the near future (Asford, Lee and Bobko 1989; Greenhalg and Rosenblatt 1984; Sverke, Hellgren and Näswall 2002; Hartley et al. 1991). Affective job insecurity refers to anxiety about losing one's job (Sverke and Hellgren 2002; Borg and Elizur 1992). Cognitive job insecurity is a major determinant of affective job insecurity (Borg and Elizur 1992). There is lot of empirical evidence that individual level job insecurity has grown during the last two decades. There are several notions that individuals do feel themselves more insecure in the labour market. For example, Schmidt (1999) found out that in the United States workers' beliefs in losing their job have become more pessimistic in the 1990s in comparison to their beliefs in the 1980s and the 1970s. Furthermore, individuals fear possible earning losses and unemployment after losing their jobs. Bernhardt and Krause (2013) found in their study of German workers' perceptions of job security that East German workers with standard employment relations were more willing to accept flexibility and performance requirements for their work. They conclude that the lower job security in East Germany versus higher security in Western Germany has created a new type of psychological contract which promises long-term employment only if workers

eventually meet the workplace demands. At the same time this context has been fuelled by lower trust in the employers. Individual feelings of job insecurity may also lead to low levels of job satisfaction and this has connections to quitting intentions in the individual mind sphere (see Asford, Lee and Bobko 1989). Also, against the general understanding that temporary job holders should feel more insecure in their jobs, it has been lately noted that, actually, the permanent workers (all other things hold constant) feel more insecurity in their work. For example, de Cuypers and de Witte (2007) argue that permanent workers expect higher levels of job security and, thus, the possibility of dismissal and job insecurity, is more in contradiction with their expectations. This raises the levels of insecurity among the permanent workers.

There may also be national differences in individual feelings of security and insecurity, since the historical institutions and value arrangements are different. For example Inglehart (1997) says that the Western countries have been shifting away from values of survival need (materialistic) to individual freedom, personal growth and aesthetics of enhancement (post-materialistic). Spilerman (2008) analyses, based on studies done by Ester et al. (2006) and Mills et al. (2005), that actually in Nordic countries the welfare state security institutions may be shedding the fears cumulating from post-materialistic value arrangements more than elsewhere in Europe or the US.

Thus, even though the end of work has been predicted several writers argue for the notion that employment security and stability is still the key in individual level job satisfaction and in their transition decisions. For example Doherty (2009) found in qualitative case studies that individuals still attach their identities around work and jobs in different fields. The work still fulfils important personal and social needs and the workplace remains an important locus for social relations.

2.3.3 Conclusions – Segmented Transitions in Labour Market

Recruitment and the entry point to the organisation is important for the length of tenure. The external recruitment and functioning of internal labour markets is vital for the length of tenure. This research, on one hand, sets its ambitions to explain what happens after the first entry to the organisation. If employment durations have become shorter it might actually very simply be because recruitment has become worse and finding a good fit does not work well anymore. This then might mean that expectations for new employee has changed and become more obscure or that the workforce has changed so it no longer fits the employer needs. It might also be that the share of struggling or flexible employer organisations has grown.

These previous notions of the significance of the recruitment channel are important in relation to how the internal labour market operates. The results indicate strongly that firms have some inner logic in their labour usages that are not altogether consistent with economic aspects. Because the actual starting of

the employment relationship is a dialogue between structures and agents this also indicates that the duration of employment is also actually a negotiation between the two. Furthermore, this information about recruitment also defines the ending point of the employment relation as in the end of the working spell the same operations start again. Individuals may start to compare their salaries to the general salary levels in labour markets or the employers may start to compare their profitability to the economic situation of the markets. These considerations alongside the socially constructed behavioural patterns together lead to creating the decision for ending a job. In this research I will detect the establishment level behaviour patterns by looking at the individual level selectivity into particular establishments. I will be able to see whether some particular segments of the labour force are located in establishments that use long or short term employment. This selectivity is one part of the labour market allocation process, but at the same time it describes the labour market segmentation. The longitudinal picture will show us whether there are new types of labour force allocations and whether there is new type on inequalities in the structure of employment stability structure.

The ending of tenure, on the other hand, may cumulate from individual actions and from organisational demands. It may be that there is dissatisfaction at the individual level between the demands of the job and the rewards for it, such as between salary expectations and actual salary. Furthermore, dissatisfaction may cumulate from individuals' other spheres of life or from conflicts within the organisations, such as from the family situation, or job dissatisfaction. These contradictions might be lowered with good organisational management. Organisations may also use temporary working staff in order to more easily adjust to economic changes or they may use dismissals and layoffs in the case they need to adjust their labour force. Further, organisations may use dismissals if they are unhappy with the productivity of an individual worker. This possibility is however, restricted by labour legislation.

Market-based theories of organisation seem a contradiction in terms; if markets operate in the way specified by neo-classical economic theory, as perfectly functioning 'clearing mechanisms' balancing price and cost, there is no conceptual role or technical need for 'organisation'. As Coase (1937) realized in his classic paper, if markets are perfect then firms (and organisations) should not develop in perfectly regulated market transactions based on the voluntary exchange of information between equal economic agents. Coase was, however, forced to recognize the reality of firms as being collective economic agents, accounting for them as 'solutions' to market failure or breakdown. As mechanisms for 'internalizing' recurring economic exchanges, firms reduce the cost of individual transactions through standardisation and routine. They increase the efficiency of resource allocation within the market system as a whole by minimizing transaction costs between economic agents who are naturally distrustful and suspicious of their partners.

If the tenures in employment are actually shortening, it for one thing implies that the reallocation of workers across sectors may be responding more quickly than before to demand shifts – labour markets have become more flexible. It may also be that, if this phenomenon is produced by increasing short-term, temporary, employment, there may be relatively small direct costs to employers, and this may then encourage new hiring in the face of uncertain future demand (see also Farber 2005, 1). Put this way, the shortening tenures then are for the advantage of the labour market and economic development of national economics. However, the implications of more mobility in the labour market also has negative effects on the national social structures and, thus, it may be argued that it might have negative effects on the national economics. Especially, critical notions have been made towards the burden that this flexibility has put on the individuals. If labour mobility is a result of dismissal because of the economic situation of a firm, the individuals may face long-term insecurities in their working career. For example, Farber (2005, 24) finds out that in the US 35% of dismissed employees were not in employment after two years, 13% had a part-time job, and of those who had found re-employment 13% had smaller salaries than they would have had in their previous jobs. These individual losses have cumulative importance to national economics, if such situations are increasing. Thus, even though flexibility might lead to some short term efficiency in production, the larger societal consequences should also be noted. For example, in order to reduce the negative results of dismissals more national efforts should be put on re-employing the dismissed (Farber 2005, 24).

Furthermore, the latest transition figures show declines in job to job transitions in many Western labour markets. This is in contradiction with aims of flexibility. If the employment stability shares are roughly staying the same at the same time when job changes are declining, this would mean that the labour markets, instead of becoming more competitive, are becoming more locked in. If the growing insecurities of individuals mean they do not feel secure enough to change jobs and search for a better match for themselves, this might turn against the national economics and functioning of labour markets. Thus, in the current situation of increasing globalisation it is utterly important to know how these mechanisms of stability and transitions function in national labour markets. It is necessary to also notice the social determinants of labour allocation processes, and not only view these phenomena as driven by economical determinants.

3 Research Data and Methods

Time is a mundane, taken-for-granted element of life, but in research which analyses change across time, it has to be conceptualized with clearer definitions. In relation to ontological understandings of phenomena and in methodology, time has to be conceptualized in such a manner, where social meaning of time, and how it represents it, is focused correctly. Research needs to conceptualize time in sequences or in calculable time units in order to analyse differences and changes in social life. However, these time units and sequences should mark something meaningful about human life.

When conceptualising change, it is first important to describe the phenomenon in question very clearly. In order to provide an ontologically accurate description of the nature of a phenomenon one should consider four essential elements. *Firstly*, one should define what the constructs of the phenomenon are, and how and why they are related. *Secondly*, it is important to define to whom the constructs apply and where and when they are applicable. Often, the questions of whom, when, and where are seen as boundary conditions for research phenomenon (Whetten 1989). However, considering time and when-questions is more than just about the limitation to preliminary conditions, since time directly impacts the what, how, and why elements of research. Incorporating time into a research can totally change the way that relationships between constructs are conceptualized, and therefore alter the analysis that is made (George and Jones 2000).

In this research I have four different concepts of time: (1) duration of employment tenures; (2) the years 1991–2008; (3) changes (shortening or prolonging) of the tenures; and (4) causality, which inevitably leads to notions of what phenomena have existed before changes. I will be measuring tenures by days of employment with the same employer. Ontologically, first, I have to tackle what this unit of measurement actually tells if I want to sociologically describe, understand, and interpret both previous research and the results of this research. These definitions have been made in the theoretical portion of this thesis in the previous chapter. I have defined tenures as implications of matching processes inside the firm, and that they represent human capital accumulation, but at the same time they represent an individual level regarding the security and stability aspects of human life. At the firm level, the length of tenures implies not only monetary capital accumulation, but also learning processes and internal labour market mechanisms. Further, at the firm level, tenures depict labour usage and turnover within companies. At the structural level, employment stability is represented in the aggregated length of tenures.

These levels also have implications for the competitiveness of national labour markets and for the foundations of social systems. (See more about time in labour market research Devoe et al. 2010; Epstein and Kalleberg 2001, 2004; Hearn and Michelson 2006.)

3.1 TIME IN SOCIAL RESEARCH

When tenures are measured in time units, such as days in this research, and as clock time is ahistorical and calculates time passing with no reference to context, time must be given some social meaning. Isaac and Griffin (1989) and Isaac (1997) portray this dominant ahistorical time as a, "...linear organizing device for a sequence of events or an incremental counter 'marking time' in equal units as in clock or calendar time." This is time that is divisible as a homogeneous succession of instants of duration with uniform and linear qualities. It is abstract "objective" time represented as independent of observers, events, space, and motion. As it flows, time delivers the phenomenal world along at a uniform pace. This is, in fact, the hegemony of Cartesian-Newtonian abstract time that has permeated the actors, organisations, and cultures of industrial capitalist societies for the past several centuries.

Because measurable time is easily used in research, sociologists routinely divide the past into temporal chunks, which are supposed to represent certain social phenomena. These periods may be viewed as separate cases, and comparing them has much in common with comparing social institutions. This can be seen as teasing out important differences between two time periods, and may also involve some causal explanation seeking – searching for explanations that will hold across different temporal settings. Griffin (1992) contrasts two broad forms of historicized time. The one that is more commonly used in the social sciences, he labels "time-as-context". Here, time and place form a concrete setting usually employed by an analyst as a background or demarcation. It categorises history to detect, represent, and explain some limited generalizations or transitory causal regularities. Time classifies context into temporal units and time becomes a presentation for example of economic upturn or downturn. Explanatory inferences are then logically attached to a context that indicates some relative regularity in a set of institutional or structural arrangements.

The methodological difficulties in time-as-context are the possibly simultaneously changing phenomena (constructs) and causal mechanisms. If a phenomenon changes all together, there might be differing causal patterns that are involved in different time periods, or the magnitude of causal effects may differ in time. Or it might also be that the construct does not change but the actual effects still change. Furthermore, if (and almost every time) the simultaneous change on causal effects and construct happens, the question does not anymore lie in the causal explanation, but actually in what is behind both

changes. Thus, what the difference between comparing social institutions and comparing time periods is should be reconsidered. When we are comparing time periods, the similarities or differences may be reported but also an event between two time periods could be under scrutiny. This type of research has similarities with narratives and the way in a narrative study how one tries to specify how contingencies steer historical change and what mechanisms lock in the flow of events (Haydu 1998). A narrative tries to create continuities in social action and time periods, and tries to avoid the pitfall of separating time into two distinct cases.

Thus, in positioning time in concrete research, it is obvious that even though time is a continuum that reflects the past and future in present action, not all aspects of past and future are important in defining the present. Only those constructs from the past and future are relevant that are connected to object phenomenon. Acknowledging the embeddedness of the past and the future in the present suggests that it may not be meaningful to dissect time and artificially separate it into discrete, objective units to which we assign different content (Faulconer and Williams 1985; Maines 1993). The second temporal form in research, eventful time, is introduced by Sewell (1996). This way of understanding time is premised on the potential power of social events (defined in some time periods) to transform social structures. In this case, temporality shifts from being a broad historical period (time-as-context) to time as an active process unfolding social action and events. It begins with the understanding that the mutually constitutive interplay of social structure and social action is a fundamental social dynamic. It is continuously occurring in and through time (Griffin 1992). By taking the sequential, ordered, contingent character of social events seriously, this approach offers a much more intense consideration of concrete (local) temporalities that shape, and are shaped by, active human processes, and the social reproduction and change brought about by such actions.

Sequences of social actions, or events, then, are the raw materials from which narratives and logical deductions are built. However, any given sequence must be linked step-by-step to the phenomenon under the scrutiny of research; the event has to be combined with sequential significance in relation to the focus of the construct and generally thematised to it. To locate actions in a narrative or logically understandable sequence means linking preceding actions to subsequent ones, and this is one way to understand what may have caused latter actions and, thus, help to explain a studied phenomenon's occurrence. It is this combination of cumulative succession of connected actions plotted in a holistic configuration of actions and events that gives logical reasoning and narrative its unique intelligibility (Griffin 1992).

Adam (2004) proposes that we should think about temporal relations with reference to a cluster of temporal features, each implicated in all the others but not necessarily of equal importance in each instance. We might call this cluster a

time-scape. The notion of scape indicates, first, that time is inseparable from space and matter, and second, that context matters. When we consider the dominant, public time-scape of industrial temporal relations, each of the temporal features identified in the basic time-scape cluster is associated with a number of particular practices of transcendence and transformation.

This sort of narration must be capable of dealing with irregularities of nonlinear social dynamics grounded in the power of transformative localities. In a nonlinear world, irregularities in the trajectories of "macro" or "global" processes will likely display local (time/place) contingencies that transform the historical process. Small shifts in initial conditions or intervening events allow small actions and events to produce very large changes, maybe even major categorical transmutations or "explosive turning points." (Isaac 1997.) In trying to understand the change in labour markets it is important to understand two different manners of change: an incremental manner of change and a discontinuous manner of change. In organisational research these are often referred to as evolutionary and revolutionary change (Porras and Robertson 1992). The same phenomenon may have both aspects of change in their nature. In durations of tenures, changes may be rapid, like in the case of mass dismissals, or gradual if the dismissals are spread over many years or the structural change happens in different branches of the economy at different times.

Haydu (1998) states that in dividing the time period in between two constructs (before and after) of an event, or splitting the time into multiple units; the researcher might find that the one case is being transformed into another through different sequences. When composing a piece of research on change, one must also understand how the data and practice present social change. It may be that the frequencies of some phenomena change, or the change is rhythmical and occurs in steps. But in longitudinal research we, might find that the change is cyclical and tied to number of time-unit or to contextual factors. It might also be that the period the data covers is too short to show these cyclical patterns. Furthermore, some phenomena may spiral over time. This means that they intensify or increase in an upward direction, or they decrease in a downward direction. Spiralling may be nonlinear and exponential, and it may happen in short or long periods of time. Instead of spiralling, some researchers (for example Koselleck 1986, in Leccardi 2007, 25 according) talk of social acceleration. Social acceleration means that the acceleration of change erodes experience – the shortening of time lapses between an event and public perceptions of it accelerate the action patterns that then accumulate from the observations. Identifying these dimensions of change is often the key to understanding the nature of the phenomenon.

By focusing on events and causal chains, we then would have an agenda for moving beyond methods that merely compare periods. The strategy that Haydu presents treats sequences as narratives; it aims at making narrative-like sequences as explanatory periods. In narrative research, the analyst organizes

events into a story with a beginning, middle, and ending; central characters, and a coherent plot. Once there is a story line, events in one point in time can be "explained" with reference to prior plot developments (Abbott 2001; Isaac 1997). Narrative comfortably accommodates the inescapable contingency of historical sequences, whereby events alter the direction of social change and transform social structures (Sewell 1996; Abbott 2001). Even though there is logical integrity in this methodological idea, it still fails to establish connection between eras (Haydu 1998, 351). Formal parallels in sequences of events within two separate periods fail in explaining how events in one influence those in the other. This also emphasizes the actors' role in social change. Haydu (1998, 357) argues that, "...the ways people cope in one period affect both how their descendants diagnose the next crisis and what remedies they have available".

I define time as a contextually bound, socially constructed, and institutionalized social structure. Time is defined in an individual sense and in a socially created sense of time. Calendar time is a measurement unit, and it helps in describing social change. Events happen in this socially created time and they are marked to the structures by measurement units of days, months, and years. However, in any events, social constructions of the past, present, and future are combined because the meanings of the events are tied to the flowing present. In this research, I will be measuring time in days and years. The duration of working tenure and employment stability, is a social phenomenon that has many interpretations in society; for some individuals it may describe insecurities, for others it may mean stability.

In this research, the studied change of phenomenon is the changing durations of employment tenures. This phenomenon is constructed by aggregating the duration of individual working tenures, and declared as applicable to all working aged persons in Finland during 1991–2007. These years create many differing contexts for the phenomenon and the phenomenon's features are related to the different contexts. However, this context defines the change and the studied phenomenon as it is given different meanings in different times. Also, the depicters of change gain different interpretations, thus, different influences on the phenomenon at different times. Furthermore, I offer several different levels of consideration for time; I have the wide and overall time concept of modernity, industrial society, and globalization as phases of social development and social structures. On the other hand, I have a concept of time as economic down slopes and upturns as they modify social action within society. Thirdly, I have the concepts of individual lifetime and durations of individual employment tenures.

Time has two methodological meanings in this research. Time is treated as a context because in regard to years, with the period of 1991–2007, I refer to the contextual national economic situation. Even though, at some level, they are measurements of time passing, at the same time tenure and the event of ending tenure, are actually lodged to constructions of labour markets for those

particular years. I also use time as eventful time when I refer to lengths of tenures. Massey (2008) depicts different types of time and space with a two dimensional coin that moves in time. This is, in her opinion, not the correct way to understand time, but the sides of the coin should be understood as interlinked. In this research, I see my studied social phenomenon: the duration of working tenure, as a construct that moves in time. Its constructions entail the past, present and the future together, and it also incorporates the context, thus the space, in it; it is like a ball that moves in time (Figure 4).

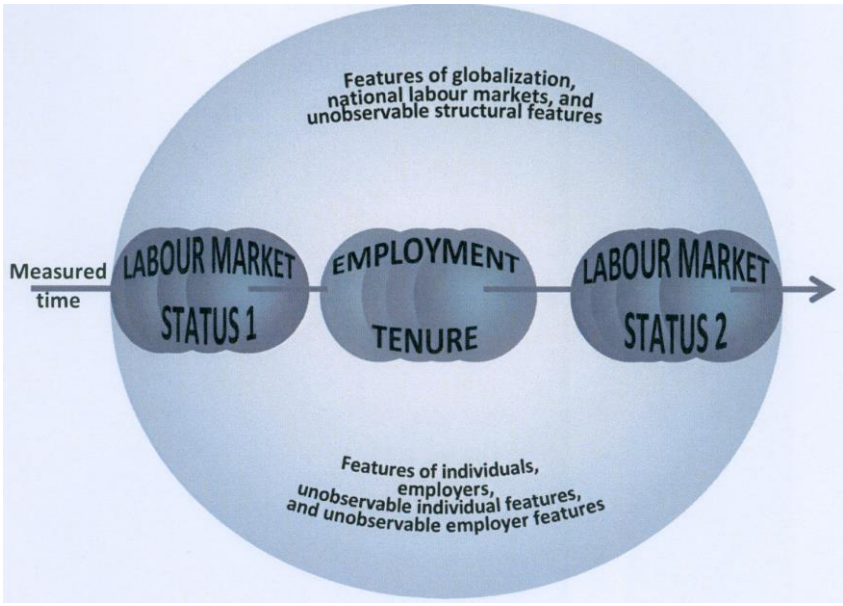


Figure 4: Employment tenure as a social construction of time

Even though in the figure above I have delineated the factors from each other, this is done purely for analytical and research strategy reasons. In reality, they all also intermingle together, but their impact on the phenomenon under scrutiny may be differentiated in analysis with suitable methods. Further, the unobservable may be differenced phenomena, or they may be parts of the factors that are included in the analysis, and thus, their impact is included in the variables. I will, for research purposes, aggregate the analysis in this study in predicting the general hazards for ending of tenures of differing labour market segments. I take under analysis all tenures that start during a particular year and tie them together in their contextual time, allocated by particular points of measured time.

From the data, I will search for the explanations for what is the rate of change in employment tenures, why change is happening, whether tenures change in an

incremental or discontinuous, rhythmic or cyclical manner, or whether the change spirals over time. The type of the change has meaning in the analysis, since it defines the importance that will be given to changes. It might be that, actually, changes in employment stability and the phenomenon of employment stability are continuously in an upward or in a downward trend. Thus, any far reaching conclusions about Western labour market changes might be ill founded. However, in this data, I cannot cover the whole industrialization period and measure how stable the phenomenon has been. However, in relation to previous research findings, I do consider this phenomenon as rather stabile in the Western world.

In this research, I do not give much consideration to durations between tenures; I have computed employment spells as a one tenure if spells have less than 1 month break between them and if they continue in the same establishment. Rather, I observe only what the destination is right after tenure and use this as one variable or factor in analysis. Furthermore, I do not actually aim to present any causality. I rather present probabilities for the ending of employment, how these probabilities are linked with the explanatory factors, and whether there are changes in time in these probabilities. I think that the explanatory factors and their influence may change in time, and this is actually the main interests in my analysis. Firstly, I will demonstrate how a share of short tenures has grown in Finnish labour markets, and then I will look into how other constructs in labour markets are linked to this phenomenon. I will also be looking at how the previously declared results in research and hypothetically interlinked factors connected to tenures have changed during the period of increase in short employment shares. Based on previous research and analytical thinking, in the discussions chapter, I will try to answer the question of why the relationship between theorized causes and theorized effects changes in the manner that is described in this research.

However, after these considerations, the change might not be severe enough to be called a real change; we might compare the differences to the contexts, the manner of the rate of change or the causes and time lapses within the change, and come to the conclusion that the observed change of a phenomenon is merely a product of the aforementioned, and that the actual phenomenon has not changed much. Furthermore, in relation to the theory previously presented, one might assume that this labour market restructuration works differently in different segments or parts of the labour market.

3.2 SURVIVAL ANALYSIS

There are different statistical possibilities for dealing with analysing time. “Survival analysis” is a family of statistical research techniques dealing with the time it takes for something to happen – the time that it takes for an employment

tenure to end, or how long tenures are. In my research method, time is a measurement unit, and with a survivor function we are assigning explanatory power to time. However, the time in itself might not be the actual cause, but the learning of a special capital or other time bound constructs as described in the theoretical portion of this thesis. This cause is involved with time passing by, and in analysis it appears as if the duration of employment is a function of time. If we would have all the information, such as all the information related to the processes inside employment tenure and the accumulation of specific human capital, then we would not have to assign any role to time in our model. Instead, we would use those measurements as explanatory factors. However, this is not the case here. The register base data does not have any individual level measures of satisfaction or knowledge accumulation, thus, we need to approach those issues from another angle.

The term "survival analysis" is based on medical applications in which time until relapse or death is studied between groups: those who have received medical treatment or medicine versus those who have not. The basic question in this type of analysis is whether those treated have longer survival times. Survival analysis can be replaced within manufacturing industry studies with "failure analysis", when analysing how long it takes for a machine to break down. Interest is then focussed on whether the failure time is different if different materials are used or if a machine operates in different temperatures. In labour market studies, the most commonly used term is "survival time analysis", and particularly in the context of employment stability, "survival time" means survival time in one job. In unemployment tenures, the term refers to how long it takes for individuals with different features to gain a job. This period is ended by an event of exiting or entering an organisation.

Differing questions may be posed to survival analysis depending on the data available and the phenomenon in question. Most simple studies frame the question of whether the treated samples survival times differ from those that were not treated; another set of questions depict whether the survival time is influenced by some other co-existing variable like gender, age, branch, and so on. In general, it is a study where the dependent variable measures time to the occurrence of an event. Because we are dealing with time, we need to consider carefully what has actually been measured. Also, the fact that time is a dynamic process provides challenges in formulating a model that is not present in cross-cutting studies.

For the purposes of this research, the possibilities offered by a semi-parametrical Cox regression were the clearest ones. This technique addresses group differences in survival times. Basically, I look at:

1) How individual level and establishment level covariates influence the probability of ending tenure?
2) How the covariates influence has changed during 1991–2007?

My hypothesis is that from these analyses, I can analytically explain 1) Has the structure of employment stability changed during 1991–2007; and 2) if the influence of other variables in individual or in firm levels have changed, can I say that the change is linked with those particular variables in which the influence has been strongest toward shortening/lengthening of tenures. I attempt to detect the mechanisms of change in the level of organisational action or in the level of individual agency, and also attempt to detect changes in the overall model fit to see if covariates have lost some of their influence.

The Kaplan-Meier estimator (the products limit estimator) of the survival function incorporates information from all the observations available (Kaplan and Meier 1958; Hosmer, Lemeshow and May 2008, 17), and it considers survival at any point in time as a series of steps defined at conditional and censored times. It uses the observed times to estimate the conditional probability of confirmed survival at each observed time and then multiplies them to obtain an estimate of the overall survival function (Hosmer, Lemeshow and May 2008, 17). In order for an individual to survive within the same employment from 1.1.1991 until 31.12.2007, he/she has to first have survived until the time 2.1.1991, and given that he/she survived to 2.1.1991, he/she must survive to 3.1.1991, and so forth. If he/she does not survive the entire time, he/she will be marked in the data as 1; if he/she survives in employment he/she will be marked as 0. The survival time is then calculated as the number of days of survival. However, since we should not have any exact amount of time for the observations that survived the whole period and beyond, we need to censor such observations.

Censoring refers when we artificially mark those observations which do not end during observation period, as ending in the last day of our observation period. This is normally called "right-censoring". If we would have data where the beginnings of tenures might be situated before our observation period, we would have to censor those by "left-censoring". Further, censoring also applies to those observations that end because of another reason than the one that is under inspection. For example, in this data, I could censor those cases that end because of death or retirement. However, in this data I have included only those tenures that start during a particular year, thus I do not need to use "left-censoring". Further, I have assembled the data so that I have not included those tenures that end in death, moving abroad or retirement. Thus, I do not need to censor such cases.

The Kaplan-Meier estimator handles the ties between ending times, and simple modifications of the model are needed in two very common situations: 1) if two subjects share an observation time; and 2) if the longest observed time was a failure (or the longest time in the data is also marked as ended employment). However, as far as the Kaplan-Meier estimators is concerned, it is unnecessary to make adjustments for tied failure times when estimating survival function. However, in extensive numbers of tied endings one should consider

the possibilities of the discrete time model (Hosmer, Lemeshow and May 2008, 20).

The most interesting use for the basic survivor function is to use it in descriptive manner. Changes in it are explained by Cox Proportional Hazards method. This is why we need a confidence interval estimation of the functions. In this research I will be using the confidence interval estimator that is often referred to as the *delta method* and it is one of the most used methods for measuring confidence intervals.

To gain the most informative knowledge of the structure of the time variable, the information of key sub-group divisions of a time variable is important. In my case, these sub-group divisions are mainly covariates, but they could also be, for example, differing treatments. In this sense, I aim at quantifying differences between groups through point and interval estimates of key measures. Because survival data is typically right skewed, one should use rank-based non-parametric tests followed by estimates and confidence intervals of medians within groups. Modifications of these procedures are needed when there are censored observations present. Furthermore, this comparison of groups provides an explanation as to if there are interactions of the coverable and time. The statistical question here is then whether the observed difference between the two groups (for example male and female) is statistically significant in general, across the observation time. A problem may arise if the groups estimated survival functions cross each other. This means that at one time, for example, females may have a stronger probability to end tenure, but in other times, males have a stronger probability. This may first be analysed visually – looking if the functions cross each other. To statistically test these interlinks, one may use a Log-rank test. If the probability is more than p>0, 5, then the interpretation is that the interaction between the groups is within sampling variation of each other (Hosmer, Lemeshow and May 2008, 56–57).

Any survival analysis of proportional hazards model building should begin with a thorough univariable analysis of the associations between survival time and each covariate under consideration. It should include Kaplan-Meier estimates of the groups' specific survival functions, and one or more significance tests to compare survival experiences across the groups, defined by the covariate (Hosmer, Lemeshow and May 2008, 132–133). Log-rank tests run on survivor functions of the labour force segments in this study show that the variables are still giving us statistically meaningful results. Some variables have categories that seem to give no statistically important variation, but for theoretical reasons, I will include them in the model. I also expect that once I compute the multivariable model, where I include all the covariates together, it might change univariable differences.

3.2.1 Cox Proportional Hazards Method

The Cox Proportional Hazards Method is basically a regression procedure in which the survival time is predicted from a set of variables. In these regression models, the analysis accommodates censored cases and uses a log-linear, rather than linear, model. This method models event rates as a log-linear function of covariates, and regression coefficients give the relative effect of each covariate on survivor functions, which is more forgiving in terms of assumptions about censoring. The model treats censored cases as a logistic regression, and compares the probability of an event against the probability that the event does not happen. The use of exponential distribution assumes that the percentage for a hazard rate remains the same within a particular group of cases over time. For example, the hazard rate of 0.01 per day implies that that 1% of the remaining cases fail in each succeeding day.

Sometimes the Cox Proportional Hazards Method is referred to as the Cox Semi-Parametric Method because it includes a baseline hazard function that is completely unspecified, but it assumes parametric form for the effect of the predictors on the hazard. This means that the shape of the hazard over time may be constant, increasing, decreasing, increasing and then decreasing, or anything else. However, the shape of the hazard over time is assumed to be the same for every individual. Parameter estimates in the Cox Proportional Hazards model are obtained by maximizing partial likelihood, as opposed to full-likelihood. The partial likelihood is valid when there are no ties between events in the data. Ties are handled mainly with the Berslow method.

There are differing methods to control for tied survival times, and in a basic survivor function tied events are handled with the Kaplan-Meier method. However, the most commonly used method for handling ties within the Cox Proportional Hazards model is the Berslow approximation. Another quite famous approach is the Efron approximation for the partial log-likelihood. The benefits of these approximations are that they are quite quick to perform, and despite being only an approximation and not exact, they end up with similar results in the final models. The Berslow method is an approximation of the exact marginal where the risk pools for the second and subsequent failure events within a set of tied failures are not adjusted for previous failures (Cleves et al. 2010, 150). Berslow's weakness is that it does not perform well when the number of ties at a particular time point is a large proportion of the number of cases at risk. In this analysis, I use the Berslow method because at any point in time, the relative amount of tied cases is not too high due to the extensiveness of the data. However, I also made other tests in order to find out which distributional assumption would best fit the model and data. I tested Weibull's distribution, log-gamma, and Efron. All of these tests had lower fit ratios than the basic estimation model with the distribution assumption of the Berslow method, and none of these other models would better the Log likelihood. Thus, I chose the Berslow method because it was the most optimal solution.

In choosing the correct covariates in the Cox model it is necessary not only to consider hypothetically important factors behind the construct, but also how time is conceptualised by the possible co-variables. Some variables do not, in general, change when time passes, for example date of birth or gender. Other variables, however, do change, like age or monthly salary. The question is then can one include the influence of, for example, establishment turnover in 1991 in the probability of ending tenure ten years later, in 2001. Can one philosophically say that the situation ten years back in a firm would have anything to do with decisions made in 2001? Empirically analysing the situation, I noticed that the effect of turnover in the year 1991 on the end of tenure in 2001 is statistically lower that the turnover effect of 2001. Furthermore, in this research, I use these years for connecting the analyses to contextual societal time. In the case of turnover, I want to see how the current economic situation of the establishment affects the ending; I have to allow turnover to be changing in time, and thus mark it as a time variant covariate.

There are some limitations to performing the Cox Proportional Hazards Regression. One limitation is due to time and it is often argued that covariates have to be present before an event happens. A second limitation is linked to multivariate normality, linearity, and homoscedasticity among covariates. Even though these features of covariate distributions are not required in logistical survival analysis, they may often enhance the power of the analysis (Tabachnick and Fidell 2013, 513). In this dataset, the existence of outliers is small due to the large number of observations and the data's representativeness of working aged persons in Finland. In terms of distributions of covariates, it presents the actual situation in labour markets. Also, in survival analysis, it is important to delineate between missing data, withdrawn cases, and actual events. This feature is not present in this research because the register base has missing data only in reference to deaths and those who emigrate from Finland. Such cases were easily detected and deleted from the data set.

The goal of the statistical model used in this research is to obtain a model that best describes the "middle" of the data. In the social sciences, this aim of statistical modelling is often hard to deal with as statistical models are intended to obtain results by optimizing variables so that they would fit a model in the best possible manner. However, social sciences are more interested in real-life situations and variables are not just considered to be mere numbers, but they are seen as representations of social reality. Often, the easiest example of such data modification is the case of outliers; outliers are those observations that lie outside the general trend of observations. They distort the function's angle and thus might interfere with the consistencies of the overall data. Consequently, it is generally advised to exclude the outliers from a dataset. However, the exclusion of outliers might, at the same time, hide some important features of the social reality; particularly, if the outliers happen to belong to some specific

group or have something in common – that is not included in the data. One might then distort the view of society.

There are still two important assumptions of the Cox Proportional Hazards method that have relevance in this research: (1) proportionality of hazards; and (2) absence of multicollinearity. The first assumes that the shape of the survival function is the same for all cases, and for all groups. Otherwise, there is an interaction between groups and time in survival rates. These problems arise in this type of data when, for example, genders have different shapes of survival functions in some years and particularly in the case of differing transitions after tenure. A multicollinearity situation occurs when two or more co-variables have a strong correlation. This can mean they actually are presenting the same phenomenon.

Absence of Multicollinearity

Absence of multicollinearity is most easily understood in the context of cross-sectional research. In multicollinearity, two or more co-variable have a strong correlation and their influence on the dependent variable is overridden by each other. Theoretically, all of my variables may have multicollinearity. In the social world, for example, age correlates with educational level; younger generations tend to have higher educational levels. Also, age relates to monthly salary since older workers have more experience, thus, they should have more salary. Even though, theoretically, we tend to divide conceptualisation and understanding of these variables in differing meanings, these meanings depend on their context and within their frames of reference.

The proceeding of the nominal regression is such that it first includes the influence of one variable into the equation, and then includes the influence of the second one. In this phase, the model counts each variable's influence and subtracts the joint influence from both variables. Thus, what is left is the individual influence of the two variables. By adding the variables one by one, these joint influences are taken out and what remains is the individual influence of each variable. The more variables included, the more of the joint influence is left out. But at the same time, the more accurate the analysis will be from the existing variables individual influence. Thus, variables are reduced to as tight an interpretation as possible.

Thus, I have decided to include 16 variables in the model; I have tested all the variables and their multicollinearity situations. I will also describe the strongest interlinkages in the analysis, as they might add to the understanding of the phenomenon. It has actually been a question of creating such a variable that presents the influence that I am looking to find in the analyses. However, I will have to be careful when interpreting these variables; in the social sciences, often, one has to make optimizing decisions between statistical assumptions, theoretical hypothesis and empirical reality. The pros and cons of violations of

statistical assumptions are put against the losses of information that would be the result.

Proportionality of Hazards

In the Cox Proportional Hazards Regression, hazard for any individual is assumed to be a fixed proportion of the hazard for any other individual. This means that for example the risk of ending tenure declines roughly in same manner for male and female or for young and old workers in time. A most brutal violation of this occurs if the curves (or functions) cross each other, thus, the parameters have differing interactions with time. The proportionality assumption deals with only one variable, the composition of that variable, and its influence on survival curve.

In this model, I have 16 co-variants; each is coded as a categorical variable. There is a huge number of variables and categories, as well as possible interactions within this model. In addition, I do the same analysis across 17 separate years, so there are 17 models that all should satisfy this condition. Statistically, it would be unwise to try to model these together. However, sociologically, when I am trying to discuss real life implications in social structures, I am forced to include as much knowledge of social behaviour as possible in the model according to what is theoretically and empirically reasonable. If I know that the phenomenon under scrutiny is influenced by these factors, and I have the opportunity to include all of them, the exclusion of some would be violating existing knowledge. Also, my analysis would then be biased and overall interpretations would not be complete. Nevertheless, since the Cox regression model is rather adjustable to some of the violations, we can still be confident about the results. All in all, the present violations of the Cox model, in the sense of proportionality assumption, are still quite modest and arbitrarily distributed across the observation period; they are not consistent throughout the whole observation period and their violations are not severe in proportion to other variables. Also, the variables used are important in the theoretical understanding and are related to existing knowledge. Ultimately, their presence in the analysis is vital for providing an overall picture of the change in tenures.

Interactions of Variables

Interaction tests are often used in the Cox Model to test or correct the proportionality assumption. It aims in studying whether the effects do not change with time except in ways that are already parameterised. Interactions refer to the situation where there is correlation, i.e. a joint effect between two different variables in relation to time.

In general if variables have statistically meaningful interaction influence, these variables statistically meaningful individual influence is unsure, because the interaction effect influences the p values of individual variables. If the interaction influence is statistically meaningful (and the general limit has been

set in p<0, 05), it means that the difference between the means is statistically important. For example Pallant (2007, 264) suggest in this situation to make separate variance analyses for each interaction.

I carried out several interaction tests with this model. Some of these interactions were consistent throughout the observation period. However, I did not include these interactions in the model, because I wanted to keep the interpretation of the model as simple as possible. The inclusion of interaction would have made the interpretation of the original variables more difficult, because their influence would then be divided in multiple different instances. However, the deeper statistical analyses of the interactions might be useful after this rather general study and description of the phenomenon of employment stability in Finland.

3.2.2 Modifications of Cox Proportional Hazards Regression

Stratification

In this research, I wanted to explicitly study tenures in relation to influences accumulated from actions within internal labour markets. Despite the fact that I can do this by including some establishment level variables in the model, there still exist those social norms and action patterns that I do not have any notion of in this data; I do not have variables indicating whether individuals in firms have tight social relationships nor whether an establishment uses particular recruitment channels in order to stimulate the development of their labour force. In statistical terms, there exists some unobserved heterogeneity bias at the level of the establishment. This bias may be linked to establishment level variables correlated with employee level variables.

I execute the study of establishment level influence, or control for the establishment level heterogeneity bias, by stratifying the data with establishment ID. This means that a separate baseline hazard rate is assumed for each establishment. At the same time, the coefficients of the covariates are assumed to be the same. This procedure is similar to the within-groups estimator in linear regression (Kalbfleisch and Prentice 2002). Practically, this means that the stratified model allows establishments to have differing proportions, for example, male and female, low and highly educated, and so on. When these results are compared with the model, where the composition of establishments is expected to be the same, the difference between the two results indicates of the overall influence of the establishment level.

Competing Risks Model

In theory, the determinants for job-to-job mobility are different from the determinants that influence job-to-unemployment, or job-to-outside labour markets transitions. Job-to-job transitions reflect three cases. Firstly, there are those employees who want to change their job, who might be motivated by job dissatisfaction, wanting more salary or other types of upward mobility in their

individual careers. Such reasons for job change are related to individual aspirations, the current working place situation, or an anticipated situation in another work place. Secondly, job-to-job transitions are formed by possible temporary contracts that end, and the individual instantly gains the next employment period through a different working place. Thirdly, exits may happen due to dismissal, yet the worker gains new employment right away.

Then on the other hand, job-to-unemployment may also be motivated by differing logics. First of all, individuals may resign themselves, possibly motivated by their current situation in the work place or for other individual reasons. However, an individual resigning does not appear in the category of job-to-unemployed because the unemployment is counted from the dates of the unemployment periods. These spells only appear if the individual has received unemployment insurance during that time, and if the case is self-resignation, the individual will not be regarded as unemployed for 3 months afterwards. So the second reason comes to the forefront, and it may be stated that it is an act of employer dismissal or as the end of temporary employment. For these persons, there has not been replacement work, they have not wanted to take on a new job, or they have not begun search for a new job.

Furthermore, according to previous research, one may suspect that these two types of transitions reflect differing workforce segments that act differently in labour markets. However, even though such logical reasons behind the different transition types somewhat overlap one may expect that the firm level action patterns are more present in job-to-unemployment transitions where the employer action is more present. Hence, one can expect that the risk of changing jobs is fundamentally different from the risk of going into unemployment – individuals face 'competing' risks. For this, I use competing risks (or multiple destination) models that deal with cases of multiple failure types (destinations).

The actual analysis in this research will be conducted in two parts; (1) those that end employment as job changers; and (2) those that end employment by becoming unemployed. I have divided the data with these two types of transitions.

3.3 LONGITUDINAL FOLLOW-UP, EMPLOYER-EMPLOYEE REGISTER

The Linked Employer-Employee Data of Statistics Finland (FLEED) combines administrative registers of individuals. Individual records are collected from the Finnish Population Register Centre, tax administration, national pension institute (KELA), pension insurance companies, and unemployment administration. The Population Register Centre provides basic information of individuals, such as birthdays, gender, place of residence, and information on family members. Tax registers include information on income amounts of

individuals from different sources, such as annual salary or annual assets incomes. The national pension register (KELA) offers information on social transfers paid according to different statuses of individuals, such as family allowances, sick leave transfers, pensions, and so on. Pension insurance companies records are official records of the exact starting and ending dates of employment, and based on this information cumulative pensions are later paid. The employment administration, then, provides information about an individual's unemployment, such as beginning and ending dates of unemployment spells, and active labour market measures that the individual has participated in.

This individual level register data is then combined in FLEED to employer establishment; these records are obtained from company registers. Company registers include information on the annual turnover of the establishments, numbers of personnel, and ownership, and so on. Information is drawn from companies' annual financial statements from all companies in Finland.

The information collected on Finnish persons and companies is based on law and legislation requires that public administration entities collect basic information continuously. Also, companies are required by law to update their information annually in certain registers. These registers are mainly used for administrative, taxation, and public insurance purposes, but registers are also accessible for scientific research. The use of register base information is protected strictly against misuse, and the Personal Data Act (523/1999) aims to protect individual privacy. When parts of the register data are handed over to researchers, they work under strict confidentiality in such cases where individuals might be recognizable. By contract, the information is provided only for strictly defined scientific questions. For reasons of privacy protection, much of the information is pre-coded by Statistics Finland and some is provided only in a large scale format; the clearest example of this being regional information. In FLEED, the information of place of residence is handed over at the NUTS3 level in order to protect the privacy of individuals and companies.

FLEED data covers the years 1986–2010. In this research, I have used the records from the years 1990–2009; however, the analyses are conducted for the time period of 1991–2007. FLEED is a 1/3 sample of all working aged (15–74 aged population) persons in Finland. Annually, 1/3 of the sample individuals turning 16 during the year are included in the data. Also, a 1/3 sample of working aged immigrants is added. Annually, there are about 1,200,000 individuals all together and during 1991–2007, the data covers information of over 2.2 million individuals (Table 1). These individuals are followed in time, and they disappear from the data only when they die or if they emigrate from Finland. In the case of emigration, individuals might return to the data set later, and they are recognisable by their ID number. From the analyses used in this study, those who have died or emigrated have been removed from the data.

Table 1: Variable computation information and source register

Computed variable	Raw data used and computation information		Source register
Employment periods, Years 1991-2003	(Ending date of the longest lasting employment annually) – (Beginning date of the longest lasting employment annually)		Pension insurance firms
	Beginning date of next employment		Pension insurance firms
	Establishment ID code		Statistics Finland
Employment periods, Years 2004-2009	Ending and beginning dates of employment annually		Pension insurance firms
	Establishment ID code		Statistics Finland
Status of individual before employment	Full-time status of individual in the last day of the previous year		Statistics Finland
Transition after employment	Beginning date of first unemployment annually		Unemployment registers
	Date of the beginning of new employment		Pension insurance firms
	Establishment ID code		Statistics Finland
	Full-time status of individual in the last day instant year		Statistics Finland
Monthly salary	Annual amount of taxable salary, inflation corrected		Tax registers
	Number of employments in a year		Pension insurance firms
	Beginning and ending dates of employment		Pension insurance firms
Educational level	Educational level coded in 5 digit code, where first 2 digits define the level and rest refer to educational field		Statistics Finland: Qualification Register
Family type	Spouses id code (exists / not exist)		Population registers
	Number of children under 18-years		Population registers
Salary increases during the first 5 years within same employer	Yes	More than 1.30*(Mean of the changes of annual amount of taxable salaries in one establishment)	Tax registers
	No	Else	
	At least one salary increment during the 1st five years. Follow up stops if the tenure ends.		
	Establishment ID code		Company Register
	Individual ID code		Statistics Finland
Industrial branch	Basic industry	manufacturing industry and related	Company Register
	High-technology industry	electronics industry and related	
	Basic services	privately owned services, like trade and tourism	
	New services	commerce, R&D, B-to-B services, insurance	
	Public services	privately owned health and social services, like private day care and elderly care	
	Primary production	agriculture and forestry	

Turnover type of establishment during three years	Stable	Annual capital turnover growth is less than 30% and deduction is less than 30% during three years	Company registers
	Growing	The turnover growth is more than 30% at least during two years (Includes start-ups)	
	Diminishing	The turnover deduction is more than 30% at least during two years (Includes closing establishments)	
	Fluctuating	The turnover changes between stable, growing and diminishing during three years	
Amount of employers in province	Coded in 100		
	Sum of establishments in the same branch in province		
Mean salary in province	Mean of individual monthly wage in the same branch in province		
GDP			Statistics Finland

Annually FLEED has 159 variables, some of which are basic information on individuals and some are computed by Statistics Finland. However, the data is rather unmodified and much of the information is raw data. This means that most variables used in this research have been computed by the researcher. The ready variables that I am using here were mostly computed by Statistics Finland. These variables are: age, gender, type of place of residence, beginning and ending dates of the longest employment spell annually (years 1991–2003), number of employment spells annually (years 1991–2003), capital turnover of the establishments, and amount of personnel in establishments. Age is computed by Statistics Finland from the birthdays of individuals and gender is computed from the personal ID code of individuals, which is not given to researchers. The type of region is coded as (1) large city, (2) town, (3) densely inhabited rural region and (4) sparsely inhabited rural region. Beginning and ending dates of the longest lasting employment period annually are detected by Statistics Finland in the years 1991–2003, and Statistics Finland had computed variable of number of employment spells annually for years 1991–2003. I computed these two variables myself from the raw data for the years 2004–2009. Annual capital turnover is handled as the actual sum, and number of personnel is coded in ten categories by Statistics Finland.

The rest of the variables used in my research I have computed from the raw data. These variables include the duration of the longest lasting employment spell annually, the state of an individual before the employment period, transition after the employment period, monthly salary in the employment period, education level, family type, salary increases in the employment period, turnover type of establishment, number of employers in the province, and mean salary in the province. Further, I have added to the data set the provincial Gross Domestic Product annually. The next table shows the raw data the variables

were based upon and also the computation information of the variables (see Table 1).

The possibilities that FLEED offers are numerous. First of all, it can be considered as a longitudinal total sampling of Finnish population and establishments. Secondly, the variety of information that it provides, makes it possible for researchers to create variables for a wide variety of their own interests. However, despite the wealth of the data, also, the cons of this type of data are numerous. The size and scope of the data set requires powerful and suitable software for analysis. In this research, I am using the statistics program STATA and accessing Statistic Finland's computers through a remote connection. However, and more importantly, the practicalities of handling this data are challenging. Because of the raw data nature of this information, the researcher must understand the rules of "why" and "how" the differing administrative units collect the information; there are differing ways of feeding the information into the system. For example, different pension insurance companies have had diverging ways of submitting information. A lot of work for this research has been done in checking the beginning and ending dates of employment periods: making sure that dates are correctly inputted[2], that the dates are placed in the correct years, and so on. Furthermore, challenges also are created by the longitudinal nature of the data. Two of the most laborious phases in this research were the checking of continuations of tenures; I have checked for continuations of employment tenures in cases of establishment mergers, and have combined tenures situated in the same establishment if they have a one-month or fewer break between them. Further, the pension system and labour legislation changed in Finland during the observation period. Thus, I marked all individuals that have been in the unemployment pension system as pensioners, and deleted all employment that lasted less than one month.

3.4 RESEARCH SETTING – A PATHWAY TO TARGETED ANALYSIS

In my analysis, I will target first the general changes in labour market structures with descriptive longitudinal information of the variables. In this section, I will also present the changes of these single variables (or labour market segments). This is done in order to understand the structure of these variables longitudinally. (Table 2.)

[2] The dates are correct because pensions are based on this information, but the form of the feed up may be differing.

Table 2: Research setting

Research setting				
Level of social reality	**Variables**	**Step 1: Cox Proportional Hazards model**	**Step 2: Stratified model**	**Step 3: Competing risks model**
		Question	**Question**	**Question**
Individual	1) Gender 2) Age 3) Education 4) Status before employment 5) Monthly salary 6) Salary increments 7) Family type 8) Housing region	1.1 Which labour market segments influence the employment stability the most?	2.1 How much unexplained establishment level selectivity is there by segment in employment stability?	3.1 How the co-variable influences the probability of job change or job loss, and is there establishment level selectivity in these transitions?
Establish-ment	9) Industrial branch 10) Establishment annual economic turnover 11) Economic situation 12) Amount of personnel 13) Ownership	1.2 Which variables influence the changes in employment stability the most?	2.2 How much of the shortening of tenures is explainable due to establishment based selectivity?	3.2 How much the shortening or lengthening of tenures is influenced by differing transition types out of employment?
Structural	14) Monthly salary in relation to labour market salary level 15) Amount of employers in labour market 16) Gross Domestic Product in labour market	1.3 Have there been longitudinal changes in the labour market structure of employment stability?	2.3 Have there been longitudinal changes in the labour market structure of employment stability in relation to selectivity of establishments?	3.3 Have there been longitudinal changes in the probabilities of differing transition types?

The empirical analysis will follow three steps. First, I will conduct a general Cox Proportional Hazards regression for all employment spells that started during 1991-2007. In this model, I include all independent variables from individual, establishment, and labour market levels. I look into which independent variables exert the most influence on the risk of ending employment. I will also look at whether the relationship between the variables has changed over time. Further, I separate the variables from the model, and

will take a closer look into each co-variable's longitudinal expression in the probability of ending employment. In the second step, I compare this general hazard against the stratified hazard rate in order to find out how much risk is related to establishment level selectivity. When the establishment level independents are included in the basic model, the difference between basic model hazards and stratified model hazards implicate some other establishment level selectivity that is not due to observable factors. In the third step, I introduce the competing risks model. In this section, I first analyse the overall influence of each co-variable on the probability of transit into employment or into unemployment after employment tenure. The transition type, hypothetically, also offers a hint about the action stemming from different levels of social reality. The changing of employment, or transitions from job-to-job, indicate an individual action since their occurrence is based more on an individual decision to change job. Transitions to unemployment, or losing a job, indicate more actions of an employer. I will, also, present a stratified model of transitions and see whether the establishment level selectivity somehow differentiates probabilities of these transitions (Table 2).

I present how establishment level selectivity changes the general structural picture of employment stability. After this, I continue onto a targeted analysis of the longitudinal changes of each variable. I divide the multivariable analysis into individual, establishment, and structural level variables, and analyse what types of changes have occurred in these labour segments. In relation to each individual variable analysis, I also examine the influence of the unobservable selective processes of the establishments, and analyse the influence of differing transition types longitudinally.

4 Analysis

This chapter examines the situation of employment stability in Finland. It presents a longitudinal picture of the changes in structures of employment stability. The aim is first to understand, what the overall situation in employment stability is longitudinally, and, depict some co-existent changes in labour market structures that might have influenced employment stability. Secondly, in this chapter, the employment stability of different labour force segments is analysed in detail, with analyses of the transitions taken into account.

In general, there have been many structural changes happening within the Finnish labour market between 1991–2007. Most notably, the general structural tendencies of Western labour markets can be seen in these changes as hypothesised. The educational levels within new employment has risen, however, new employment is decreasing in basic industries despite growing in the new services sector. Nonetheless, the aging of the labour force is more nuanced in new employment spells; the baby boom generation has not yet come to pension age in this time span, yet, and there is age related structural change in new employment as the share of new employment for 25–30 year olds and those under 25-years of age continually grows. Likewise, new employment for those over 44-years of age is growing. There are also some other structural changes when new employment concentrates more on single households, and at the same time, couples with children have less new employment tenures. Further, new employment is slightly concentrated in cities.

As these structural changes are interlinked in this chapter, I will also present a multivariable model and separate the changes particularly in relation to employment tenures. I analyse the structural changes in relation to differing levels of social reality and in relation to time passing. In the conclusions, I will divide the changes into longstanding structural tendencies, as well as cyclical tendencies that are tied to economical up and downturns, in addition to continuously increasing segmentation or un-differentiation in labour markets, and into periods of cumulatively decreasing employment stability. This way, I am able to see what changes are in strict relation to fragmented labour markets and which phenomena are more linked to longstanding changes.

4.1 DESCRIPTIVE ANALYSIS OF EMPLOYMENT TENURES

Overall, in the FLEED data, there have been approximately 715,000–905,000 individual employment spells annually during 1991–2008. In the data, those individuals that had less than 3 employment spells during a single year are used in this analysis. This is because the continuation of employment had to be cleared, and because information regarding the beginning and ending dates of employment were only for the most recent employment spell in a year, and for the longest employment spell in a year. The share of these individuals with less than 3 employment spells in a year has gradually declined, from 97% in 1993 to 87% in 2006. Thus, the representativeness of the analysis slightly diminishes during the observation period. However, the change is not so severe that it would endanger the generalizations of these analyses (Table 3).

Numbers of employment tenures and shares of ended tenures annually in Finland 1991–2008

Table 3: Descriptive on tenures in Finland 1991–2007

Numbers of employment tenures and shares of ended tenures annually in Finland 1991–2008

	Number of all individuals in employment					
	All	Individuals with less than 3 employment spells in a year		Number of ended employment spells	Mean duration of ended employment spells	
		n.	%	n.	months	years
1991	813,858	776,807	95.45	103,390	36.41	3.03
1992	766,542	737,780	96.25	98,270	45.15	3.76
1993	724,058	699,829	96.65	92,696	53.74	4.48
1994	714,763	714,763	96.23	72,978	49.49	4.12
1995	722,964	695,116	96.15	92,960	41.02	3.42
1996	766,398	715,130	93.31	106,487	38.57	3.21
1997	776,934	720,808	92.78	103,787	34.07	2.84
1998	816,640	746,832	91.45	86,813	36.06	3.01
1999	833,277	735,882	88.31	89,402	40.87	3.41
2000	840,334	740,615	88.13	98,751	35.21	2.93
2001	855,403	753,518	88.09	106,446	37.93	2.66
2002	856,319	753,234	87.96	106,129	38.36	3.16
2003	859,053	755,941	88.00	94,642	32.71	3.17
2004	722,757	633,974	87.42	70,976	33.72	3.20
2005	872,471	755,694	86.62	132,679	32.70	2.73
2006	882,251	764,099	86.61	144,887	33.72	2.81
2007	895,117	775,695	86.66	137,858	34.82	2.90

Overall, the mean durations of ended employment tenures have been rather constant since 1996. The length of mean tenures has varied between 3.2 to 2.7 years. Long-standing employment tenures ended in greater numbers during the Finnish recession at the beginning of 1990s. This notion is in line with international research findings in that in general tenures tend to be longer in

recessions. In Western societies, average employment tenures are indeed counter-cyclical in relation to economic turns (Boeri 1996; ILO 1996, 2000). The aging of the labour force may hypothetically increase the mean length of ended employment tenures from 2005 onwards, when those who age ageing come to pension age. This group have traditionally had long-term employment whereas younger generations have, hypothetically, shorter tenures (Figure 5).

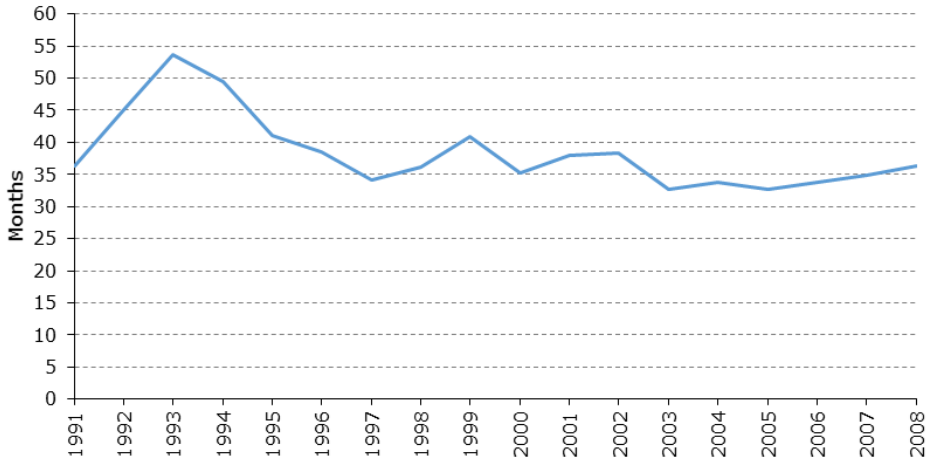


Figure 5: Mean duration of ended tenures, 1991–2008

Next is the descriptive information for the tenures started in Finland from 1991–2007. I have not excluded here "summertime" jobs or vacancies. Even though these inevitably increase the number of short-lived tenures, I see them as an important part of the functioning of labour markets, especially, in the case of industrial restructuring when new employment might be concentrated more in the service sector and in tourism; the exclusion of the seasonal work would distort the results. Also, it is important to understand that, even though, students work during their holiday breaks, the unemployed do this sort of work as well. Furthermore, the labour markets need this flexible labour force, as it is a crucial part of the structure and function of the labour market.

Between 71,000 to 148,000 tenures began annually in Finland during 1991–2007. The number of starting employment positions varies in relation to economic cycle, and in the private sector there have been roughly 28,000 to 130,000 new tenures initiated a year. In these analyses, only private sector workers are followed, since the aim was to create a three-layered picture of the labour market. When the data includes annual account records (including the size of establishment and annual turnover) only for private sector organisations, public organisations had to be dropped from this analysis. Also, in these analyses, those employment tenures that had only less than a 1 month break

before continuing employment in the same establishment are computed as one employment spell. Furthermore, in this analysis, those employment spells that lasted less than 1 month are excluded, since legislation changed in accordance to such extremely short periods of employment in 2003. The changes in legislation meant keeping record of tenures that were shorter than one month and these records were not included prior to 2003 (Table 4).

When employment spells are separated from other occurrences such as deaths, transitions to retirement and pension, moving abroad, employment that lasted less than 1 month, and employment that had less than 1 month between continuation in the same establishment, the number of employment spells beginning varies between 27,000 to 119,000, annually. Thus, in the final analysis, when those that have missing observations in none of their independents are included, there is roughly 70–90% of the original number of started employment spells in private sector included in this analysis (Table 4).

Table 4: Data modification descriptive

Descriptive information on data modifications of started employment

	Public and private sector n. *	Only private sector n.	Cleared from deaths and moving abroad n.	Cleared from retirement n. **	Cleared from tenures of less than a month n.	FINAL after case wise deleting n.
1991	88251	38627	35085	34854	33687	27777
1992	70738	30360	27955	27739	26952	22418
1993	88101	29576	27759	27556	27060	23327
1994	79861	30080	28679	28435	28146	25302
1995	105193	44455	42509	42227	41896	37678
1996	108072	42683	41066	40781	40280	36448
1997	123400	54385	52444	52135	51409	46665
1998	128334	71804	69340	68859	68187	60445
1999	114929	64316	62445	62034	61053	54242
2000	125358	71434	69402	68972	67146	60668
2001	111642	68600	67011	66572	64615	57621
2002	84528	56887	55600	55403	52773	47624
2003	76932	52448	51422	51159	48701	34347
2004	78641	71543	70443	69952	68428	45387
2005* **	141416	121099	119060	116434	106617	44792
2006* **	139237	66809	66079	64494	60199	24980
2007* **	147586	130442	129671	126952	118889	23380

* taken under consideration the pauses are less or equal to 1 month

** retirement includes sc. unemployment retirement

*** Years 2005–2010 the tenures are computed from the total sampling of Finnish working aged. Thus, once this information is combined to other registers, the number of observations declines by at least 2/3.

The share of those employment spells that ended during their first year has been growing between 1998–2006. This growth is situated in the 2000s, but there seems to be a slight downward trend at the end of the observation period. Thus, this growth may have been temporary and related to some economic or other factor in society (Figure 6).

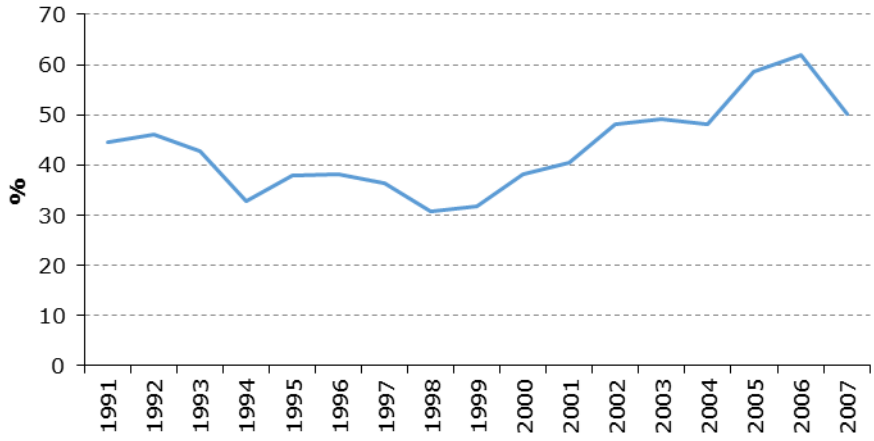


Figure 6: Share of short tenures, 1991–2007, % of started

The preliminary notion here is that while the mean of ended tenures stays roughly the same, the share of short tenures increases. Thus, it must be that as the share of short tenures increases, the length of the longer tenures also increases. This proposes some sort of dualisation or polarization in Finnish labour markets in relation to employment stability. However, this dualisation may be due to the ageing of the labour force, or other segmentation patterns in Finnish labour markets. It also might be a hint towards polarization, but interlinks between ageing and polarization hypothesis (as it stands – the "middle class squeeze") will be dealt with in the analysis.

4.1.1 Longitudinal Changes of Individual Level Co-variables

Gender

In general in Finland, there does not appear to be any noticeable feminization of the labour force; the tendency of starting employment is rather constant for both genders. Each year, roughly 60% of initiated employment is male and 40% female. Males begin more situations of employment during a year, yet also tend to end employment during the first year more so than females. Further, these differences are rather constant over time (Appendix 1; Figure 7).

In Western labour markets, males tend to have longer tenures than females, except in the Nordic countries. In Finland, females have less of a probability of ending their employment compared to males during the whole observation

period of 1991 to 2007. The probability of ending employment by gender, however, shows some longitudinal changes; gender difference in the probability of ending employment was lower during the years 1993–1997 and then again in 2008. This descriptive information does not take into consideration, for example, the effect of family compositions or branch segregations. Thus, in this picture, I account for only the differences generated by gender, but it might actually be that these differences are more so to do with other societal factors (Figure 8).

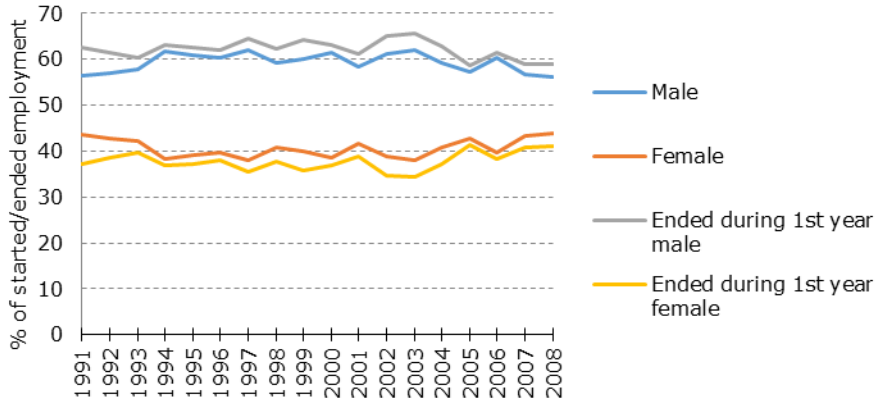


Figure 7: Shares of started and ended employment by gender in Finland, 1991–2008

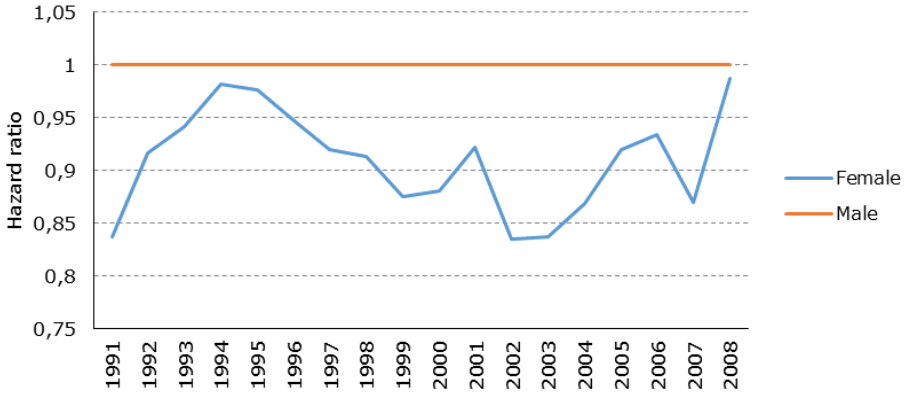


Figure 8: Univariable model: probability of ending tenure by gender in Finland, 1991–2008

Similar results have been obtained in Germany and in the United States (Diekmann and Preisendoerfer 1988; Farber 1998), and Farber (1998; 2008) has argued that less educated males have had declines in their tenures at the same time that females have experienced prolonging in theirs, especially in public

sector jobs. Further, males in their thirties experience a churning effect, meaning that males change jobs back and forth between a few employers, and this phenomenon is more prevalent in economical upturns. This might be the case also in Finland, during the upturns; the female probability of ending a job declines in relation to males. However, these notions must be tested with a multivariable model, and whether gender differences are due to, for example, industrial branch differences, or age, or whether they differ by type of transition after the employment.

Age

New employment periods are most likely taken by young employees in Finland. However, the structure of new employment spells is changing in relation to age, as the shares of age groups 'under 25 years old' and 'over 44 years old' are growing, and the middle-aged groups are diminishing. Since, at the same time, there is an aging of the workforce happening this tendency is interesting and might account for age increases in starting employment. However, even though the share of older workers is growing, the main tendency is that new employment concentrates even more than before on the youngest age groups (Figure 9; Appendix 2).

New employment situations that ended during the first year also have clear age group divisions. Even though, the young do begin more employment, their employment is more likely to end during the first year. The middle aged labour force are more likely to keep their jobs longer than one year and the oldest age groups have the similar shares of ending employment an starting (Figure 9).

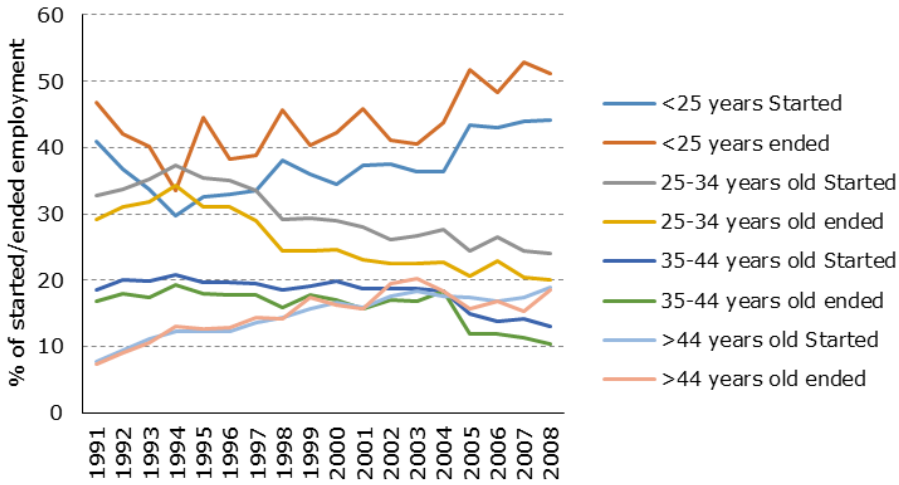


Figure 9: Shares of started and ended employment by age in Finland, 1991–2008

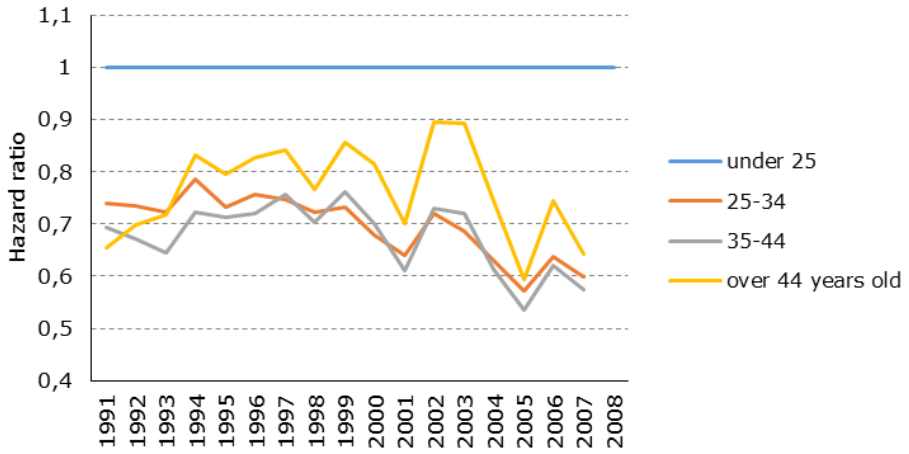


Figure 10: Univariable model: probability of ending tenure by age in Finland, 1991–2008

Thus, younger persons have a stronger probability of ending their employment and the middle-aged workers (25–44 years old) less likely to. However, the oldest age group seems to have a slightly higher probability of ending their employment. There is, also, a continuous and stable differentiation between the under 25 years of age and other age groups since 1998. This means that the youngest workers constantly have a higher probability of ending their employment than older employees (Figure 10). This notion that there is an increased probability of employment ending for the youngest age group in Finland has also been noticed in other data (Auer and Cazes 2000). This tendency is happening at the same time as the ageing of the labour force, increasing educational levels, and industrial restructuring in the labour market, and also coincides with the growing share of short tenures. Thus, a change in age related tenures might be a result of these other co-existing structural changes; it might be that the younger generation is situated in new branches of the economy, or that their education level is, in general, higher than the older age groups. These effects will be studied more in the next chapters, where we take a closer look into the multivariable model.

Educational Level

In Finland, the largest educational group starting employment annually is the 'secondary level educated[3]' segment; this segment occupies 60% of all new employment. There is a clear change toward a more educated labour force, as the share of the highly educated is steadily growing and the share of employees with a basic education is continuously decreasing. The share of highly educated

[3] Finnish school system is compose of basic education (compulsory, age 7–15), secondary level (oblicatory, occupational or high school), and higher educational level (university or polytechnic)

workers has increased from 6% to 11% during the observation period, and the share of those who have only basic education has decreased from 38% to 30% during 1991–2007. However, the changes are not linear, and there is some fluctuation in this trend during the years 2002–2004 and 2005–2006 (Figure 11; Appendix 3).

Furthermore, the level of education implies tendencies in the probability for a worker to end employment during their first year. The share of the highly educated in short-term employment is clearly lower than their share of new employment, and basic or secondary school educated employees seem to have a higher probability of ending their employment during the first year. When comparing educational groups and their probability of ending tenures in relation to each other, it seems that the highly educated constantly have a lower probability of their employment ending than other educational groups (Figure 11; Appendix 3; Figure 12).

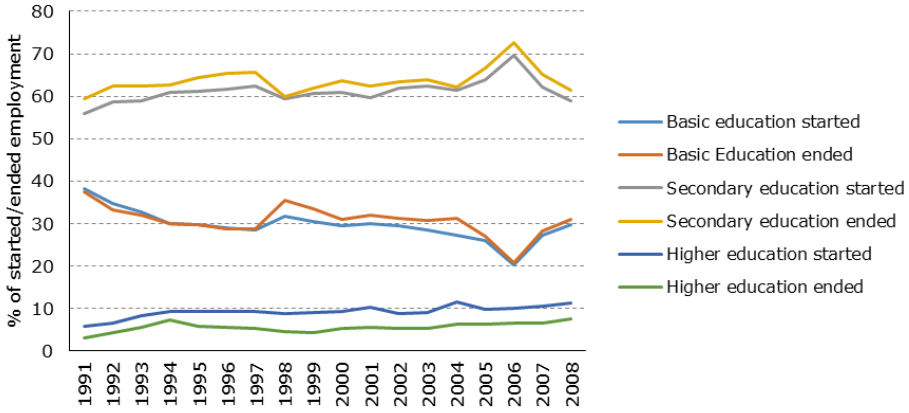


Figure 11: Shares of started and ended employment by education in Finland, 1991–2008

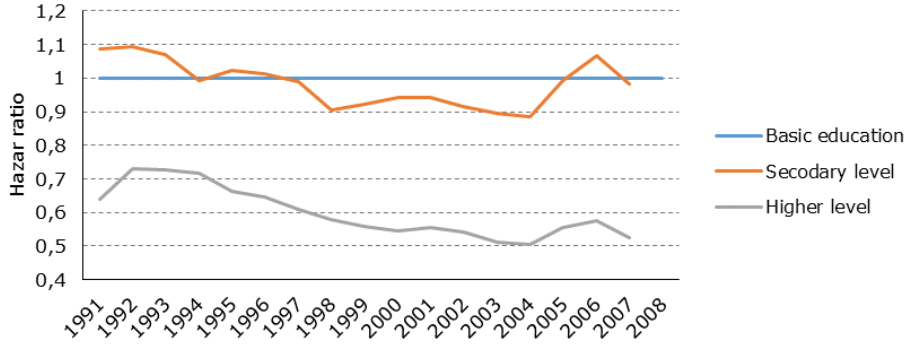


Figure 12: Univariable model: probability of ending tenure by education in Finland, 1991–2008

Level of Monthly Salary

Most new employment starts with a salary level of 1,000–1,999 €/month; however, this wage group diminishes over time and when coming to the 2000s, the share of those with salary level of 2,000–2,999 €/month is higher. Other salary levels stay constant, roughly, during the observation period of 1991–2007. The 1,000–1,999 €/month salary level group also has a lower tendency of their jobs ending during the first year. This effect changes coming to the 2000s, as their probability of employment ending during the first year increases. Correspondingly, those with a salary of 2,000–2,999 €/month have a lower probability of their employment ending moving toward the 2000s. It is notable that the highly paid have a higher share in employment that ended during the first year, indicating, that they have a higher probability of their employment ending. In particular, during the years 2000–2004, those with middle and higher level salaries had more occurrences of their contracts ending after short tenure (Figure 13; Appendix 4).

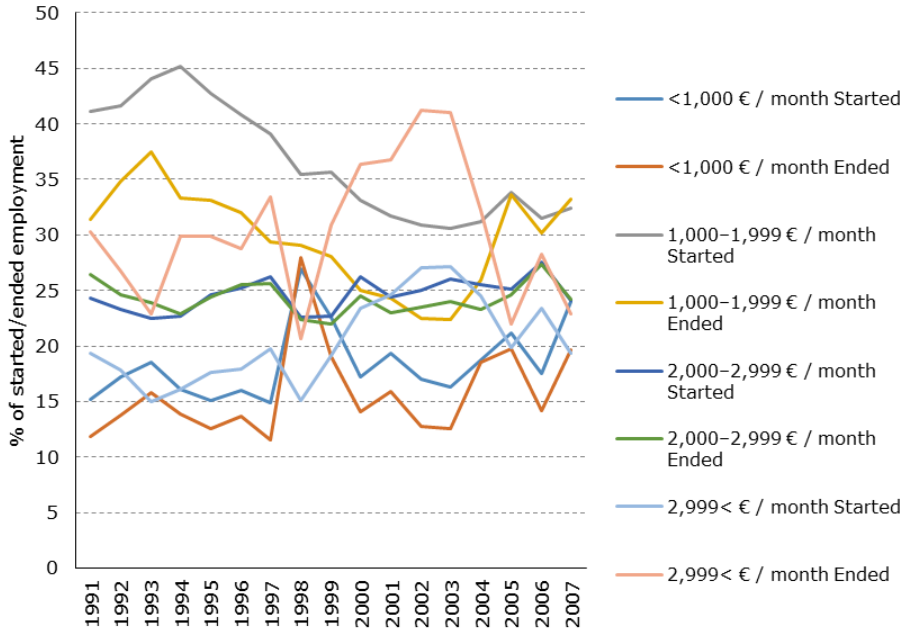


Figure 13: Shares of started and ended employment by monthly salary in Finland, 1991–2007

Thus, when comparing different salary levels and their probability of employment ending against each other, the highly paid have indeed a higher probability of employment ending compared to other pay groups. There is still a high fluctuation in this probability as all salary groups in new employment since 1998 have had quite similar probabilities of employment ending. The most

recent tendency is that salary groups are differentiating in a way that sees the lowest salary groups becoming less mobile in reference to other salary groups. Later, as this analysis proceeds to a multivariable model, we may be able to detect the interrelationships between this tendency of shortening employment spells and other covariates, such as increasing divisions of education level, age groups, and salary levels. This might be an indication of a "middle-class squeeze"; polarized labour markets, and new divisions of tasks and branches (Figure 14).

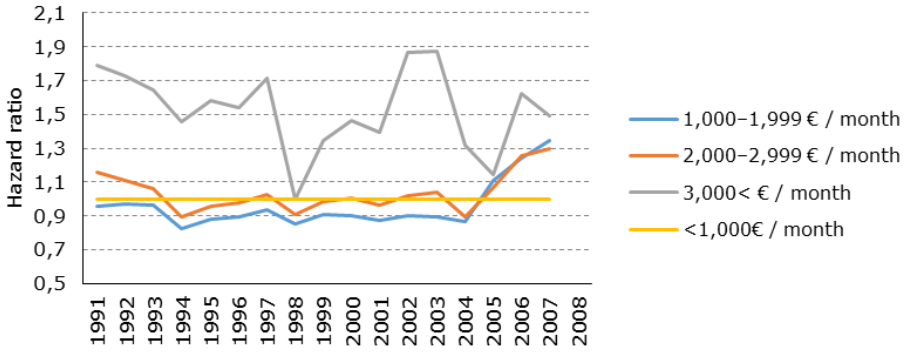


Figure 14: Univariable model: probability of ending tenure by monthly salary in Finland, 1991–2008

Salary Increments During the 1st Five Years of Tenure

Theoretically, as the previous literature suggests, salary increments do lengthen employment tenures, especially at the beginning of tenures, but as tenures lengthen increments higher the probability to end employment. In Finland, roughly half of all newly employed persons get at least one considerably high salary raise during their first 5 years of employment. These individuals also have a lower probability of their tenures ending during the first year. However, salary adjustments do not seem to affect the probability that tenures would last more than 10 years; the effects of salary increases seem to be cyclical. Until 1993, during the recession, salary increments were rarer than during the growth period of 1994–2005. However, during the years 2005–2008, salary increments do not have much effect on the probability of jobs ending during the first year (Figure 15; Appendix 5).

Interestingly, no salary increments affect the ending of tenures during the first year. During 1991–1998, those who had no salary increment were more likely to leave their job during the first year. However, after 1998, this occurrence decreased. Similarly, the probability of employment ending for those who had gained salary increments grew. This effect is seen until 2003, when the lines cross each other once again (Figure 15; Appendix 5).

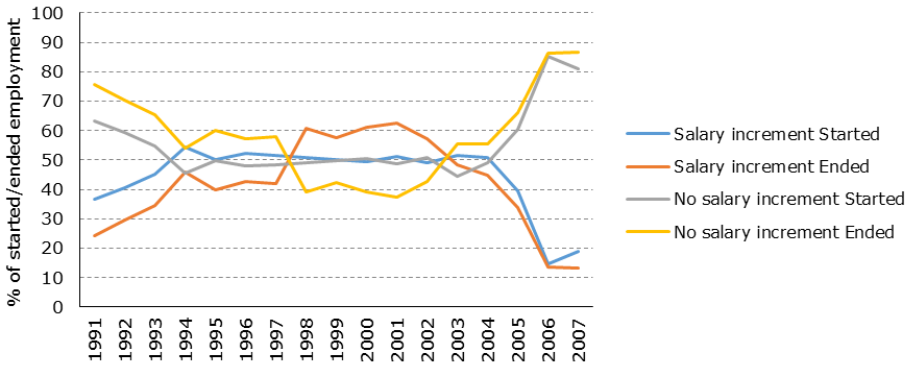


Figure 15: Shares of started and ended employment by salary increment in Finland, 1991–2008

However, over time, the probability of employment ending in the long-run stabilizes; in the long term, the probability of ending is lower if salary increment takes place. This is according to expectations. Thus, it seems that salary increments have more influence on short-term employment than on long-term employment. The effect is that in short run the salary increments tend to increase the probability of employment ending indicating that the salary increments do not have such an motivational effect as expected in short run. However, this effect may be quite distorted since it might be that the salary increments concentrate on those individuals who already have higher probability of their employment ending (such as those who are very capable or over-educated), and the salary increment might just postpone the ending (Figure 16).

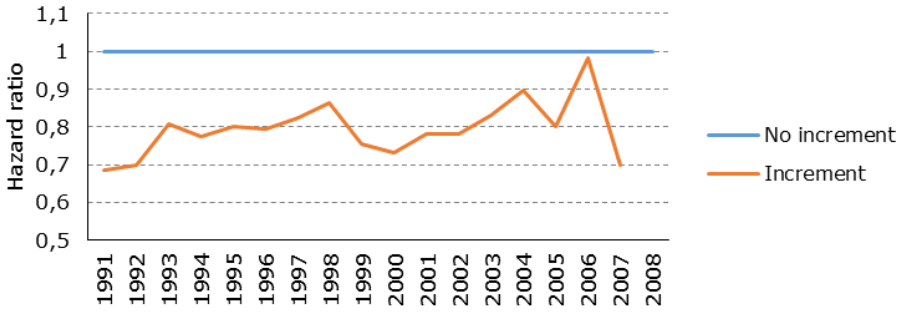


Figure 16: Univariable model: probability of ending tenure by salary increment in Finland, 1991–2007

Status Before Employment

In Finnish labour markets, most new jobs start when an individual transitions from another previous job. In general, about 40% of transitions to the employment spell under investigation are job-to-job transitions. Generally, 20% are transitions from unemployment, and likewise, there is the same share of those who transition from studies. About 10% are transitions from outside labour market to the employment. However, these shares change annually and present some fluctuation in relation to economic cycles. Actually, the share of employment transitions between jobs clearly occurred more during the years 1998–2004. During the recovery years of 1993–1998 transitions from unemployment and studies had quite similar shares as did transitions between employments (Figure 17; Appendix 6).

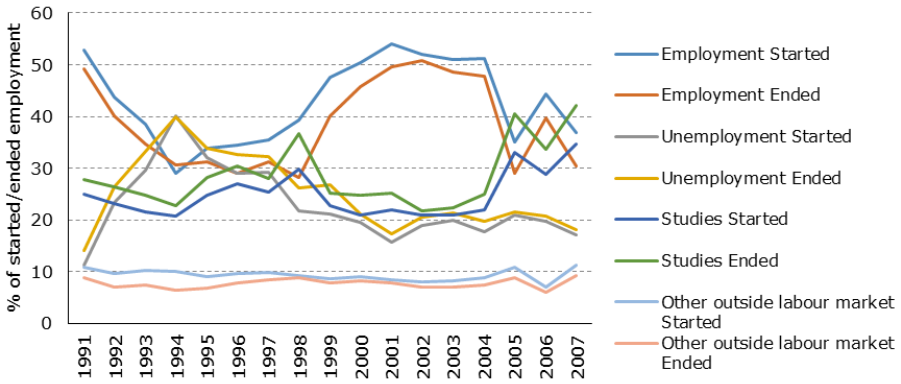


Figure 17: Shares of started and ended employment by status before tenure in Finland, 1991–2008

All transitions from unemployment and from studies have a higher probability of employment ending during the first year as opposed to what their share in new employment would suggest. When comparing these differing statuses before the studied employment spell to each other, we find that those who transit from unemployment or from studies have a higher probability of employment ending than those who transit from employment. Those transitioning from studies have had an increased probability of their employment ending since 2005. These observations are probably interlinked with previously discussed notions about age groups and that younger generations have a stronger probability of employment ending and, furthermore, that this tendency is increasing. These interlinks will be studied in detail later with a multivariable model (Figure 18).

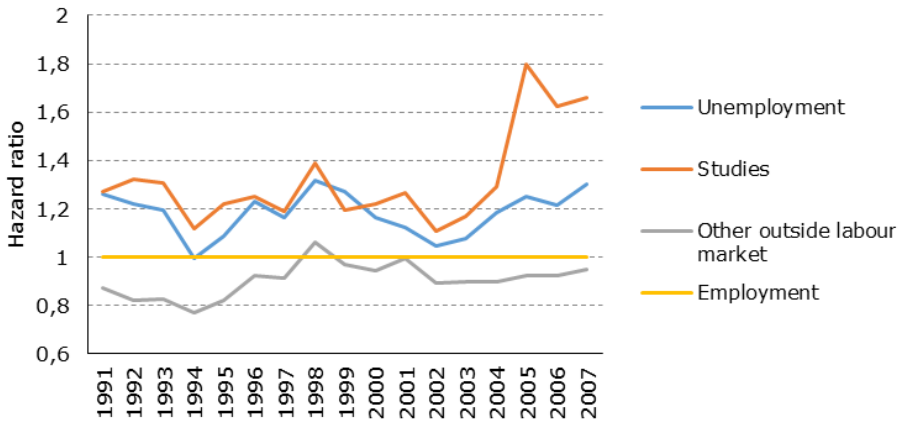


Figure 18: Univariable model: probability of ending tenure by status before tenure in Finland, 1991–2007

Family Type

Beginning employment patterns show important changes in relation to family compositions in the Finnish labour market. While the share of single parents and the share of couples stay roughly the same during the observation period, the share of single households is increasing while the share of couples with children is decreasing. The termination of employment during the first year does not seem to differentiate between family types.

When comparing a family type's probability of employment ending against the probability of single persons we find that, first, family type does not seem to matter much in the probability of employment ending. However, there seems to be slight longitudinal differentiation between singles and other family types; singles' probability of employment ending has grown in relation to others. This might be relate to the previous descriptive analyses of age groups differences and students mobility growth, and interlinks of these factors will be studied with multivariable model later (Figure 19; Appendix 7; Figure 20).

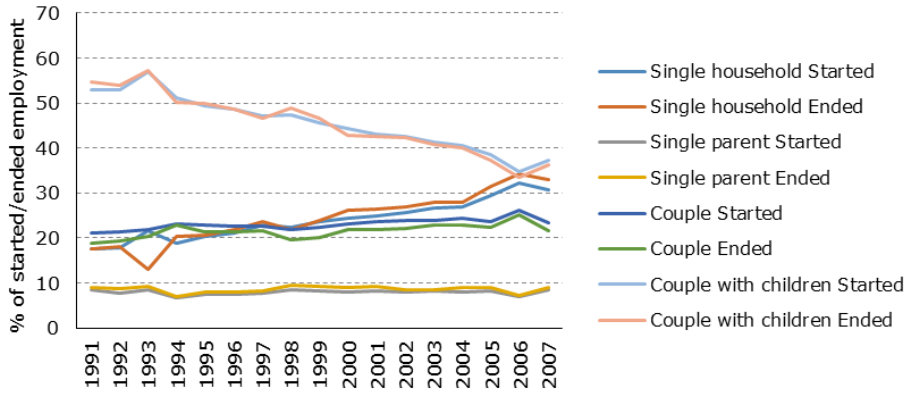


Figure 19: Shares of started and ended employment by family type in Finland, 1991–2008

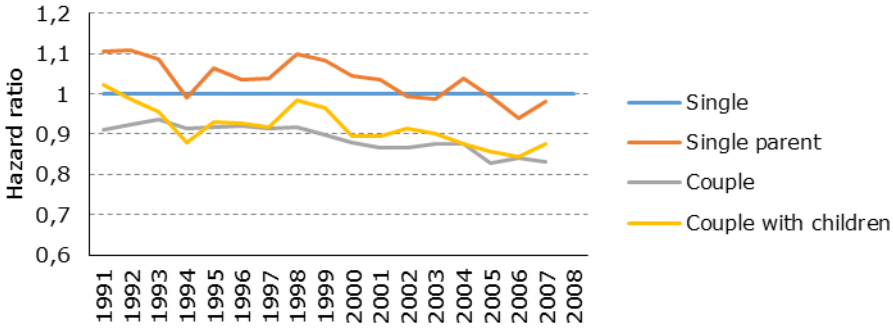


Figure 20: Univariable model: Probability of ending tenure by family type in Finland, 1991–2007

Type of the Housing Region

In Finland roughly 70% of all who start employment live in cities. This share is constantly rising due to the population being concentrated to the cities and decreases in started employment for those who live in rural regions. The probability to end employment during the first year differentiates so that for those who live in cities, the ending of a job is less probable than for those who live in rural regions. This tendency has been quite stable. However, since 2005 the difference between city inhabitants and rural habitants has diminished radically, and from 2005–2007 there has no longer been any difference between housing regions (Figure 21; Appendix 8; Figure 22).

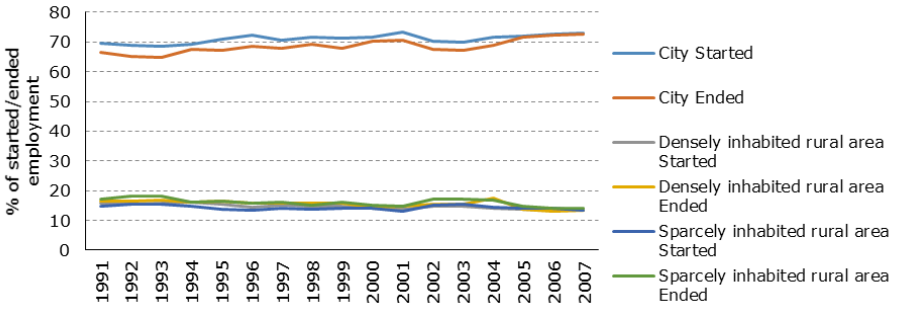


Figure 21: Shares of started and ended tenures by type of housing region in Finland, 1991–2008

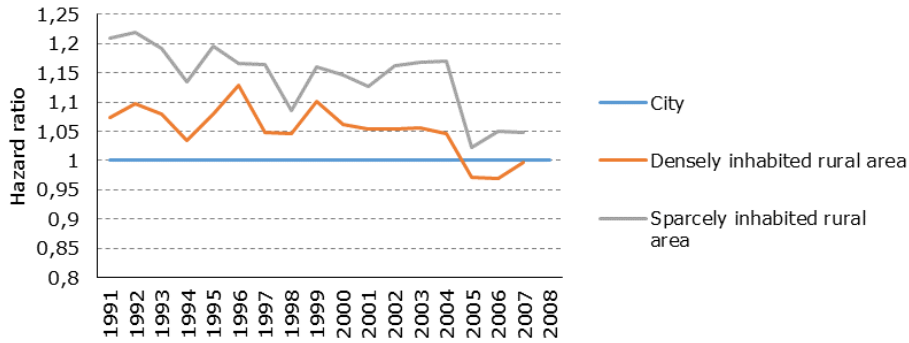


Figure 22: Univariable model: probability of ending tenure by type of housing region in Finland, 1991–2007

In this research, the housing region, particularly, is a variable that is used as a controlling variable for provincial labour markets. Due to confidentiality restrictions of the data, in this research, local labour markets will be analysed at the provincial level which creates some problems in regards to local labour market functions. The provincial level does not account for the differences between city and rural labour markets. In provinces, there are both types of local labour markets, and the provincial level does not encompass differing regional labour market functions or regional mobility patterns, such as commuting or employer location. Thus, the aim of the place of residence is to hold these differences constant.

4.1.2 Longitudinal Changes of Establishment Level Co-variables

Next, I will turn to presenting descriptive information of the structure of Finnish labour markets in relation to starting and ending employment tenures and their variance between different establishment types. The main concern here is to examine how the industrial branch of the establishment, annual accounts

turnover, changes in turnover, number of personnel, and ownership type of the establishment differentiates the picture that lies behind the starting of employment annually and the length of employment tenures, in general. These variables are not in this descriptive part related to each other. However, short observations are made about the relationships between variable categories.

Industrial Branch

In Finland, the largest industrial branches from the perspective of started employment are basic industry and basic services; roughly two-thirds of all employment starts in one of these branches. However, the share of these branches is diminishing and the share of new services, such as the R&D sector as well as consulting and planning services, has been growing since the 2000s. The tendency is that basic industry employment is more likely to end and basic services employment is less likely to end during the first year of employment. Despite the commonly held view that service workers have short-term employment tenures, there seems continuously to be a lower probability of employment ending compared to basic industry. However, in the new services branch, there is a steadily growing probability of employment ending, when compared to basic industry. Furthermore, it seems that in the high technology industry, there is the lowest probability of employment ending as compared to other industries during the entire observation period (Figure 23; Appendix 9).

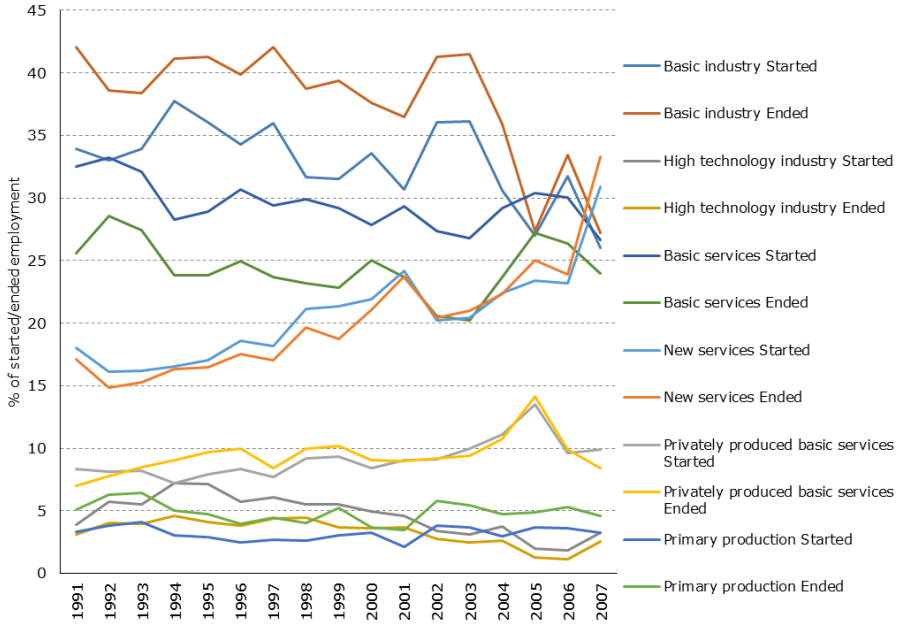


Figure 23: Shares of started and ended employment by industrial branch in Finland, 1991–2008

Previously discussed, we noticed that females tend to have longer tenures than males. This observation is probably interlinked with the concentration of a female labour force in the service sector. Thus, these branch differences might radically change once the gender influence is held constant. In Western labour markets, it has also been seen that those working in hotels and restaurants have the shortest tenures, and that these differences are rather stable across countries and over time (Ayer and Cazes 2000). However, in Finland, it seems that in basic services (including hotels, restaurants and grocery stores), the tenures are slightly longer than in basic industry (Figure 24).

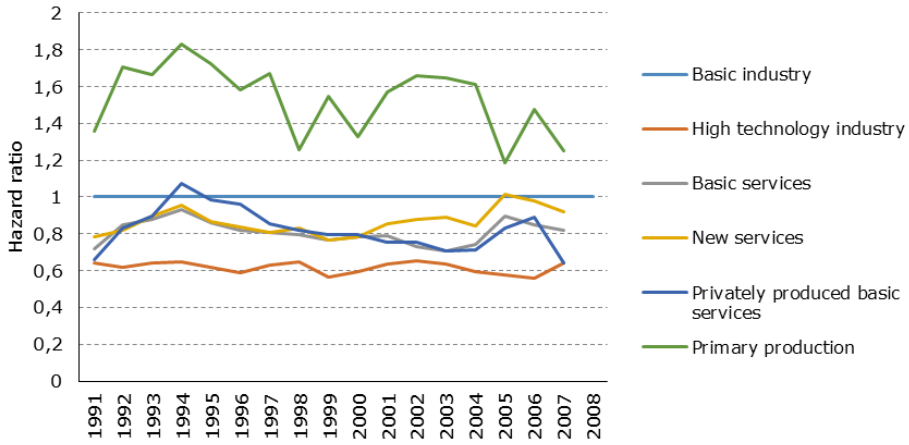


Figure 24: Univariable model: Probability of ending tenure by industrial branch in Finland, 1991–2007

Annual Capital Turnover

The structure of new employment stays quite stable over the observation period in relation to annual capital turnover of establishments. Most employment starts (approximately 70%) in firms that have over € 500,000 annual turnover. Actually, the largest share of new employment is in establishments that have € 500,000 – 5 million in annual turnover. Also, the probability of employment ending during the first year seems to be quite constant over years in different capital turnover establishments (Figure 25; Appendix 10).

When comparing the probabilities of employment ending between different annual capital turnover establishments from 1991–2007, we notice that middle level turnover companies constantly have the strongest probability of employment ending than compared to the lowest turnover groups. This difference grew until 2006 (Figure 26).

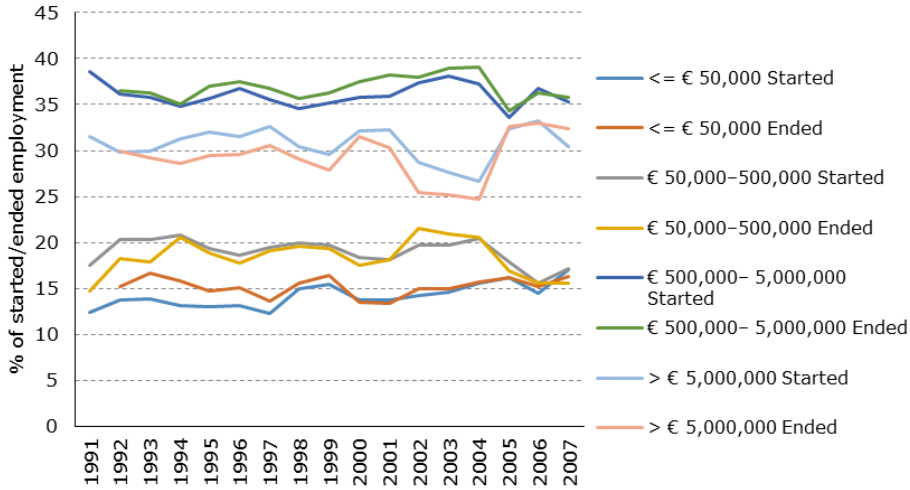


Figure 25: Shares of started and ended employment by annual capital turnover in Finland, 1991–2008

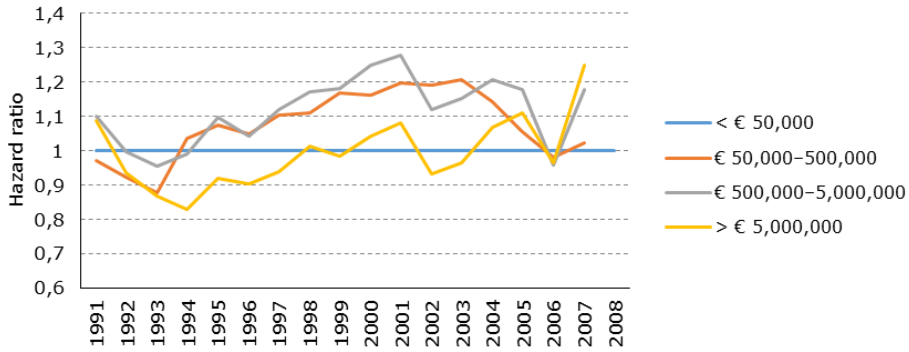


Figure 26: Univariable model: probability of ending tenure by annual capital turnover in Finland, 1991–2007

Number of Personnel

The structure of new employment remains quite stable over the observation period, and also in relation to the size of establishments. Around 70% of all new employment starts in establishments that have less than 50 persons. Approximately 20% start in establishments that have 50–199 employees. Furthermore, the structure of ended employment during the first year of tenures stays rather constant and it does not seem to differentiate between sizes of establishment (Figure 27; Appendix 11).

When comparing establishment sizes to each other, the probability of tenures ending has been lowest in large establishments during the 1990s. However, since 2003, this difference has been decreasing, and in the last years of the observation period, the probability is actually smallest in the small establishments (Figure 28). It is generally hypothesised that tenures should be longer in large establishments because of a better functioning internal labour market. However, empirical results of this phenomenon are mixed throughout the Western world; in some data the influence varies, in others the hypothesis is abandoned, or sometimes, it gains support (Boockmann and Steffes 2010; Auer and Cazes 2000; Bellman, Bender and Hornsteiner 2000; Burgess, Pacelli and Rees 1997). In Finland, it seems that there are changes in regard to this hypothesis.

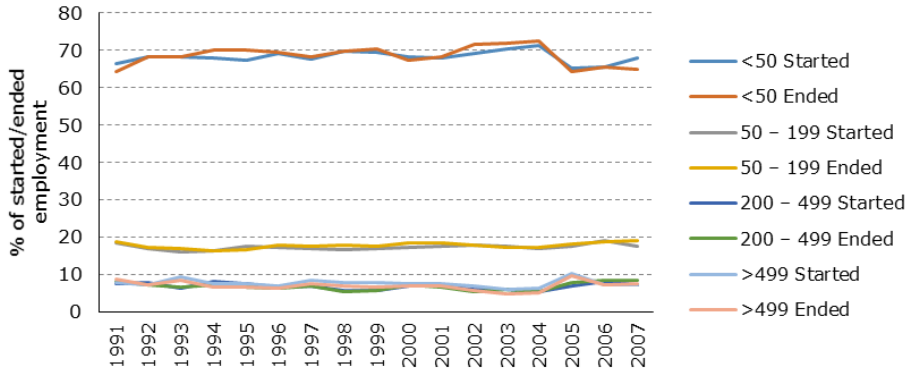


Figure 27: Shares of started and ended tenures by number of personnel in Finland, 1991–2008

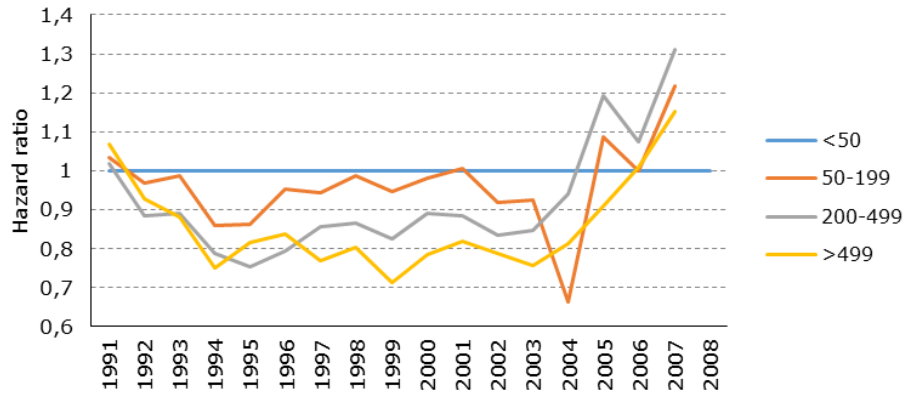


Figure 28: Univariable model: probability of ending tenure by number of personnel in Finland, 1991–2007

Establishment Economic Situation

Most employment begins in economically stable establishments (50–60% of started employment) and economically growing establishments started to employ larger labour forces once the 1990s recession was over. However, their share of new employment once again diminished after the growth period, and the share of employment started to grow in economically fluctuating establishments at the same time, since 1995. Coming to 2007, the share of started employment was even higher in fluctuating than in stable establishments. This might indicate larger structural change in Finnish industry, and that growing establishments started fluctuating after the first years of recovery. This effect is controlled for in the multivariable Cox proportional hazards model described in next paragraph (Figure 29; Appendix 12).

The probability of ending employment has been highest in diminishing and in fluctuating establishments in Finland. It has been lowest within growing establishments. Furthermore, this is quite predictable and the expected result is rather stable over time and there are only few changes during the observation period. However, growing establishments could have an even clearer lengthening effect on tenures (Figure 30).

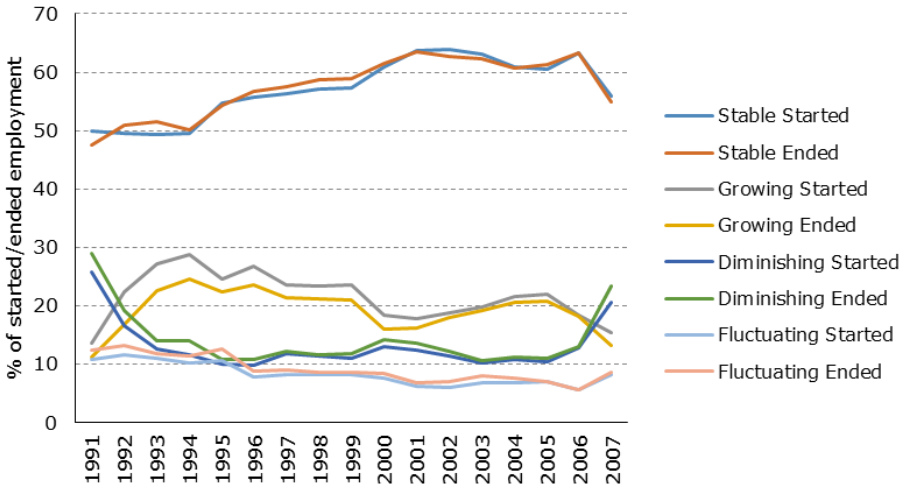


Figure 29: Shares of started and ended tenures by turnover type in Finland, 1991–2008

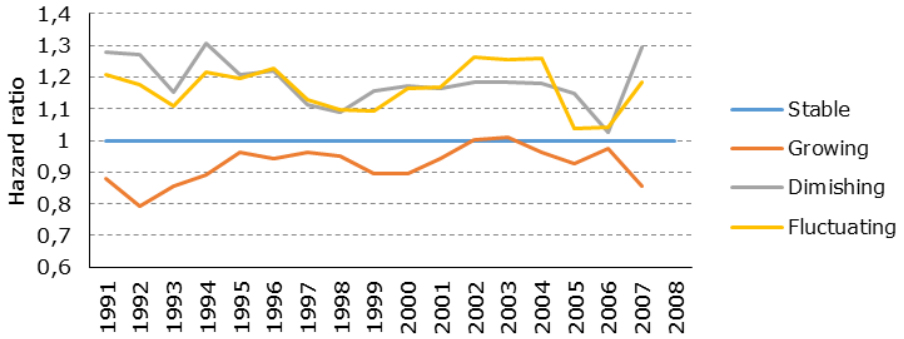


Figure 30: Univariable model: Probability of ending tenure by turnover type in Finland, 1991–2007

Foreign Ownership of Establishments

Foreign ownership is gradually gaining a foothold in Finnish labour markets. At the end of the observation period, 11.5% of new employment was situated in establishments that were foreign. The probability of ending employment during the first year does not seem to be strongly divided between the ownership of establishments. When comparing the overall probability of employment ending between Finnish and foreign owned establishments, we find that Finnish owned establishments have a higher probability of employment ending. However, this difference is decreasing gradually as the share of foreign owned establishments grows within the Finnish labour market (Figure 31; Appendix 13; Figure 32).

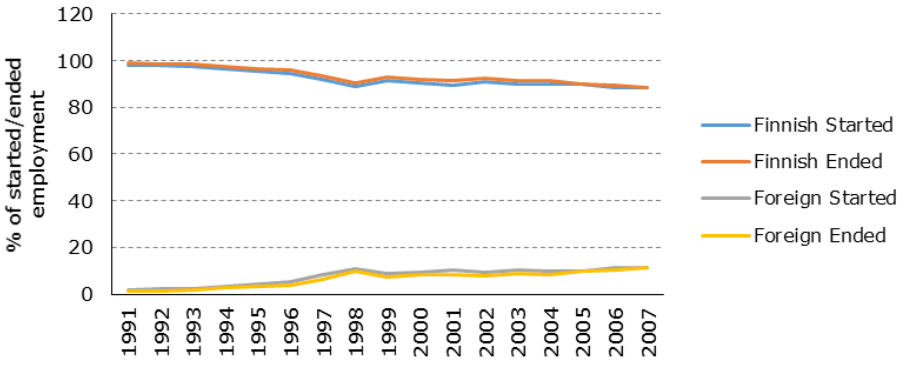


Figure 31: Shares of started and ended employment by ownership in Finland, 1991–2008

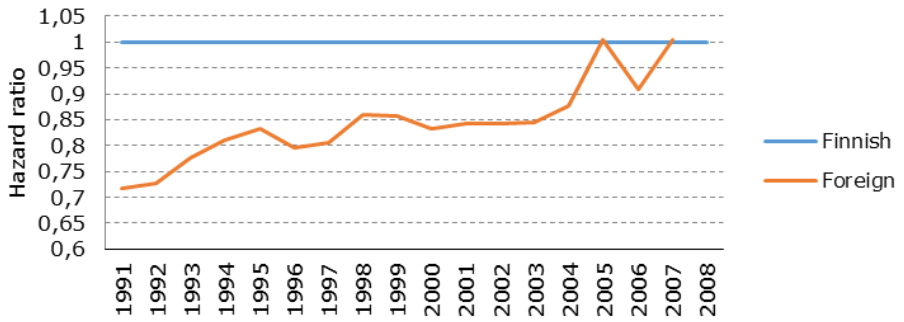


Figure 32: Univariable model: probability of ending tenure by ownership in Finland, 1991–2007

4.1.3 Longitudinal Changes of Labour Market Level Co-variables

Next, I will present descriptive information of the independent variables that aim to tackle the external labour market structure's influence on individual tenures. These variables are coded at the provincial level and in this descriptive part they are not controlled by a type of the region as being rural or city regions. Thus, this information cannot be interpreted in relation to local labour market theories, but only in a multivariable model can we come closer to observing actual local labour market functions.

Open Labour Market Salary Level

Most new tenures begin with lower than medium open market wage levels in provinces and these employment spells have lower probability to end during the first year. Furthermore, those that start in higher than medium level wages have much higher probability of ending their tenures during the first year. The finding that those with higher salaries, in relation to other salary groups, have a higher risk of employment ending is also constant over a longer time period. Comparing these differing salary levels to each other with a Cox proportional hazards univariable model, we find that, those who have higher salary levels than those in general labour markets tend to end their employment more probably. The drastic difference between the highest salaried group and other groups might indicate that the low paid in Finnish labour markets are almost trapped in their low employment, at least during upturns in the economy. However, this difference also changes over time and from 1998–2002 and since 2004, these differences have been smaller. This hypothesis must be tested in reference to transitions after an employment spell (Figure 33; Appendix 14; Figure 34).

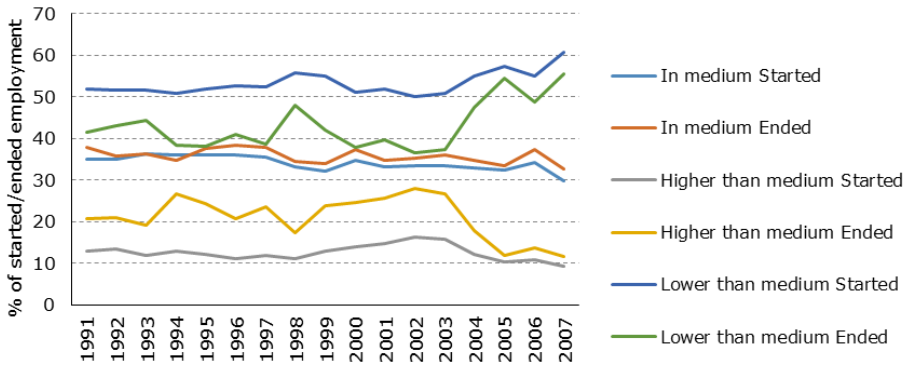


Figure 33: Shares of started and ended employment by open labour market salary in Finland, 1991–2008

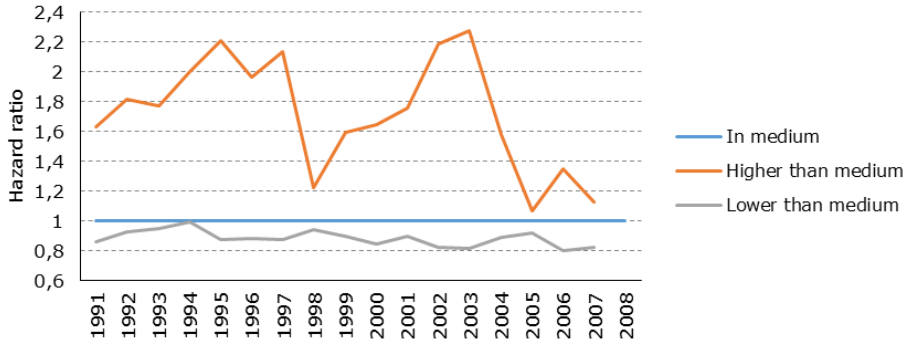


Figure 34: Univariable model: probability of ending tenure by open labour market salary in Finland, 1991–2007

Number of Employers in Province

The more employers on a provincial level, the less likely it is that employment ends. This notion might refer to matching being better in regions where there is more competition for the labour force between different employers, or that the employers keep their labour force more in such regions where competition for the labour force is stiff. This effect increased during the 2000s. Generally, this notion does not confirm the hypothesis that workers would change jobs if there were lots of other employers available. Rather, the number of other employers and outside labour market opportunities function in the other direction. However, the scale of this variable is extremely low, and thus, any strong statements are not advisable (Figure 35).

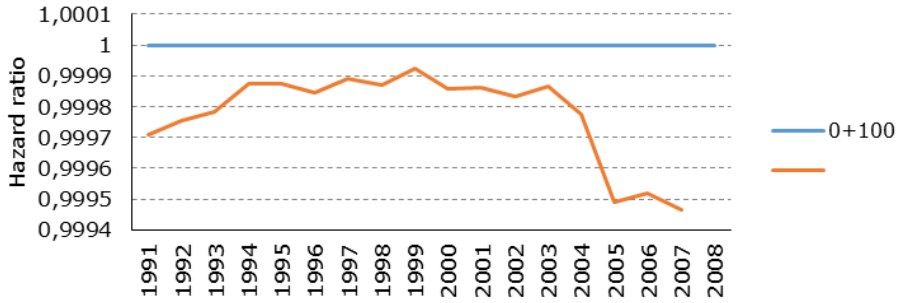


Figure 35: Univariable model: probability of ending tenure by number of employers in province in Finland, 1991–2007

Gross Domestic Product at a Provincial Level

The structural effect of the provincial gross domestic product is quite small on the length of tenures. The overall economic situation in a province has only a minor effect on the length of employment. Only during periods of high economic growth, a higher GDP suggests a slightly higher probability of tenures ending, and thus more mobility in labour markets as hypothesised earlier in relation to employment transitions and economic growth research (Figure 36).

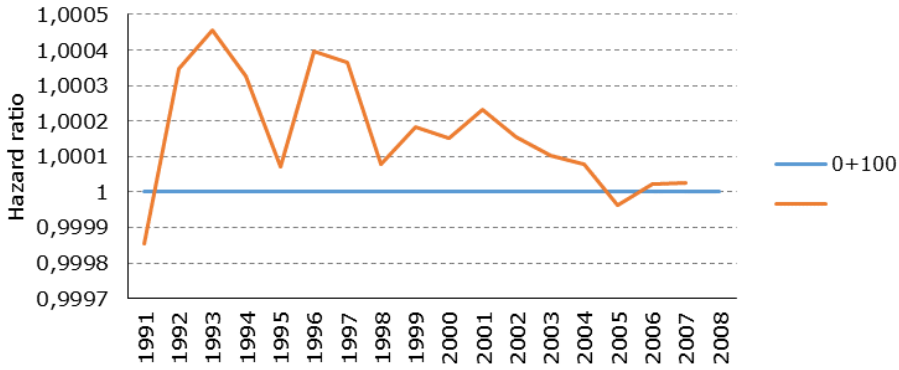


Figure 36: Univariable model: probability of ending tenure by provincial GDP in Finland, 1991–2007

4.1.4 General Notions of Employment Transitions

Previously, we found that the share of short tenures has increased in Finland. It is a very interesting observation, but this share might mostly be a product of job changes, which might indicate more employment mobility in labour markets. This question of whether the change in the share of short employment spells is in accordance with flexibility strategies at a national level, or actually a phenomenon situated somewhere else, may be targeted as a starting point for

looking into the transitional patterns of all the employment spells. It might be that the job-to-job transitions after tenures have increased, but the transition of job-to-unemployment has decreased.

I will divide the exit types from the analysed employment spell into four types: (1) job-to-job, (2) job-to-unemployment, (3) job-to-pension, and (4) job-to-other destination outside the labour force. Transitions to pension are excluded. Those who make the transition to unemployment must have received unemployment benefits at least 30 days right after their employment spell.

During the recession at the beginning of the 1990s, we see that the share of those who became unemployed after the analysed employment period was higher. Since 1996, the share of transitions to unemployment has declined; however, the share of transitions to employment has been declining as well. Thus, largest change is in the share of those who transit to outside the labour market. Their share is continuously growing and has changed radically from 59% in 1991 to 76% in 2007. The change is in the same range for those employment spells that ended during the first year; it increased from 63% to 80% in 2006. This finding does not support the conclusion that job-to-job mobility would have increased. Rather, it indicates that labour flows are constantly directed more from employment to outside labour markets (Figure 37; Appendix 15).

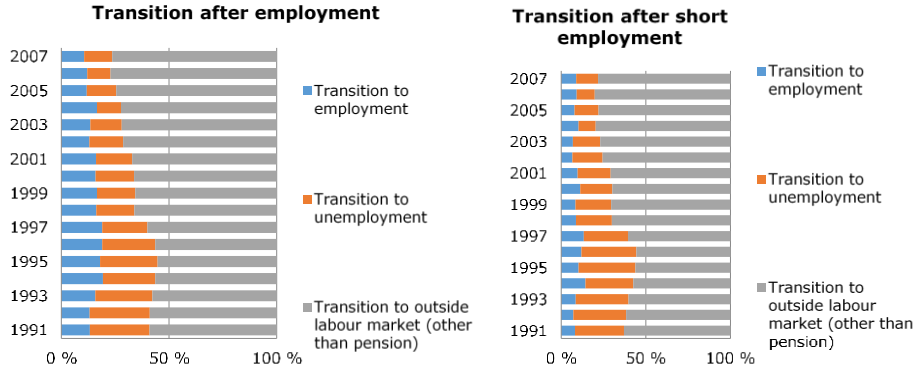


Figure 37: Shares of employment transitions after tenures in Finland, 1991–2007

Labour markets might be divided into segments by differing transitions and transitory chains of individuals. Thus, differing entry and exit types into and from organisations (between two jobs, between unemployment and employment and between outside labour markets and employment) follow clearly differentiated processes. It might be that the same individuals, who transit from short tenures to outside labour markets, are students etc. who typically have this type of employment mobility. However, if we find continuous chains of unemployment, we may begin to ponder about the

possible labour market segmentation in relation employment mobility. Further, those who began the employment spell as job changers might be changing their job, once again, after their tenure.

The figures of these transition paths show that the churning effect is strongly related to economic cycles. Job-to-job-to-job chains are the most prevalent in labour markets during the times of a good economy. In economic recovery times, unemployment-to-job-to-employment grows when those who were left without a job during the recession gain back their position in employment. Also, chains to unemployment seem to be similarly cyclical in relation to economic turns. However, the chains of studies-to-employment-to-employment seem to be rather constant in spite of economic turns. However, even though the chains to outside labour markets seem to have the same cycles in relation to economic turns, there is an interesting increase in the chains from studies to employment and back to outside the labour market since 2003. This might indicate that temporary work for students has increased or that the transitional groups in labour markets are changing (Figure 38).

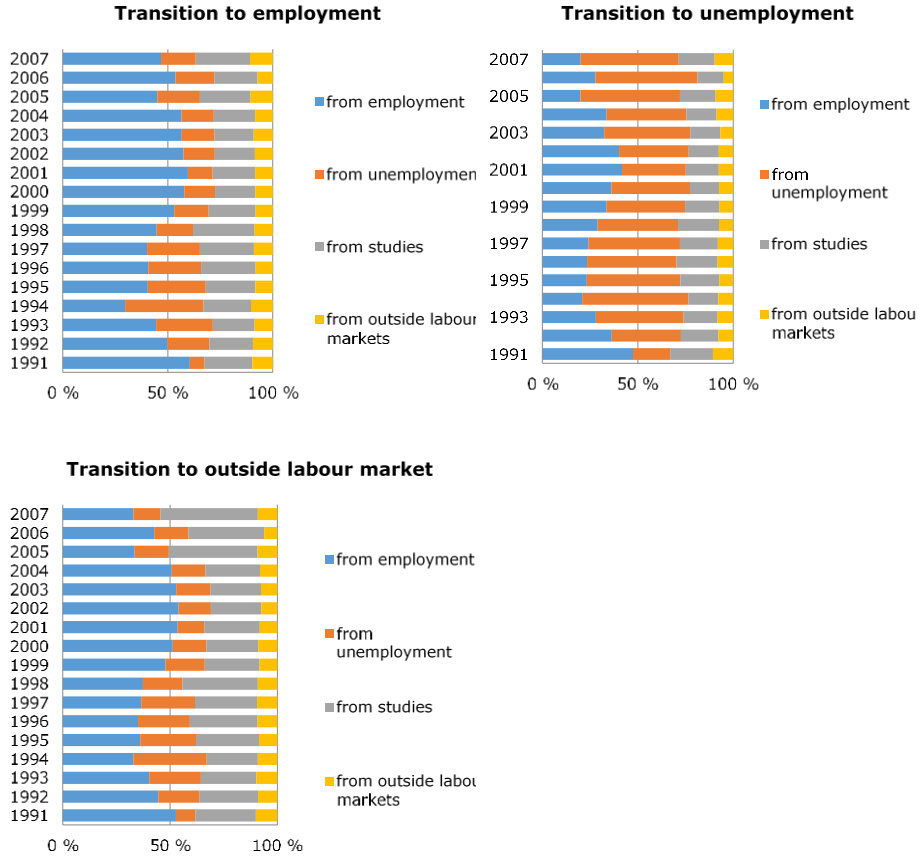


Figure 38: Shares of employment transitions after tenures by status before tenure in Finland, 1991–2007

4.1.5 Conclusions – Description of Patterns of Change

In the Finnish labour market, the general pattern of employment stability has been rather stable from 1991–2007. However, the share of short-term tenures, those that lasted less than a year, has been growing since 1998; they have increased from roughly 40% to 60%. Thus, when the mean tenure stays roughly the same, and the share of short tenures increases, it proposes that Finnish labour markets have become divided in a dual manner, into stable employment and into fragmented labour markets, since 1998.

The number and shares of transitions into employment and out of employment show important tendencies. The transitions to outside the labour market have increased during the observation period significantly and the number of transitions to employment and unemployment have decreased. Similar results have been obtained from other Western societies, especially in relation to job-to-job transitions. This has caused some concerns when job-to-job transitions are seen as one important part of the function of national labour markets, salary formation, and competition. High worker reallocations have been associated with higher economic growth. When targeting the descriptive analysis of the labour force that transits into outside labour markets, we notice that the group structure is rather constant. The changes that occur are related to economic cycles. During upturns, this group within the labour force comes mainly from unemployment or from studying, and in downturns they come from other employment to new employment. Only from 2005–2007 did this general tendency change slightly and, it might be, that during the latest global economic crisis, there is an increase in churning between studies and employment.

In Finnish labour markets, there are some gradual structural changes occurring during the observation period. Younger age groups have a higher share in started employment all the time; thus, the labour market is becoming a young peoples' labour market. Educational levels have risen accordingly in new employment and further, the student and singles' share in new employment is constantly growing as the population concentration in cities is also visible in the shares of new employment in city regions. The share of new employment is also rising especially in the new services branch.

The univariable Cox proportional hazards regression model shows that age, educational level, salary increments, family type, place of residence, industrial branch (except primary production), foreign ownership, and number of employers in a province have a stable and rather continuing influence on the length of tenures. This influence is unrelated to economic situations. The young, singles, and those who work in the new services sector have greater probability of their employment ending, thus their tenures are becoming shorter. The highly educated, those living in rural areas, or in such provinces that have more possible employers, and those who gain salary increments are less likely to end their employment, thus their tenures are getting longer. Thus, in relation to

these variables, we might expect them to show some greater or smaller degrees of structural change regarding tenures in Finnish labour markets.

However, some important independents then seem to be functioning more in relation to economic turns. Gender, salary, establishment turnover, open labour market salary levels, and GDP influence tenures and employment stability varying in accordance to the economical turns. It seems that males, highly paid workers, those with a higher salary than in the open labour market, and who situate in high economic turnover establishments, are more mobile during better economic times. Thus, these groups' tenures shorten during the upturns.

However, these descriptions do not take into account their influence on each other and that the variables might be interlinked in many ways. Further, it is extremely interesting to see whether the increase in labour force mobility is due to individual job changing patterns in relation to employer labour force usage. I will now continue onto a multivariable model and analyse these changes in relation to each other.

4.2 LONGITUDINAL STRUCTURE OF EMPLOYMENT STABILITY

In this section of the research I put all the previous variables together, so, that we may control for their joint influence on tenures. Also, in order to find out how much the tenures are caused by unobserved establishment level heterogeneity, I will stratify the Cox Proportional hazards model. I have done the analyses for all years. Then, I stratified the model and the difference between the stratified hazard ratio and (basic) Cox Proportional Hazards regression hazard ratio indicates the establishment level influence. After these analyses, I proceed to dividing the employment spells into whether they ended as job-to-job transition or as job-to-unemployment transition. This division gives us some idea of whether the ending of the tenure has been due to an individual level action, or is self-initiated, or whether it has been more due to an establishment level action. Further, I also present the stratified models of these transitional analyses.

For the presentation in this research, I have chosen to show the Cox Proportional Hazards regression model in parts. In every chapter, I present the hazard rates of one covariant in longitudinal figures. This way, we may detect the changes in the probabilities of employment endings. The Cox model is, of course, relational, in that the co-variables should be studied together. However, I will explain the main interactions in each chapter and the overall model is shown in the appendices (Appendix 16). The reader can check the whole model and statistical significances that are presented there. This decision on splitting the analyses into co-variables and targeting a longitudinal picture of the influencing factors on tenures is based on the research framework, as I am

seeking to understand the change of the employment system. Further, in this way, it is the simplest way to visually show how the influence of establishment level and other explanatory variables have been changing.

In general, at an individual level, the highly educated and the middle aged are the two main labour force segments which have longest tenures. At the establishment level, working within the industrial branch of higher technology also lowers the probability of employment ending. Thus, highly educated, prime aged employees (aged 25–44), working in high technology have the longest tenures. These observations also apply longitudinally, since, even though there are some gradual changes in these labour force segment probabilities of employment ending, these groups' prospects are continuously better than others. The probability of employment ending is highest for the high salaried and for employees in the primary production industry. Furthermore, this observation applies longitudinally. Thus, the high salaried and primary production workers have the shortest tenures, and lowest employment stability (Appendix 16).

With a stratified model, we can account for establishment level heterogeneity, and thus, we control for differences between establishments in hazard rates. The stratified model shows, accordingly, that prime aged employees and highly educated workers have lower probabilities of ending tenures, and this picture stays the same longitudinally. Further, the difference between stratified and basic model hazard rates is not very large, indicating that this structure is not influenced by establishment level selectivity. However, taking into account the establishment level differences, we find that, not only the highly salaried groups' probabilities of employment ending are highest, but also students' probability of employment ending is higher than the probability for other groups. Thus, the selectivity of students into low tenured establishments influences their tenures. When analysing the difference between their stratified and basic model hazard rates we find that this selectivity is longitudinally, in general, the same. Further, the stratification of the model influences the open labour market salary level 'higher than medium' so that it lowers this group's probability of employment ending. The labour force of this segment is selected, in general, for longer tenured establishments (Appendix 16).

Thus, the structure of long-term employment is rather uninfluenced by establishment level, but the structure of short-term employment is influenced by establishment level variance in tenures. Short-term employment might be produced at the establishment level so that some particular establishments use particular labour force segments in short-term employment.

However, in order to dig deeper into this phenomenon, I will next analyse each individual variable in detail. I will take a closer look into the influence of the factors in relation to these general hazard rates and try to find some of the influencing mechanisms behind the factors.

4.2.1 Individual Level Determinants of Employment Stability

Next, in every chapter, I will first explain the general longitudinal changes in the co-variables' influence on the length of tenure, and then I will compare the results of the stratified Cox proportional hazards model with the (basic) Cox proportional hazards rates. This comparison, the difference between the hazard rates, will give us notions of unobserved establishment level influence. Then, I will turn to comparing the two exit types: to employment and to unemployment. The difference between these two and in relation to previous general results, will offer some guidelines to understanding transitional labour market operations in relation to employment stability. Further, these transitions may also be linked to establishment level selectivity by the particular co-variable under analysis. Thus, I will include comparisons between the transitional type's Cox proportional hazard rates and stratified hazard rates.

Gender and Tenures in the Nordic Welfare State

Hypothetically, gender may influence the duration of tenures in two different ways. Firstly, family responsibilities fall mainly on female employees, but on the other hand, welfare state social institutions may hinder this influence. It might be that the family type, as such, does not influence female employment much when, for example, free childcare is available. Then, secondly, gendered practices in the establishment level might produce differing advancement steps for females and males. It might be that if males are favoured over females due to discriminant patterns, males may have longer tenures inside firms. Hypothetically, gender might have an effect on different transition types and their probabilities after tenures. It might be that open labour market situations and possibilities for males or females differ. In open labour markets there might be hindrances, for example, for female job-to-job mobility if there are not enough vacancies for them. Furthermore, the transition types and their probabilities might differ between genders due to family responsibilities etc. In general, in Western labour markets, it has been found that males are more mobile in relation to job-to-job changes than females, and this might be due to their differing salary expectations etc. Sometimes, it is also argued, that females tend to be less mobile because of their tendency to be securers of the family incomes and, thus, a change of employers might present too large of a risk regarding a family's total income.

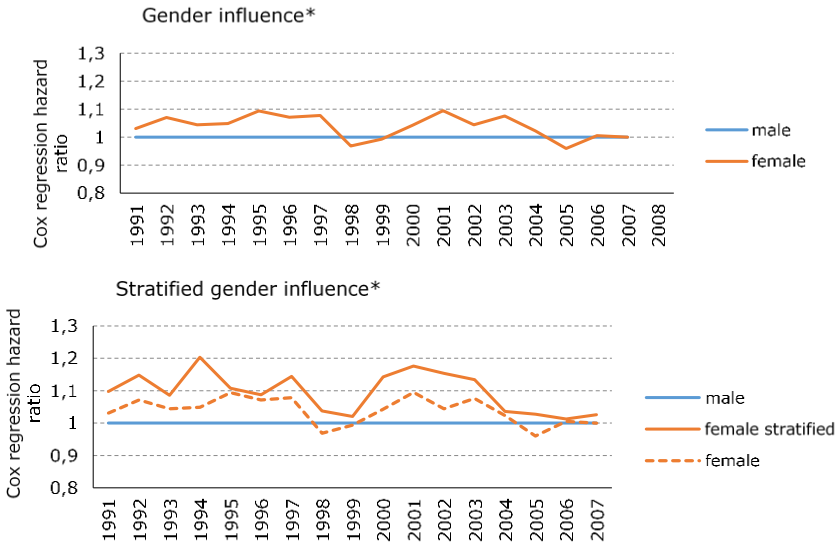
In the basic description, we found that females in the Finnish labour market seem to have less risk of their employment ending than males, and that the gender difference changes in accordance to economic turns. However, once I combine all the covariates in the Cox model[4], the probability of females' employment ending becomes higher than males. Also, the link to economic

[4] Thus, I control for age, educational level, salary, family type, housing region, industrial branch, establishment turnover, establishment size and labour market indicators.

trends is milder. Only between the years 1998–1999 and 2005–2007 did females have lower or the same probability of their employment ending as males. The general trend is that the probability of employment ending is slightly diminishing for women in relation to men during the observation period. Thus, females have shorter tenures than males, however, their tenures have lengthened and their employment stability has improved (Figure 39; Appendix 16).

The female probability is mostly influenced by inclusion of salary level, family type, and industrial branch. These variables increase the female risk of employment ending, thus, part of females' employment stability is due to females being in low salaried positions, belonging to more established family types, and their employment is in branches that have longer tenures than other branches. Thus, when this branch related division is removed, the gender difference changes. Also, family composition is important since we know that females use more family allowances and, thus, the family type influences their employment durations.

Once stratifying the model with establishment level heterogeneity, the differing genders have similar risk tendencies as in the basic model. However, the establishment level has a very slight increasing influence on female probability of employment ending. Thus, the gendered selection processes in the "shop floor" do not direct females to short tenured establishments. Rather, females work in longer tenured organisations (Figure 39; Appendix 16).



*Controlling age, educational level, monthly salary, salary increments, status before employment, family type, type of housing region, industrial branch, establishments annual capital turnover, economic situation, number of personnel, ownership, open labour market salary level, amount of employers and GDP.

Figure 39: Gendered practices of employment stability in Finland, 1991–2007

Next, I divide the analysis of genders between the transition types after tenures. I analyse two differing transitional situations: job changing (job-to-job transition) and losing a job (job-to-unemployment). These two differing types of transition are also dummies for differing behavioural types, cumulating from differing instances.

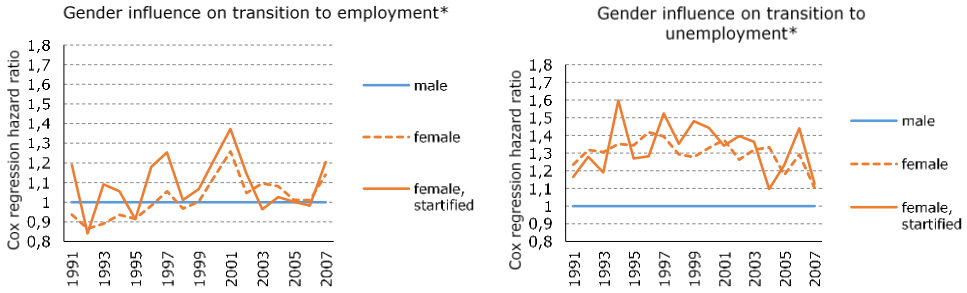
The self-initiated resignation is hypothetically differentiated by gender, as females more probably will leave a job for a variety of non-market reasons. These figures (Figure 39) show that, in Finland, females have become more mobile than males in job changing. Females' probability of their employment ending into other employment was lower than the males' probability in the beginning of 1990s, yet, it has been higher since 1997. The highest probability for females to change job was in 2001. Thus, the decrease in job changing in the Finnish labour markets affects more males than females. This indicates that females have become more mobile and, actually, some of the changes in labour market mobility are caused by females changed action patterns (Figure 40; Appendix 17).

Gender differences are linked to internal labour markets; gender equality might be better in large establishments because of the bureaucratic rules. But on the other hand, bureaucratic rules may also legitimize gender inequality (Baron et al 2007). In these analyses, the size of establishment has been controlled, but there still might remain some unobserved gendered establishment level influence on tenures. Stratification of the model by establishment increases female probability of job changing, and, thus, indicates that females who change jobs work in such establishments where there is generally less job-to-job turnover.

The female probability of transitioning to unemployment has been higher than males throughout the observation period of 1991–2007. There was a slight increase in female probability for unemployment after the 1990s recession. Thus, the decrease of transitions to unemployment after recession touched females mainly (Figure 40; Appendix 18).

Thus, in conclusion, females have less employment stability in the Finnish labour market than males. However, the increasing female probability of job changing counterbalances the decreasing probability of females' transitioning to unemployment. The increase in female probability of changing job situates at the beginning of the time span 1998–2001, when there was a general increase in short-term employment. It has been hypothesised that in Western societies the flexibilisation has mainly affected women so that they are more tied to their poorer working conditions (Giesecke and Gross 2003; Blossfeld, Mills and Bernardi 2006; Breen, 1997; Scherer 2004; Booth et al. 2002; DiPrete et al. 2007; Gangl 2003; Golsch 2003; Kalleberg 2000). This might not be quite as true in the Nordic model where childcare is publicly provided. Also, it has been argued that short-term workers are in a weaker situation than before because they need to maintain their employability themselves in order to be mobile in labour

market (Forrier and Sels 2003; Dolado, Garcia-Serrano and Jimeno 2002). In Finland females have been the winners of this transition as their general employment stability has improved, their job-to-job mobility has grown, and their job-to-unemployment transitions have decreased. Further, there is no establishment level selectivity based on.



*Controlling age, educational level, status before employment, salary level, salary increment, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 40: Gendered labour mobility in Finnish labour markets, 1991–2007

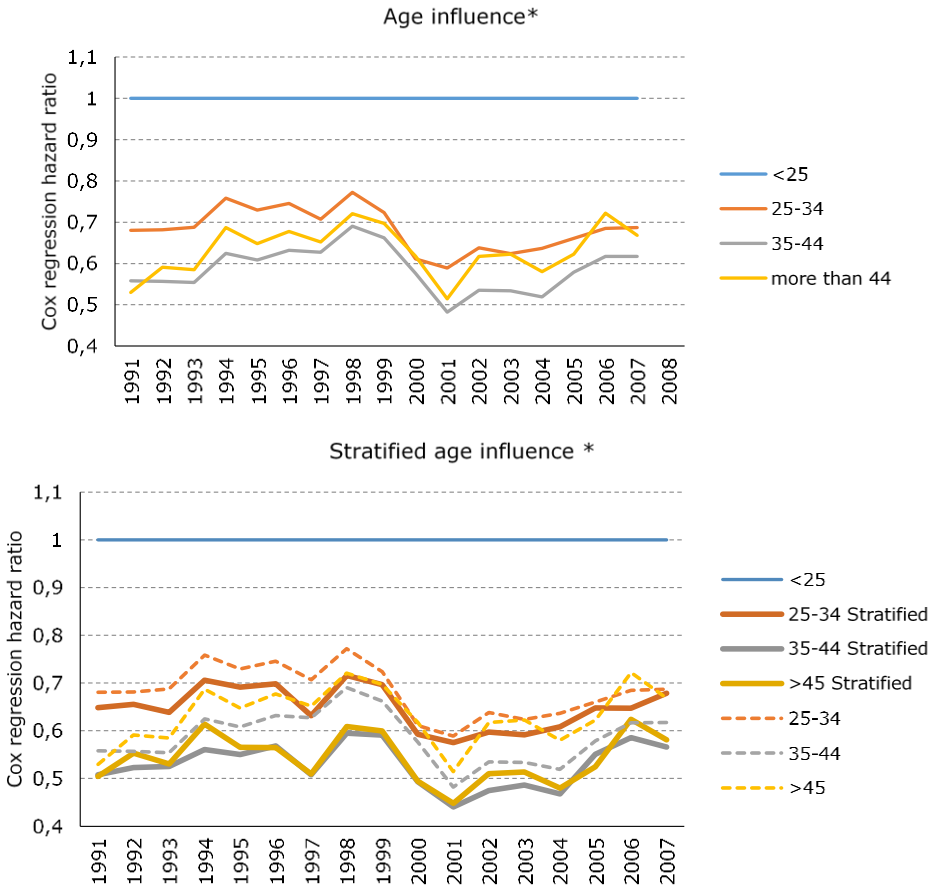
Employment Stability of Different Age Groups

Previous research describes that the youngest age groups tend to have short employment periods because they are searching for their position in labour markets; the first employment tenures may be short and then, later on, they might turn into long-term employment. In the descriptive analysis I observed that the share of the young generation in new employment, and their probability of employment ending, are constantly rising, even though the labour force is ageing simultaneously in Finland.

Hypothetically, age may influence the duration of tenures in many ways. Firstly, the young might be changing their employment in search of better jobs. Secondly, the older might face barriers in their job mobility such as pension and sick leave institutions. However, thirdly, "prime aged" workers, aged 25–35 years, might be more valued as labour force and, thus, they may have longer tenures. It has been observed that firms with a "prime aged" labour force have the highest labour productivity (for example Skirbekk, 2004; Ilmakunnas and Maliranta 2007).

Generally, the oldest age groups have less risk of ending their employment than the youngest age groups in Finland. This finding is in line with previous literature, yet, this situation is not stable over the years. During the 1991–1998, the differences between age groups' probabilities declined. However, it started to grow again between the years 1998–2001. The difference in probability of employment ending declined once again since 2003. This sharp increase in

differences suggests that the older age groups were less mobile than the youngest generation (Figure 41; Appendix 16).



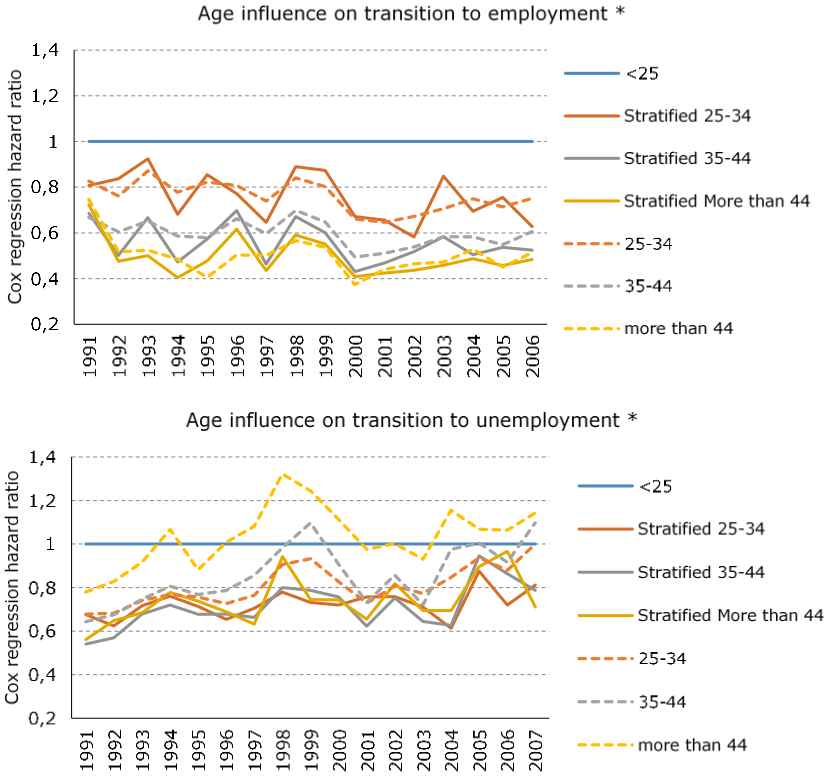
*Controlling gender, educational level, monthly salary, salary increments, status before employment, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 41: Age group segmentation in employment stability in Finland, 1991–2007

Age interacted mostly with educational level, status before the employment, and with salary levels. Inclusion of educational level and transitional status before employment raises all these age groups' probabilities in relation to the youngest age group. This indicates that the older belong to less educated groups and they tend to be job changers. However, the salary levels lowered the older age groups' probabilities of employment ending, thus, it indicates that the older have higher salaries than the young.

The stratified model shows that, the age related differences are partly produced on the "shop floor". As previously mentioned the establishment level has an influence on the tenures of the less the 25-year old workers, when the young are selected into organisations with shorter tenures. However, this targeted analysis of age related tenures shows that also the over 44 year old workers are selected into short tenured companies. The longitudinal observation is that the selection of older age groups has been increasing especially during 1991–1997 (Figure 41).

Individual job changing patterns produce continuous tendencies of employment stability structure between age groups; the younger generation is gradually becoming more mobile in job changing. Furthermore, the establishment level influence is weak on age related job-to-job mobility (Figure 42; Appendix 17).



*Controlling gender, educational level, status before employment, salary level, salary increment, family type, housing region, industrial branch, annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 42: Age group segmentation of employment transitions in Finland, 1991–2007

In general, the age group differences in the probability of transition to unemployment are declining. The older age groups have a growing tendency to end their employment and progress into unemployment. The establishment level influence on age group probabilities is strongest among oldest age group, when they situate mostly in short tenured establishments which send their labour force back to unemployment. However, this selectivity diminished during 2004–2006 (Figure 42; Appendix 18).

Thus, in Finland the change of tenures has in some aspects been a product of individual patterns of action in the self-initiated job changing of the young generation. However, on the other hand, the probability of other age groups transiting into unemployment has grown. Thus, while the young change jobs increasingly the older are more subjectable to firms' labour usage patterns. There is a pattern that employment stability of the labour segment that is closest to pension age is continuously influenced by organisational selective mechanisms. Thus, the growing transitions to unemployment of the oldest age group might be due to the unattractiveness of this segment as long term labour force.

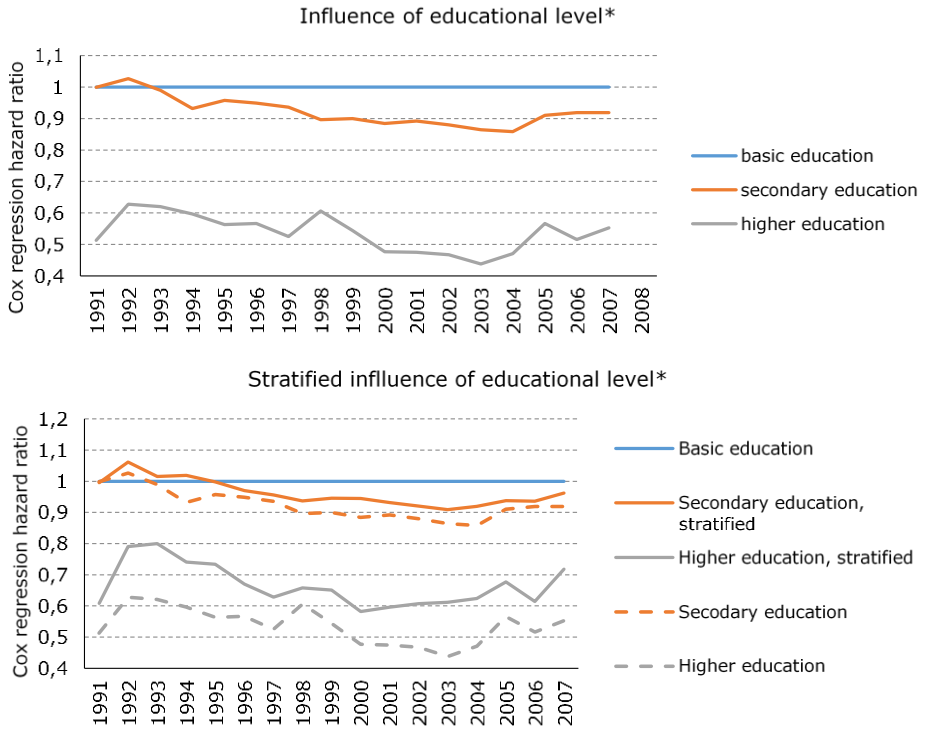
Educational Level and Employment Tenures

The share of highly educated workers in employment tenures is constantly rising in Finnish labour markets. Hypothetically this is expected that when there is more competition for job opportunities between highly educated workers, employment stability may get weaker and mobility may possibly increase. On the other hand, a better qualified labour force may be needed, particularly, in the new industrial structure of welfare state. Furthermore, the internal labour market hypothesis predicts that highly educated workers have more possibilities inside establishments for advancement, and thus, their internal careers might be longer than expected.

The higher the educational level the less risk people have of employment ending in Finland. Furthermore, even though the educational level has been constantly rising in Finland, this rise has not had any weakening influence on employment stability for highly educated workers. A notable observation – which is probably related to the general economic situation – is that higher educational groups had more similar hazards regarding employment ending in relation to other educational groups between 1992–1995. Further, a similar decrease in differences between educational levels occurred before the next great recession in 2008, during 2005–2007 (Figure 43; Appendix 16).

The educational level influence interacted mostly with salary levels and industrial branches. Inclusion of salary levels decreased the probability of employment ending indicating that highly educated employees have higher salaries. Industrial branch, on the other hand, decreased the probability of highly educated employees' employment ending, thus, the highly educated work in immobile branches, such as high technology.

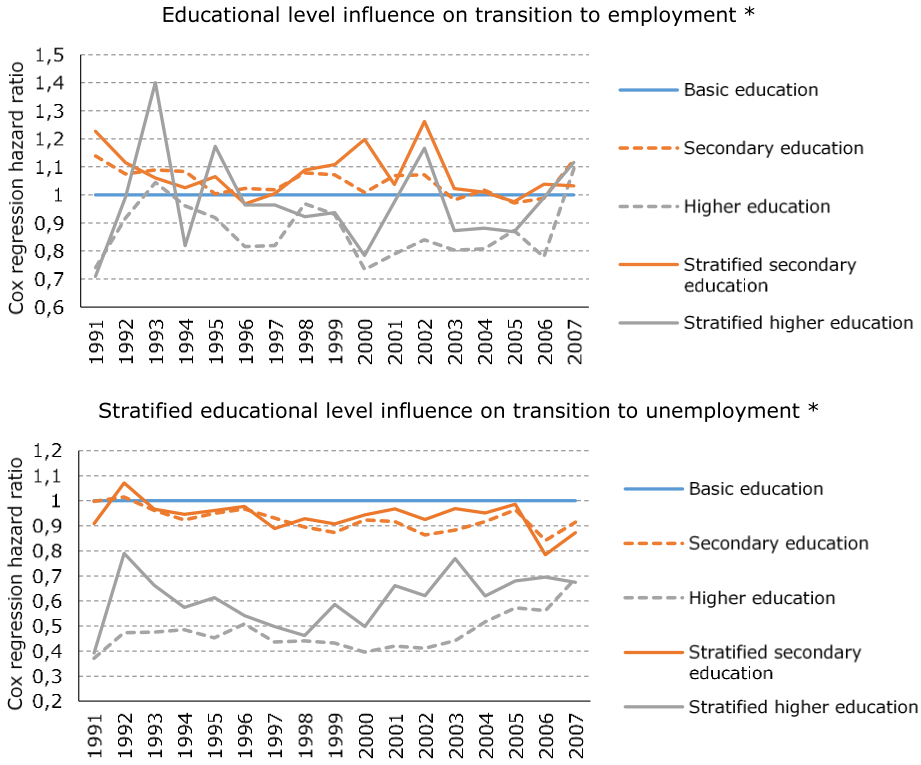
The stratified model shows that differences in the lengths of tenures between highly and basic educated workers are produced by the selective patterns of establishments; and this relation stays the same longitudinally. Highly educated employees are more likely to be employed by such establishments which have long-term employment and/or in such establishments that favour highly educated workers in their patterns of social action. Similar results have been obtained from Germany (Boockmann and Steffes 2010, 12). The favouring of highly educated employees peaks during the times of economic growth when establishments are in need of a new labour force. However, this establishment level influence drops after the peak. In this phenomenon, there are two differing streams. First, employers are in competition for a knowledgeable labour force, and secondly, highly educated workers are in a better position in labour markets for choosing their employer during the peak of an economic cycle (Figure 43; Appendix 16).



*Controlling gender, age, monthly salary, salary increments, status before employment, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary, number of employers, and provincial GDP

Figure 43: Educational segmentation of employment stability in Finland, 1991–2007

In general, higher education continuously and increasingly lowers the probability of employment ending, and highly educated workers are less mobile both in terms of self-initiated terminations and in transitions to unemployment. Highly educated workers had a lower probability of changing jobs during good economic times from 1995–2005, however during years 1991–1995, and again, 2005–2007, their probability to change job was almost the same as other educational groups. Job changing patterns of highly educated are more linked to establishment level selective processes than other educational groups. The probability of job-to-job mobility fluctuates more in relation to establishment level selective processes, especially, during economic up-turns (Figure 44; Appendix 17).



*Controlling gender, age, status before employment, salary level, salary increment, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers and provincial GDP

Figure 44: Educational segmentation of employment transitions in Finland, 1991–2007

The increase of general employment stability of highly educated is mainly a product of a lesser probability of unemployment. Even though, highly educated

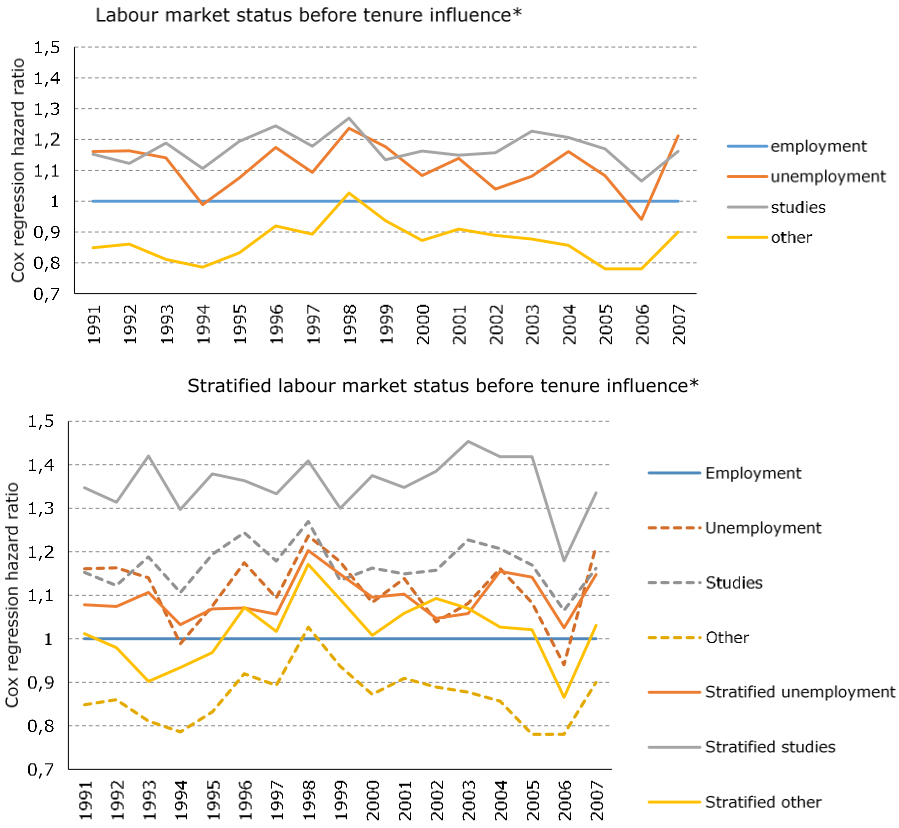
workers have a lower probability of unemployment, their probability of ending up unemployed has been increasing since 1998. This coincides with the growing share of short-term employment in Finnish labour markets at the same time. This effect is mainly a product of differing establishment level selection of highly educated workers and other educational groups. It might be that during upturns of economy the highly educated workers are also more selected into project based, temporary employment than other educational groups (Figure 44; Appendix 18).

Employment Stability of Transitional Paths Between Labour Market Statuses

It was discussed previously that segmentation of labour market may occur in how people get to be employed in a fragmented manner. Unemployment spells and short-term employment might be linked; those who change jobs might have longer durations. These results show that the status before employment is very important in understanding the structure of employment stability. Unemployment-to-job and studies-to-job transitory groups face more risk of their employment ending than job-to-job changers. This effect was strongest for the unemployed in 1998 and again in 2007. The differentiation grew during 1995–1997 and decreased during 1998–2006 (Figure 45; Appendix 16).

Status interacted mainly with salary levels, family type, and industrial branch. Salary level increased the probability of ending employment of unemployed, students, and others. This indicates that these groups belong to lower salary levels. However, the family type and industrial branch lowered their probabilities; thus, these groups are, first of all, mainly singles, and, secondly, they work in high-mobility sectors such as primary production.

Students face the most establishment level selectivity in their employment; they are selected into firms with long tenures. This is probably due mostly to the data configuration when the sc. summertime jobs are included in the data. Students situate in long tenured firms as substitutes during vacations. However, the establishments do not differentiate their selection processes in the case of unemployed (Figure 45; Appendix 16).



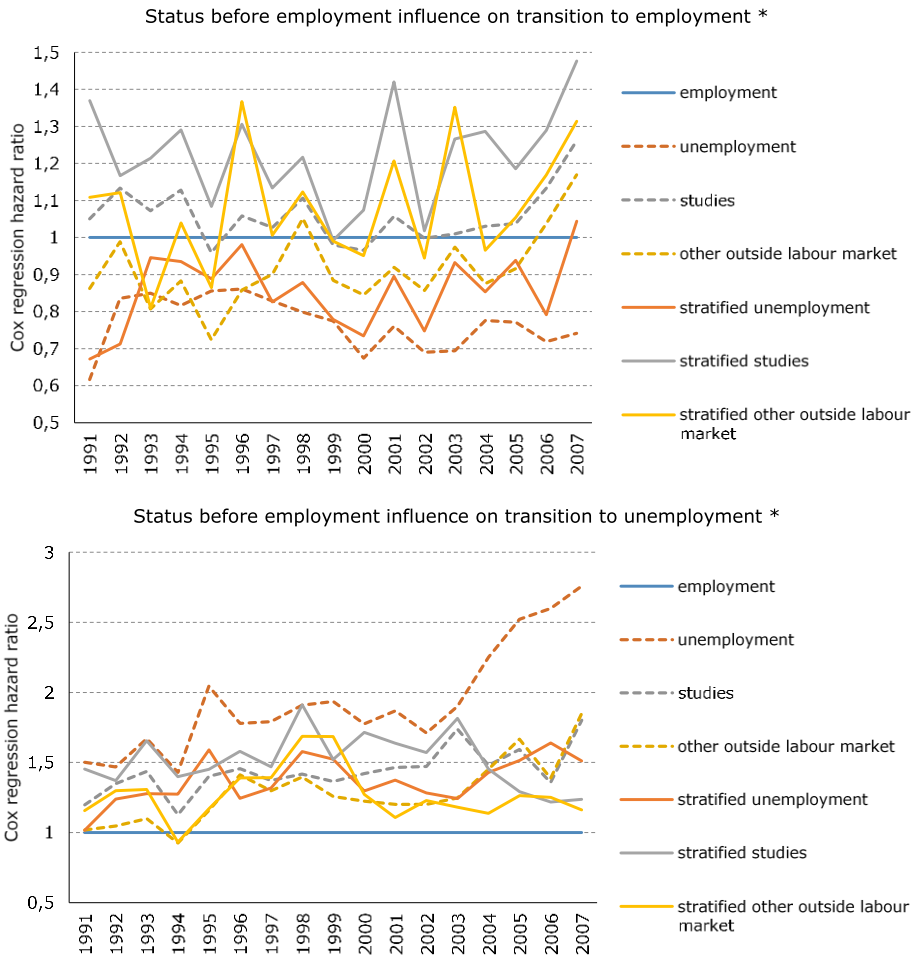
*Controlling gender, age, educational level, monthly salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 45: Employment status and employment stability in Finland, 1991–2007

Those who became employed after unemployment have less probability of employment ending into progression into another job than those who were employed from other, previous, jobs. Thus, the unemployed change jobs less than others. Since 2001 the establishment level influence on the unemployed group's lower probability of changing jobs has increased. It seems that the unemployed have started to be selected more into such establishments that have less job to job changes than other establishments, during the period when in general the share of short term employment has grown in Finnish labour markets. Furthermore, those who came from studies into current employment are more probably ending their employment into new employment than those who came from employment (Figure 46; Appendix 17).

However, when analysing the transition to unemployment, we find that those who were unemployed before the employment have a clearly higher risk

of ending up back in unemployment once the employment spell is over. This tendency has been increasing since 1994, and the increase has been even quicker from 2002 onwards. Furthermore, the unemployed transition back to unemployment is due to establishment level selection. Once establishment heterogeneity is accounted for, the probability of the previously unemployed ending up as unemployed again declines strongly. This shows that, the unemployed are increasingly facing organisational selective actions, and they are working increasingly in such establishments that use a temporary labour force. The labour market segmentation of the unemployed has grown (Figure 46; Appendix 18).



*Controlling gender, age, educational level, monthly salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 46: Segmentation of employment transitions in Finland, 1991–2007

Monthly Salary and Salary Increment

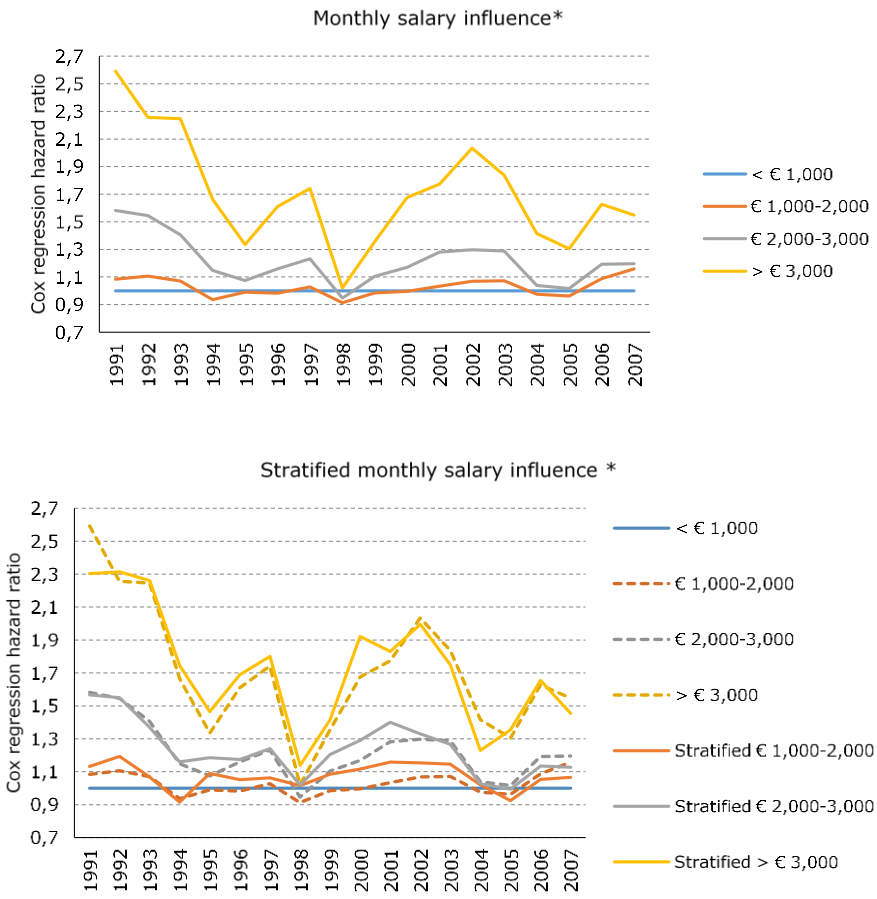
Monthly salary may hypothetically have varying effects on the employment durations. First of all, the most preliminary assumption is that if an individual has a low salary, he/she will be willing to change job for a better paid one. But this option is constrained by labour market offers of salary and opportunities. Furthermore, internal labour market salary increments situated in the beginning of the employment spell might prolong the durations of employment periods. Secondly, another hypothesis is that if an employee is paid more than his productivity is worth then a firm would be inclined to dismiss him. One interesting hypothesis in this context is also the compensation theory; highly salaried workers might be trading off between a high salary and employment stability, thus, highly salaried workers might be in short-term employment more often than others if the lower employment stability is compensated by salary.

During the recession and just after it, the probability of employment ending has been lowest for those who earn the smallest wage. Yet, as soon as economy starts to recover, the probabilities of employment ending decrease for those with a better salary in relation to poorer salaried groups. Finally the differences between salary groups cease to exist in 1998. The separation of salary groups' probability of employment ending begins to increase again from then on until 2002. Generally, highly salaried workers are more mobile during recessions (Figure 47; Appendix 16).

Monthly salary interacted mostly with establishment turnover type. The inclusion of turnover type as stable, growing, diminishing or fluctuating especially decreased the highest salary group's (over 3,000 €/month) probability of employment ending, thus, indicating that highly salaried workers mostly work in establishments which are growing. Salary level slightly interacted with salary increases in terms of increasing low salaried persons' probability to end employment. This means that low salaried workers do not gain salary increments. Family type especially increases the highest paid groups' probability of employment ending indicating that highly paid workers have partners (and children) more often. Further, salary level influence also interacted with local labour market conditions, the likelihood of employment ending especially for highly paid workers decreased once the open labour market salary was added. This means that highly paid workers have higher salaries than in their surrounding labour markets. However, high salaried workers are employed in such labour markets where there are more employers and thus more opportunities for mobility.

Establishment level influence on the tenures of differing wage groups has been rather small during 1991–2007. The hypothesis that employment stability is a trade-off with salary might be the explanation of why highly paid workers are more at risk of their employment ending. However, in Finland, this seems not to be an organisational level phenomenon, rather, the whole structure of the wider labour market may be based on compensation. However, this notion is

conditional to how the individual job mobility of highly salaried workers is structured (Figure 47; Appendix 16).

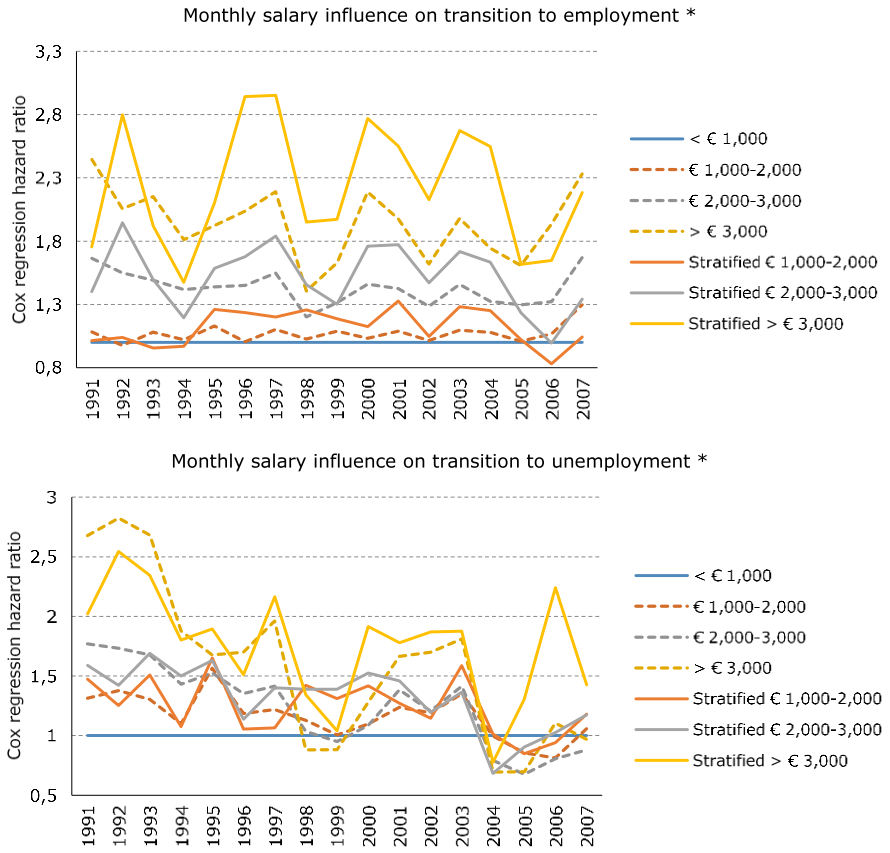


*Controlling gender, age, educational level, status before employment, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 47: Salary segmentation of employment stability in Finland, 1991–2007

Job changing patterns of different salary groups fluctuate highly throughout the observation period, and it seems that other than establishment level selective factors create these job-to-job changing patterns. The highly paid are more probably ending their employment than other groups as job changers (Figure 48; Appendix 16). Thus, the mobility of highly salaried workers is not probably due to compensation, rather, their job to job mobility is higher.

However, the highly paid also ended up more probably in unemployment than other groups during 1991–2006. There was a peak in the probability of being unemployed for highly salaried workers during 2000–2003. The selectivity of highly salaried workers for firms that have less transitions to unemployment was at its highest in 2006. It is possible that there was an increasing new tendency for using highly paid workers in project based employment (for conducting specific expert tasks), and the recession in 2008 then cut down this development (Figure 48; Appendix 17).



*Controlling gender, age, educational level, status before employment, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 48: Salary segmentation of employment transitions in Finland, 1991–2007

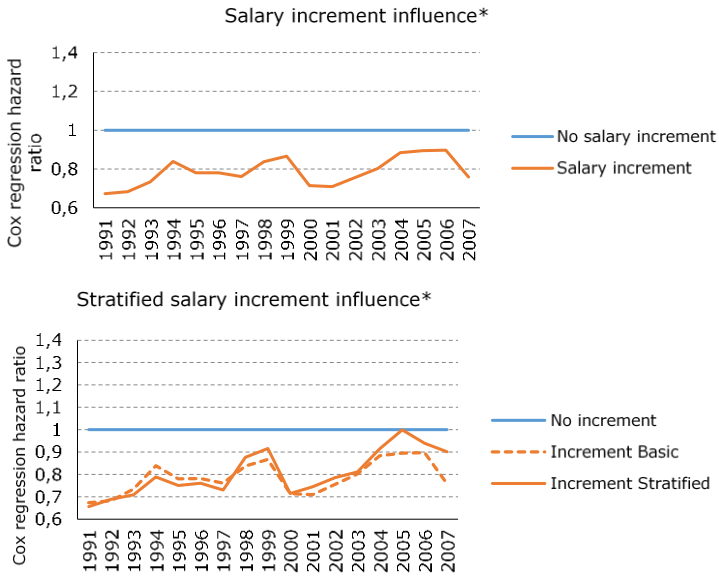
For other salary groups the probability of ending up unemployed has slightly decreased in the period 1991–2003 in relation to low paid workers. Since then, the probability has gradually increased to the same level as for low salaried

workers. The establishment level effect has been rather modest in these salary groups (Figure 48; Appendix 18).

These figures do not confirm the polarization hypothesis in the Finnish labour market in relation to employment stability. The middle salary groups are not facing any increase in their employment instability. Rather the employment stability of differing salary segments is becoming more coherent.

In previous literature it has been found out that the inter-firm practices play a crucial role in determining salary levels (Acosta 2010; Groshen 1990b; Bronars and Famulari 1997; Abowd et al 1998; Wooden 1998; Salvanes et al 1998). The salary levels described here are the starting wages which are linked to the open labour market. Thus, salary increments in internal labour markets might shed more light on the issue of the influence of salary mechanisms on tenures.

Salary increments lower the probability of tenures ending in Finland, yet, this effect changes quite much during the observation period of this research. The general trend is that the effect of salary increments diminishes over time when approaching the year 2007. The establishment level differences in salary increments are rather mild from 1991–2004, thus, indicating that salary increments occurred in all kinds of establishments, until then. However, since 2005, the increase in the establishment level effect indicates that salary increments tend to be situated more in establishments where are longer tenures (Figure 49; Appendix 16).

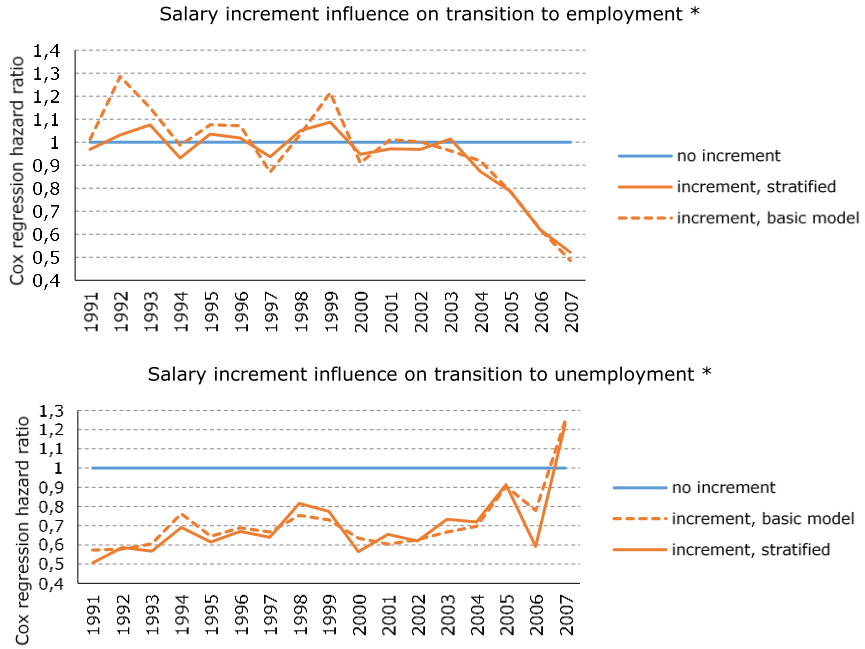


*Controlling gender, age, educational level, status before employment, monthly salary, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 49 Salary increments and employment stability in Finland, 1991–2007

The influence of salary increments on the probability of changing jobs has changed radically during the observation period. During the 1990s the salary increments did not have much effect on the individual transitions from the current job to another. However, since 2003, salary increments increasingly diminish the probability of changing jobs. The establishment level does not have much effect on this phenomenon (Figure 50; Appendix 17).

Furthermore, salary increments had a tendency, during the 1990s, to diminish the probability of ending up unemployed. This effect has been diminishing, however, at the end of the observation period; it actually increases the probability of ending up unemployed. This might be that the possible future unemployment or lay off is compensated for by salary increases or perhaps that salary increases are somehow tied to project based employment (Figure 50; Appendix 18).



*Controlling gender, age, educational level, status before employment, salary, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 50 Salary increments and employment transitions in Finland, 1991–2007

Family Situations and Employment Stability

With regards to family type, it was hypothesised that on one hand singles may more easily change jobs without family obligations, but on the other hand, they might be in a poorer economic situation to change jobs. Also, from the firm point

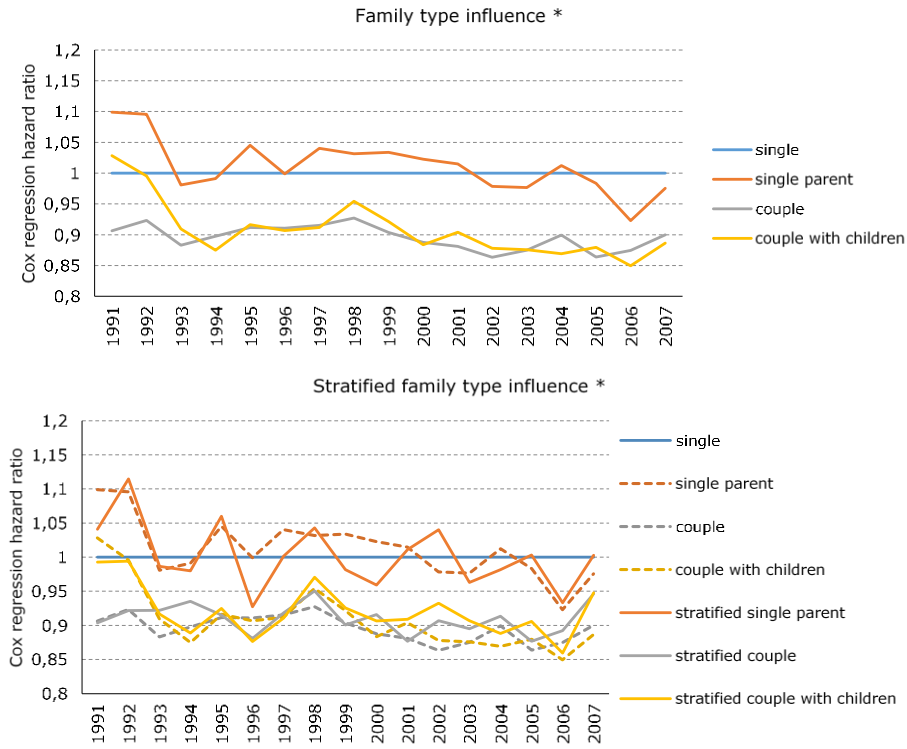
of view, they do not have as many family related absences and they might be a tempting labour force group. Single parents have more family obligations and they might be more tied to their current living area. Further, single parents might have more sick-leave absences and, thus, in this way be a more undesired labour force in the view of employers. Furthermore, couples might not have so many family related absences, but still they do not move as easily after a job as the singles might. Finally, couples who have children have family obligations, but then, they also might be better economically resourced to change jobs or even quit their current job if their partner is providing for the family. In the descriptive part of this paper we found that Finnish labour markets are turning into singles markets as the share of new employment gradually changes so that singles are the largest group starting employment annually.

On the general level of Finnish labour markets, family type does not seem to matter much in employment stability. In line with previous literature, I find that singles generally have the highest risk of their jobs ending. The probability that singles will end up in tenures is constantly growing in relation to other family types. On the other hand, single parents might be considered to be in the most risky situation in the labour markets because they face more risks during economically bad times than other family types (Figure 51). In this analysis family type interacted only rather slightly with housing region, which lowered the risk of all the family types' probabilities of employment ending. This indicates that these groups live mostly in cities whereas the singles are predominant in rural areas.

Further, one hypothesis was that family may have an influence on how the internal labour markets are structured. Some firms may be more pro-family and they might have more flexible strategies for their workers to combine work and family, and these manoeuvres might aim at directing the internal labour market structures. They may also be linked to economic branch or the social structures of firms. In order to hire and maintain their workforce employers might have to apply such benefits. For example, even though in Finnish labour markets much of the family-related benefits are arranged by public institutions and these do not act as a major device in forming the internal labour market of organisations, it has been stated that one reason for the short-term employment of females is the family allowance institutions. Female workers in their 20s or 30s are a 'hazardous' labour force since their risk of entering nursing leave is high. The employer pays for the first three months of family allowance, and also, the replacements for the mother. This might be quite costly and thus, employers try to diminish the risk by hiring young women particularly for temporary contracts.

The establishment level selective pattern in relation to family type is quite small and rather volatile. However, single parents displayed a great deal of establishment level influence on their employment durations during 1999–2001, indicating that the single parents were selected into such establishments that

have short employment spells. Also, during the same time, couples displayed a strong establishment effect indicating that they, to the contrary, were selected into companies that have long-term employment. Thus, single parents were in a poorer competitive situation in the labour market during good economic times. Later, during 2001–2003, couples with children were also selected into companies that have longer employment durations (Figure 51; Appendix 16).



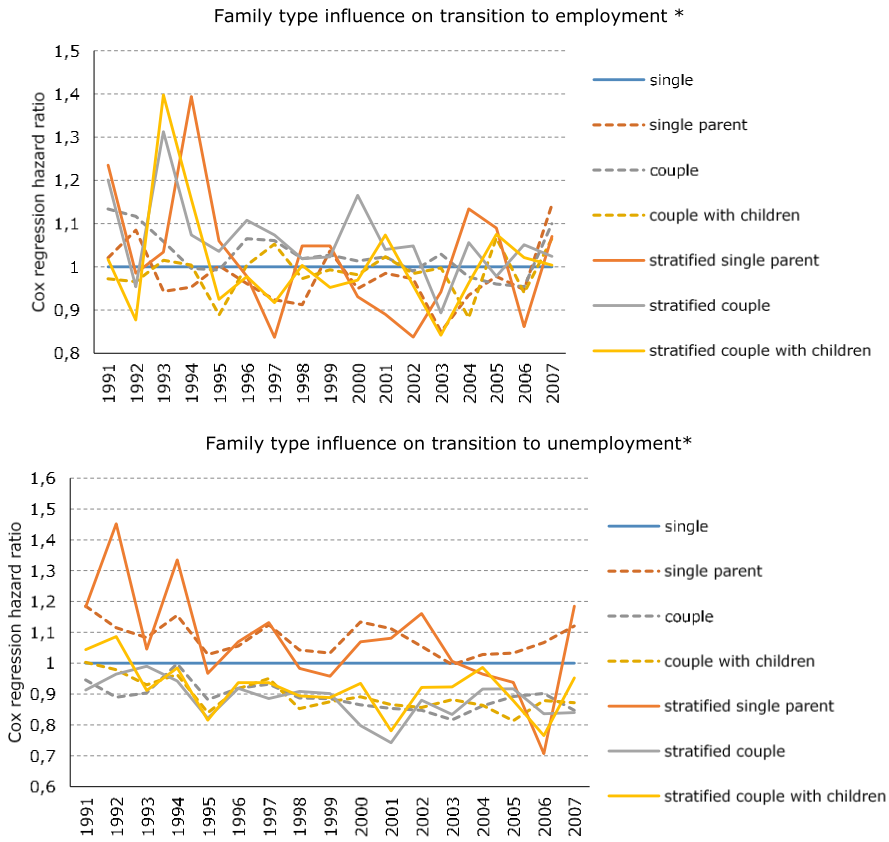
*Controlling gender, age, educational level, status before employment, salary, salary increments, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP.

Figure 51: Family type and employment stability in Finland, 1991–2007

Job to job mobility doesn't differentiate in relation to family type in Finland. Yet, during 1993–1994 for couples and couples with children and during 1994–1995 for single parents the probability of job-to-job change increased once the establishment level undetected variation was included in the model (Figure 52; Appendix 17).

The probabilities of job-to-unemployment transitions are more stable over time, and also, more stable in relation to establishment level effects. It seems continuously single parents have more risk of ending up in unemployment than

singles, and further, couples and couples with children have less probability of ending up unemployed than singles (Figure 52; Appendix 18).



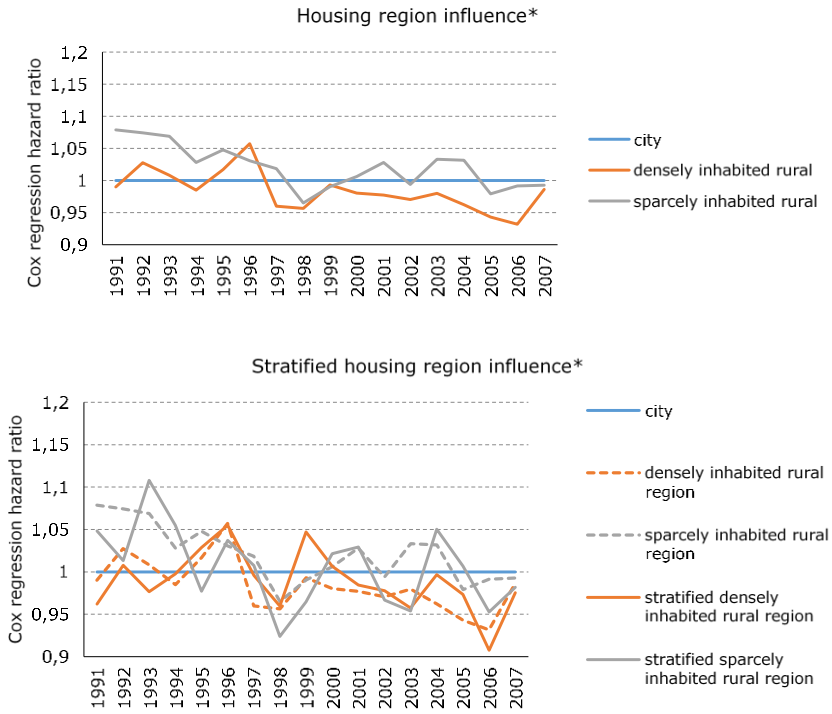
*Controlling gender, age, educational level, status before employment, salary, salary increments, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 52: Family type and employment transitions in Finland, 1991–2007

The observations of family type influence on employment stability during good economic times indicate that the poorer situation in employment stability of single parents is not an outcome of the single parents' self-initiated job changes. Rather, their situation is mostly influenced by establishment level internal labour market factors. On the other hand, couples and couples with children are in a position where they can choose their employers in such a way that they may situate in firms that have more employment stability during the good economic times. However, this notion does not hold true during recessions or recovery periods.

Employment Stability in Different Regions

Most new employment is situated in cities in Finland, and before 1998, the likelihood of employment ending was most likely in sparsely inhabited rural regions. Since then, the probability has been lower in sparsely inhabited rural regions than in cities. Establishment level differences are rather small and fluctuate in the effect of housing regions. The effect is not very important, thus indicating, that establishments do not act differently in rural or city regions in relation to the workforce (Figure 53; Appendix 16).



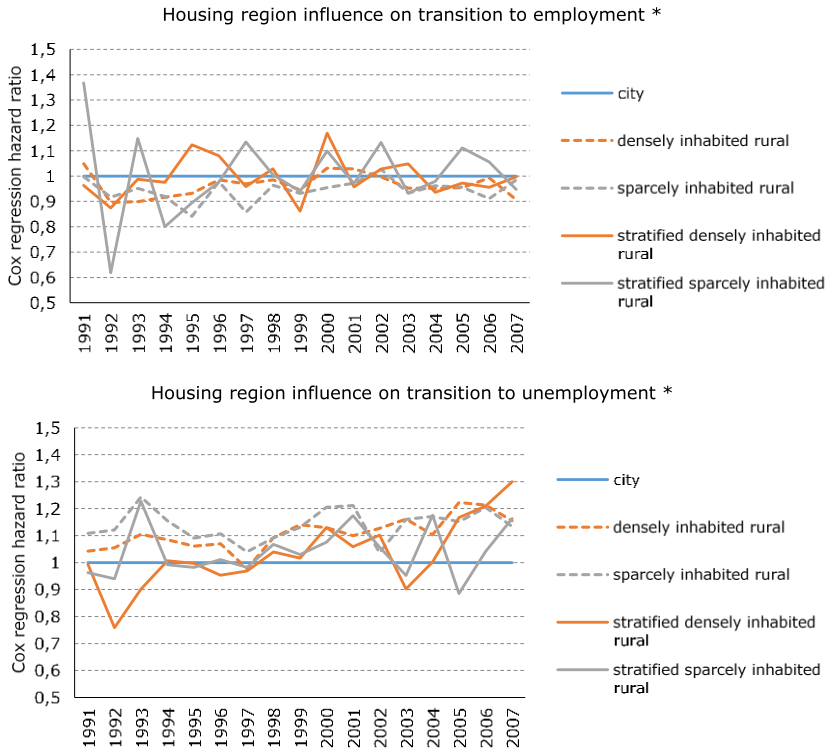
*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 53: Employment stability in different types of regions in Finland, 1991–2007

Housing region interacted supposedly with labour market factors. It lowered the probability for rural area inhabitants of their employment ending. This suggests that rural inhabitants work in labour markets that have more employers; thus, they most likely live in areas nearby cities. They also more likely have lower salaries than in general in labour markets, and live in provinces with lower GDP. The housing region also interacted with industrial branch, by lowering the probability of employment ending for the inhabitants of

rural regions. This indicates that the rural population works more likely in primary production. These results were expected because the housing region is used here as a control variable for provincial labour market indicators. These will be presented later in this analysis.

The type of housing area seems not to matter in job-to-job transitions. The probabilities are quite the same in cities and in rural regions. Also, establishment level effects were highly fluctuating in job-to-job transitions in sparsely populated areas during 1991–1995. Since then, the probabilities have settled to be roughly the same in different regions. Yet, we may notice a slight selectivity in relation to establishment and housing regions during 1995–1996 and again in 2000, when the densly inhabited rural regions probability was influenced by establishment level selectivity. During those years the individuals in densly inhabited rural region were selected into organisation where there was less job changing. The same phenomenon happened in sparsely inhabited rural regions during 1993, 1997, 2000, 2002 and 2005–2006. This might indicate that the populations in rural regions were working in well-established employer organisations (Figure 54; Appendix 17).



*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 54: Employment transitions in different types of regions in Finland, 1991–2007

The probability of ending up unemployed is growing slightly in rural areas in relation to cities. The establishment level effect is weak, but it seems that those establishments from where the labour force end up unemployed are situated in rural areas. Thus, the rural inhabitants are less likely to change their jobs and more likely to become unemployed. It might be that the employers in rural areas do not commit to their workforce, or that the labour market competition for the workforce is smaller than in cities (Figure 54; Appendix 18).

4.2.2 Establishment Level Determinants of Employment Stability

The analyses above show the result of a Cox proportional hazards model and longitudinal variances of the hazards of co-variants in the model. Further, I have shown, how the stratification of the model with establishment id reveals patterns of establishment level non-observable variance in relation to employment stability. Next, I will turn to look at the specific influence of those establishment level variables that I have had opportunity to include in the analysis. Here the stratification is not analysed, since there is no differences between the establishment level co-variables – they are already coded in the establishment level. However, these next analyses are results of the multivariable model, so the previously shown descriptive information is changed in relation to the individual level, other establishment levels and structural level variables. Thus, the following analyses are as clean as possible from influence of other variables in this research setting.

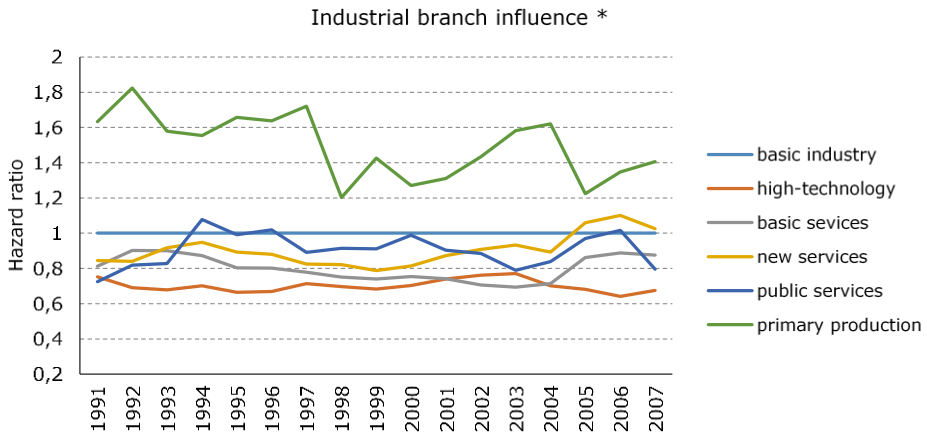
Employment Stability in Different Industries

In research setting and theoretical part of this study I highlighted that one of the important influencing factors in fragmented labour markets might be that there has been industrial restructuring in Western labour markets coinciding. I wanted to see, how much the industrial structural change has influenced the durations of employment spells. It has been argued that the industrial restructuring changes also the type of the work that is done, and accordingly, the length of tenures. For example, it is argued that the new generations with higher qualifications enter new industry and are more mobile in labour markets. This is hypothetically due to younger employees' willingness to search for their place in labour markets, and on the other hand, due to the labour usage patterns of these new industries. This is why I divided the branches of industry and services into five different categories. I include in this analysis basic industry, information technology industry, basic services (such as trade and tourism), information society services (commercial services, planning, research and development, etc.) and privately organised basic services like private schools and healthcare. The high technology industry and new services illustrate the change from basic industry and basic services into a new type of economy, demanding a highly skilled and educated labour force. Further, the industrial structure in Finland is rather clear and industrial branches have strong internal

links in their labour flows (Maliranta and Nikulainen 2008). Thus, the possible differences in the use of the labour force between branches should be rather clear. If these hypotheses hold, then we should see clear differences between the probabilities of ending tenures between industrial branches.

In the descriptive analysis we saw that in services individuals had quite unexpectedly lower levels of risk their employment ending than the workers in basic industries had. However, when we account for many co-founding factors, we see that the probability of tenure ending in privately produced public services rises almost to the level of basic industry. High technology stands still in that it has the lowest probability of tenures ending. We also notice that in all services the probability of tenures ending, thus the employment instability, has been rising since 2003 in relation to basic industry (Figure 55; Appendix 16).

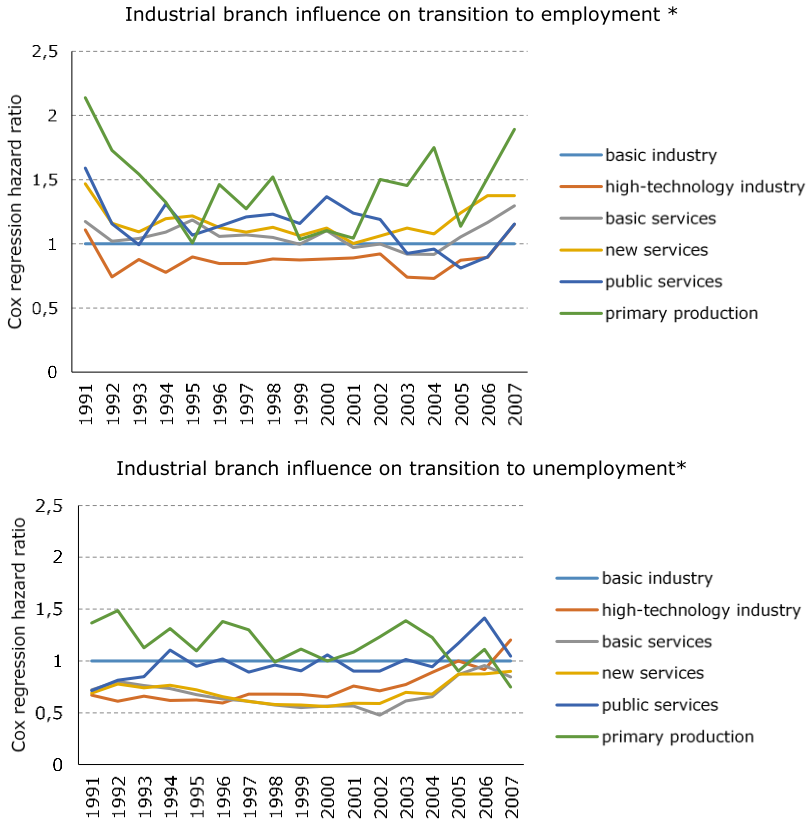
The industrial branch interacted with labour market level factors. It seems that all other industrial branches, except for primary production, are situated mostly in labour markets where there are higher GDP. However, new services and public service branches especially interacted with capital turnover of the establishment and basic services interacted with the number of workers in the labour force. New and public services' probability of employment ending decreased when adding the turnover, indicating that these branches have in general lower annual turnover. However, the number of employers interacted with basic services by raising their probability of employment ending. This means that basic services are mainly small establishments (like small grocery stores, hairdressers etc.).



*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 55: Industrial branch segmentation of employment stability in Finland, 1991–2007

The labour force in high technology is the least mobile group in job changes throughout the observation period. However, their probability of job-to-job changes increases in relation to basic industry during 2004–2007. Actually, in all industrial branches the probability of job changes increases during that period in relation to basic industry. This means that basic industry has since 2003 has constantly had less job mobility and it has become more stable than other industries. It is likely, that as basic industry in general diminishes and hires less, the new hires are, then, long tenured (Figure 56; Appendix 17).



*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, establishment annual capital turnover, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers and provincial GDP

Figure 56: Industrial branch segmentation of employment transitions in Finland, 1991–2007

The new service sector has a decreasing probability of job changes during 1991–2001, and after that likelihood begins to increase again as also do the probabilities for the other industries. Actually, the diminishing of the probability

of job changes in the basic industries is situated in the same time period when, in general, the share of short-term employment rose in Finnish labour markets. This indicates that industrial re-structuring also influences tenures. However, this change also affects basic services – not only new industries, and one part of the new flexibility is the creation of self-initiated job changes in the service sector (Figure 56; Appendix 17).

In addition, tendencies in job to unemployment transitions have been increasing since 2002 in all industrial branches in relation to basic industry, except for primary production. Tenures in primary production underwent a strong drop in the probability of ending in unemployment in 2005. However, the general trend in primary production is that the probability of ending up unemployed is increasing during the period. These tendencies mean that, here also, the probability of workers in basic industry ending up unemployed is decreasing in relation to all other industrial branches. Thus, it means that industrial restructuring influences employment stability (Figure 56; Appendix 18).

Aho and Mäkisalo (2012) saw that the mobility between industrial branches has no influence on industrial restructuring in Finland (at least during 2003-2006). They argue that branch mobility is not linked to the labour demand side of the branch, rather, some industrial branches tend to be more mobile and other do not. This analysis challenges these arguments. It seems that, even though the industrial branch influence in employment stability varies slightly in relation to economic turns, the industrial restructuring is present in employment stability, both in self-initiated job endings and in mobility into unemployment. However, this restructuring has influenced employment stability especially during 2002–2006. The explanation for the differences between this research and previous research is most likely due to branch division descriptions being different in the other research. In this research, services are divided into new services and other, and industry is divided into high and basic technology and this shows the industrial restructuring effect more clearly. Further, in this research frame, the division of the analysis into self-initiated job mobility and establishment initiated employment mobility brings forth notions of the dynamics in labour markets better. To conclude, the dismantling of basic industry and especially the growth of services is one reason behind the shortening tenures.

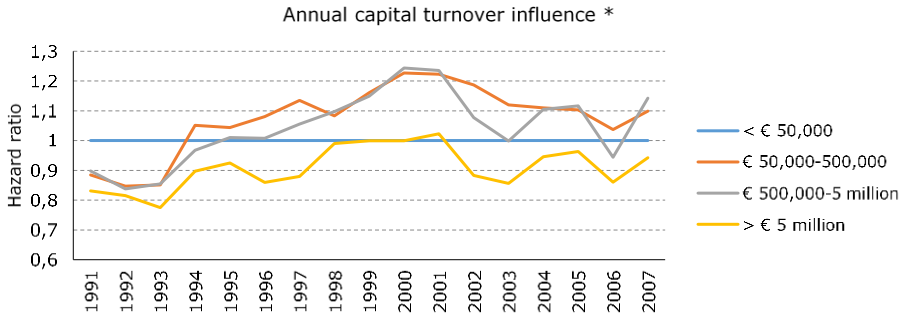
Employers Annual Capital Turnover and Employment Stability

Annual capital turnover might have an influence on the employment stability in two ways: it might increase or it might decrease it. It is argued before, that labour force turnover costs relate to managing the continuous turnover of the labour force (Geary 1992; Graham 1995; Uzzi and Barnsness 1998, 696). Thus, high labour force turnover might be an indicator of the usage of short-term employment, or high-capital turnover companies having more money to spend on employment turnover costs. On the other hand companies with high-capital

turnover might have better economic stability, thus, these companies may also have a better economic shield against risks involved in hiring long-term employees.

In general in Finland, the annual capital turnover has two way implications for tenures. First of all, the highest annual capital turnover group, over 5 million €/year, tends to have a smaller probability of employment ending than other groups. However, secondly, the risks do not decrease gradually between capital groups, and thus, since 1994, the middle sized capital turnover groups had a higher probability of employment ending than the lowest capital turnover group did, i.e. less than 50,000 €/ year. This differentiation, however, started to diminish after 2001. This decrease in all other turnover groups' probabilities of employment ending situates in the same time that the general share of short-term employment grew in Finnish labour markets, indicating that the small turnover establishment has started to have less employment turnover also (Figure 57; Appendix 16).

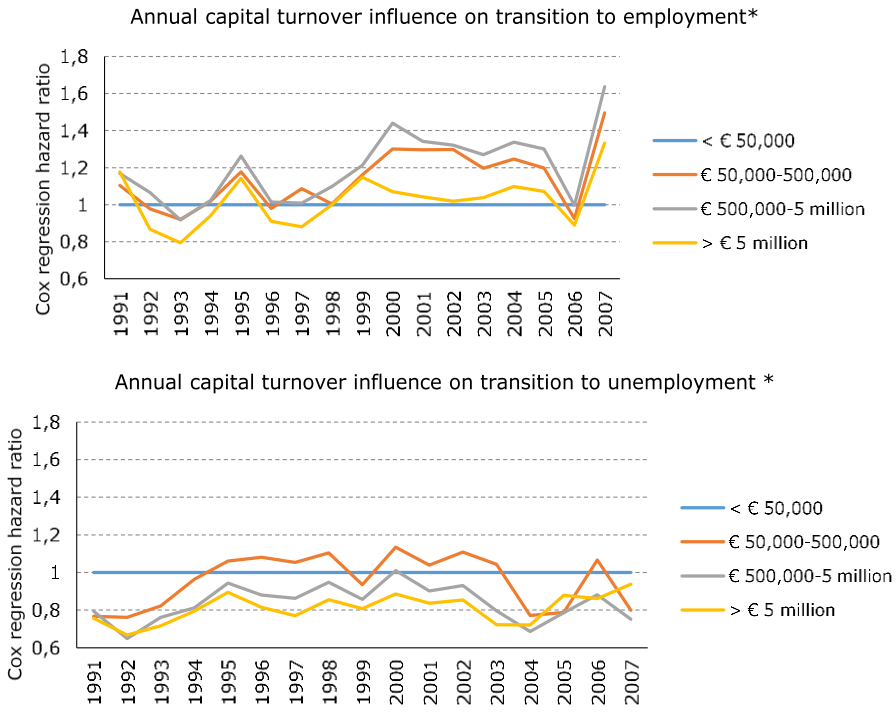
The annual capital turnover interacted with turnover type of establishment. Controlling for whether the economic situation of the establishment is stable, growing, fluctuating, or diminishing lowered the higher turnover establishment probability of ending tenures. This means that higher turnover companies are more often diminishing or fluctuating. However, the group of 50,000–500,000 € in annual capital turnover interacted with the number of employers in provincial labour markets; the number of employers raised the probability of employment ending for the workers in these firms. This indicates that lower-middle sized turnover category establishments situate in such labour markets where there are fewer employers (Figure 57; Appendix 16).



*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, economic turnover type, number of personnel, ownership, open labour market salary level, number of employers and provincial GDP

Figure 57: Annual capital turnover and employment stability in Finland, 1991–2007

The self-initiated job mobility is the most important labour force mobility pattern in 50,000–5 million €/year turnover establishments. However, this differentiation is visible only during the period of 1999–2005 in job changes. Before that, the annual turnover of establishments had a fluctuating influence on the probability of between jobs transitions. In job-to-unemployment transitions the high turnover establishments had lower probabilities than low turnover companies. This influence was clearest during the 1990s recession and again during 2004–2007. This indicates that during recessions the probability of dismissal is higher in low turnover companies (Figure 58; Appendix 17).



*Controlling for: gender, age, educational level, status before employment, salary, salary increments, family type, place of residence, industrial branch, economical turnover type, size of establishment, ownership of the establishment, provincial salary level, amount of employers and GDP.

Figure 58: Annual capital turnover and employment transitions in Finland, 1991–2007

During the growth period of short tenures in Finnish labour markets the higher turnover companies had more self-initiated employment turnover. This indicates that the high turnover companies did not actually use short term employment, rather, the job mobility patterns of individuals changed in these companies. Whereas, during the same time, the probability of ending up in unemployment declined in large turnover companies during 2002–2004, and

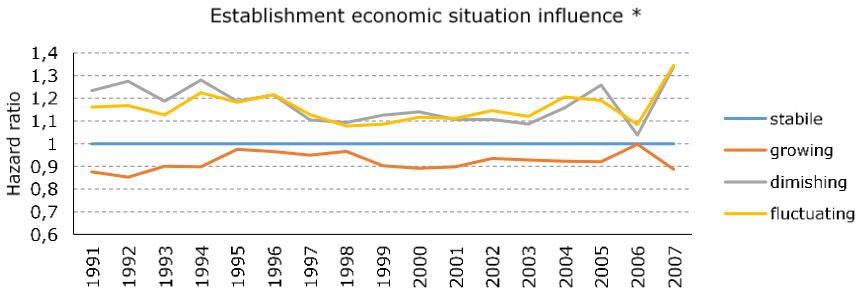
then grew during 2004–2006, but it stayed lower than in small turnover companies. This indicates that the high turnover companies had more employment stability during the times of increasing employment flexibility in Finnish labour markets. However, the notions of employment mobility to unemployment are more probably linked to the influence of economic trends. During recession the small turnover companies lay off more workers. This suggests that small turnover companies have less protection and thus are forced to adjust their labour force in relation to general economic trends (Figure 58; Appendix 18).

Thus, in conclusion the employment stability in Finland is best in establishments with high annual economic turnover and lowest in middle sized turnover establishments. The self-initiated employment mobility grew in higher turnover establishments during the general economic growth period in Finland. However, employment stability decreases especially in small turnover companies in recession. They may have less protection against outside economic shocks than the other establishments.

Economic Situation of the Establishment

The previous analysis of the capital turnover's influence on employment stability was controlled with the economic stability of the establishment. Actually, the economic stability indicator might be better in analysing the influence of capital turnover, since the size of capital turnover might mean nothing, if the economic situation of the organisation is stable. Thus, in small or larger turnover establishments, there might be differing perspectives on the future economic situation, thus, differing labour force usage patterns. The results show that the turnover change over three years had a logical and clear effect on the probabilities of employment ending. Diminishing firms had higher levels of probability as did the fluctuating ones. Thus, they had less employment stability. During 1997–2004 this effect, however, had dropped to a lower level than before and it stabilized at the lower level. The probability of employment ending then started to rise again in diminishing and fluctuating turnover types of establishments since 2003 (Figure 59; Appendix 16).

The economic situation of the establishment interacted mostly with the number of employers in the local labour market. It raised the probability of tenures ending in growing, diminishing and in fluctuating establishments. This means that these establishments situated in labour markets where there are in general more employers

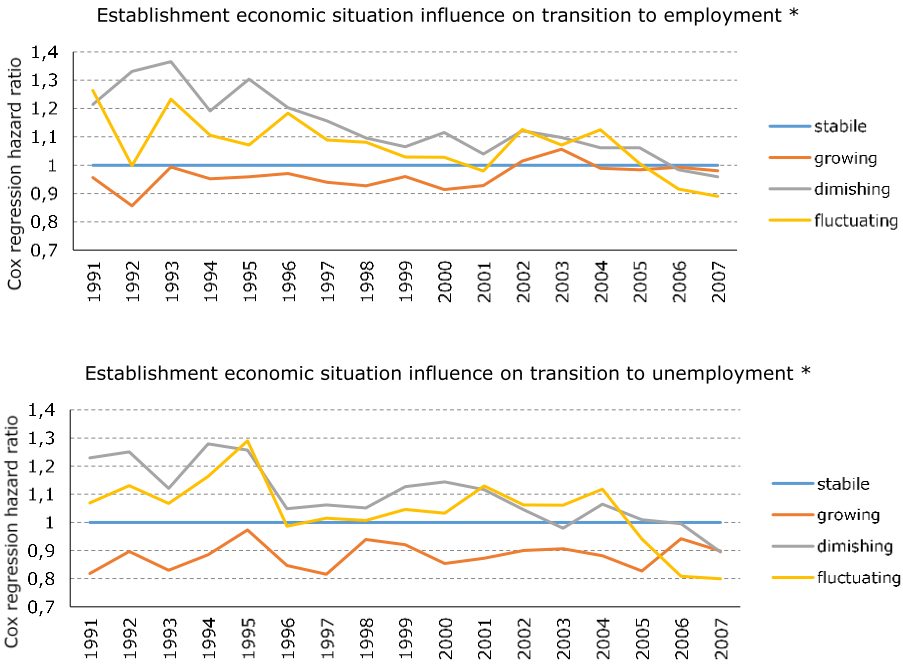


*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, number of personnel, ownership, open labour market salary level, number of employers, provincial GDP

Figure 59: Establishment economic situation and employment stability in Finland, 1991–2007

However, the employment mobility in fluctuating and in diminishing establishments might be a result of individual self-initiated job changing. If the employees see that their employers' economic situation as weak or unstable they might be tempted to search for other employers. The probabilities of 'job changing' and 'job to unemployment' transitions have been lower in economically growing establishments throughout the observation period. However, in general the establishments' economic situation's influence on the probability of job change has diminished throughout the observation period. Mostly, this diminishing has happened in the groups of diminishing and fluctuating turnover typed establishments. The probability of job changes in these establishment types has diminished from roughly 1.3 to 0.9 and 0.8. This indicates that the individual job changing patterns do not bear such a clear relation anymore to the economic situation of their employer. It might also be that workers in stable establishments have started to be more mobile or that the workers in weaker situated (fluctuating and diminishing) establishments have become less mobile (Figure 60; Appendix 17).

Furthermore, the job to unemployment transition probability is decreasing radically in diminishing and fluctuating turnover type establishments. This indicates that the establishment level labour usage is not so much tied to the current economic situation of the employer organisation anymore. It means that the establishment level in this manner no longer directs the labour force usage in establishments. As this phenomenon is situated in the same time period that the share of short term employment grew in Finnish labour markets, it suggests that the short tenures are no longer related to the economic situations of employer organisations (Figure 60; Appendix 18).



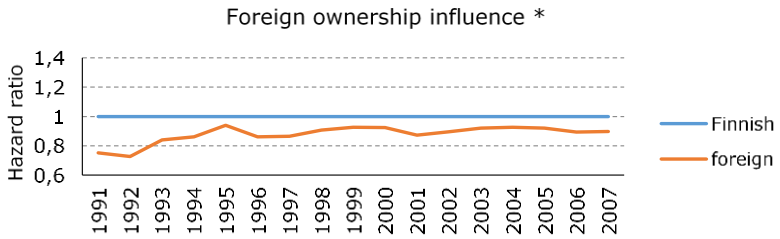
*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, number of personnel, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 60: Establishment economic situation and employment transitions in Finland, 1991–2007

Foreign Ownership

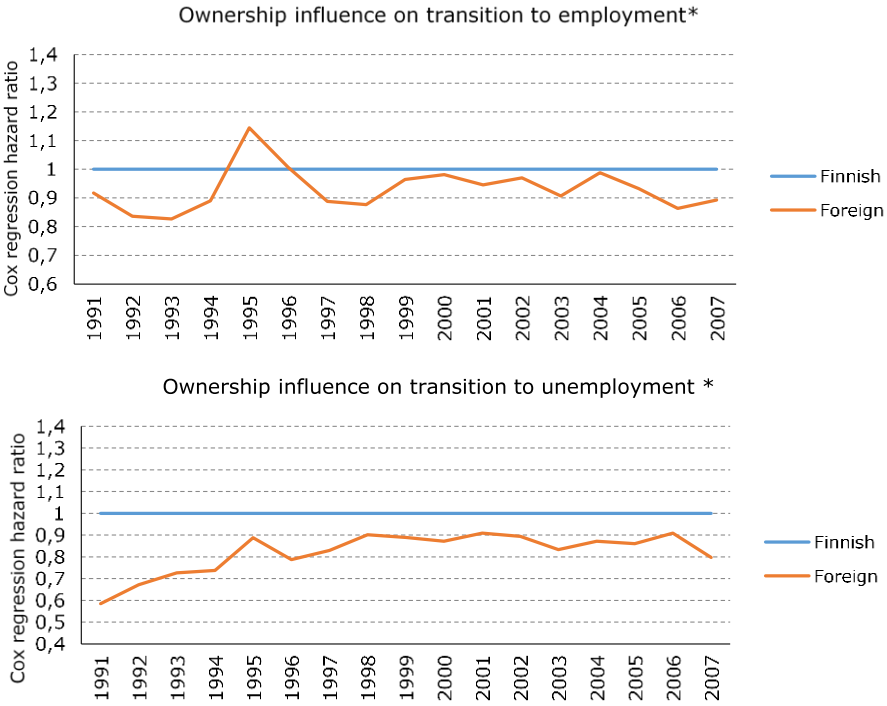
Foreign ownership had in the descriptive analysis a clear diminishing tendency as a separator of the employment tenure ending probabilities. Once all co-founding factors are included in the analysis, we notice that the differentiating effect decreased during the economic recovery period in the beginning of the 1990s, during 1992–1995. Since then the probability has stabilized to around 0, 9. Thus, the foreign ownership has a tiny influence on employment stability in Finland (Figure 61; Appendix 16).

Ownership does not matter much in transitions to employment. In transitions to unemployment the foreign ownership of current employer seems to have lowered the risk slightly, but this difference is diminishing throughout the observation period (Figure 62; Appendix 17; Appendix 18).



*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, open labour market salary level, number of employers, and provincial GDP

Figure 61: Establishment ownership and employment stability in Finland, 1991–2007



*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, number of personnel, open labour market salary level, number of employers, and provincial GDP

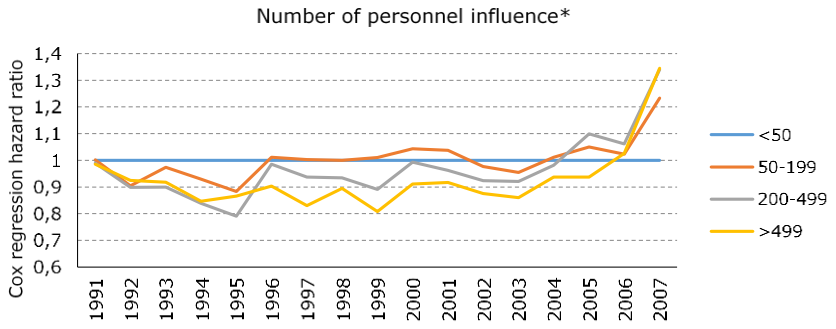
Figure 62: Ownership and employment transitions in Finland, 1991–2007

Size of the Establishment as an Implication of Internal Labour Markets

In segmentation theory and internal labour market theory it is expected that larger establishments should have longer tenures since they more probably have more advancement possibilities inside the organisation without individuals having to change their employer in search of a better position. In Finland there seems to be rather strong internal labour markets in this respect (Kauhanen and Napari 2011, 20). This study confirms that this has been the case in Finland during 1991–2004. In 2004 the probability of employment relations ending started to grow in larger establishments in relation to the smallest ones. Actually, the probability of employment ending in the largest companies in the end of observation period in 2007 was roughly 1.3 times more than for the smaller ones (Figure 63; Appendix 16).

However, in relation to earlier research into Finnish labour markets about polarization, it was hypothesised that the slight polarizing features in the Finnish labour market might result from differing employment patterns in different sized establishments and the functioning of their internal labour markets. There is a slight blip in the curves especially during years 1991–1996 and then again in 2000–2004. The polarization study was conducted for the years of 2000–2003, and thus, just during those years there was some kind of separation trend in the influence of establishment sizes on tenures. However, after these years the situation has changed dramatically.

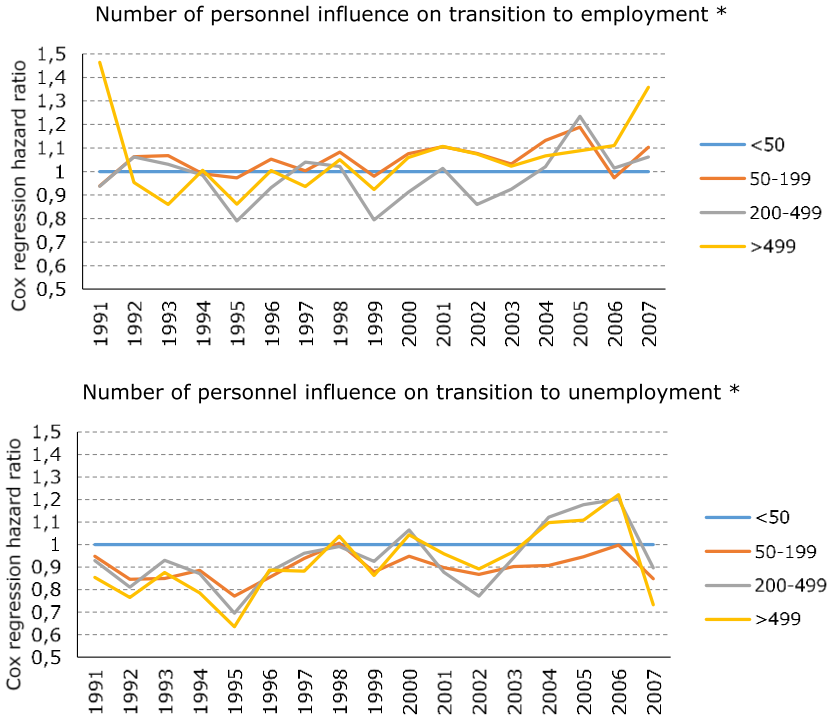
Establishment size interacted with turnover type so that it raises the probability of tenure endings. This means that larger establishments are more probably diminishing or fluctuating in annual turnover. However, the number of employers in the local labour market decreases the probability. This indicates that the larger establishments situate in such labour markets where there are not so many other employers.



*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 63: Employment stability in different sized establishments in Finland, 1991–2007

In general, personnel number of establishment does not differentiate much the employment to employment mobility in Finland. The probabilities of ending employment in a job change are roughly the same in reference to the number of personnel in firms. This does not support the theory of internal labour markets in that in larger companies there are more probabilities towards an upward motion without a need for external transition. On the contrary, job to job transitions have been growing especially in the largest establishments since 1999. Thus, the general growth in short tenures in the Finnish labour market also situates in this time period, and it may be that the growth is linked to self-initiated employment changes and weakening opportunities for advancement in the internal labour markets of the larger establishments. It might be that the internal labour market mechanism has lost some of its functionality, which has been one target of the flexibilisation policies. However, in salary increments we noticed that the increase in individual salary had started to gain some internal labour market features (Figure 64; Appendix 17).



*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, ownership, open labour market salary level, number of employers, and provincial GDP

Figure 64: Employment transitions in different sized establishments in Finland, 1991–2007

However, the job to unemployment probabilities do differentiate between establishments sizes. The transitions to unemployment have been rarer in largest establishments during the 1990s. These differences have been decreasing since 1995 and during 2004–2006 the probability of ending up unemployed was higher in large establishments than in small ones. However, the probability of ending up unemployed from large establishments radically dropped in 2007, which indicates that the small establishments were laying of their labour force in the beginning of the recession at the end of the 2000s. Also, during 1991–1998 the employees of small companies had a higher probability of ending up unemployed than workers in large establishments. It could be that during the recovery period small companies especially used a temporary labour force that ended up unemployed after their tenures (Figure 64; Appendix 18).

4.2.3 Labour Market Level Influence on Employment Stability

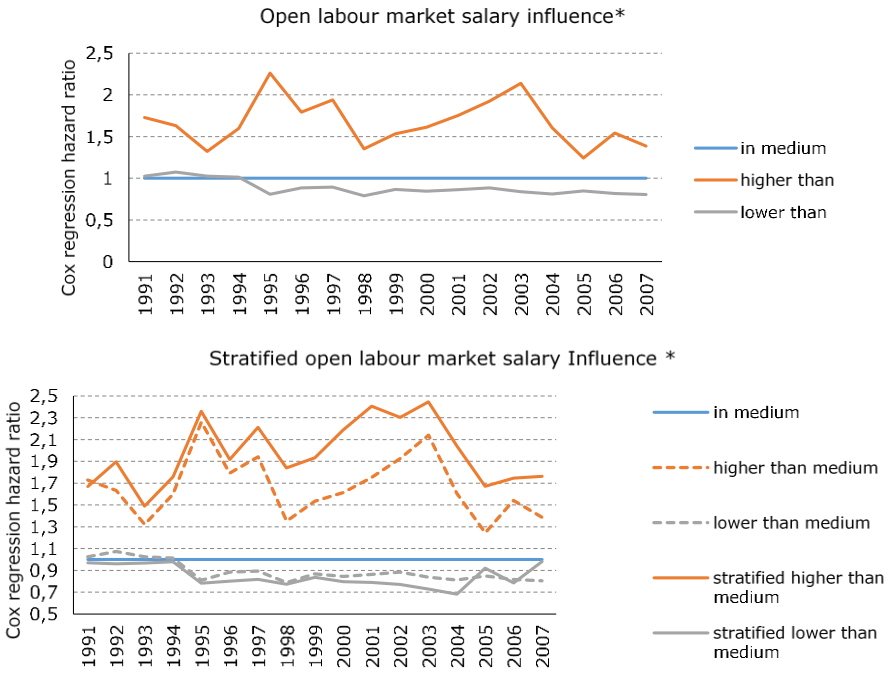
In the previous chapter I presented how the establishment level variables influence tenures in Finland. The establishment level variables often interacted with labour market factors. This indicates that establishments are linked to differing types of labour markets. Especially economically stable and medium sized establishments are situated in rural areas with less competition for the labour force. Next I will turn to an explanation of the influence labour market level factors have on the tenures and their shortening. In these analyses I will follow the research setting in that first I will take a closer look into the longitudinal variance of the influence of certain type of labour market on tenures. Then I will stratify the model in order to delineate the influence of the establishment location by differing labour markets and this phenomenon's influence on tenures.

Open Labour Market Salary

In the descriptive analysis we found that the open labour market salary levels had a clear effect in that if the starting salary in employment was radically higher than in general labour markets in the same industrial branch, the probability that the employment would end was higher than if the starting salary was in the mid-range of open labour market salary levels. Once controlling for other co-founding factors the picture remains the same. There are, however, fluctuations in time as during 1995–1997 and 2001–2004 this effect was strongest, indicating that during general economic upturns individuals with higher than medium level salaries were more mobile. This effect might once again, be a product of establishment level social behaviour patterns or individual level behavioural patterns (Figure 65).

The stratified model shows that the establishment selectivity slightly increases the probability of the highly salaried to be mobile. This means that, highly salaried workers are selected in organisations with longer tenures. Further, this means that establishments with higher salaries than in surrounding

labour markets locate in provinces where there is in general a longer duration of tenure, thus they locate in cities (Figure 65; Appendix 16).

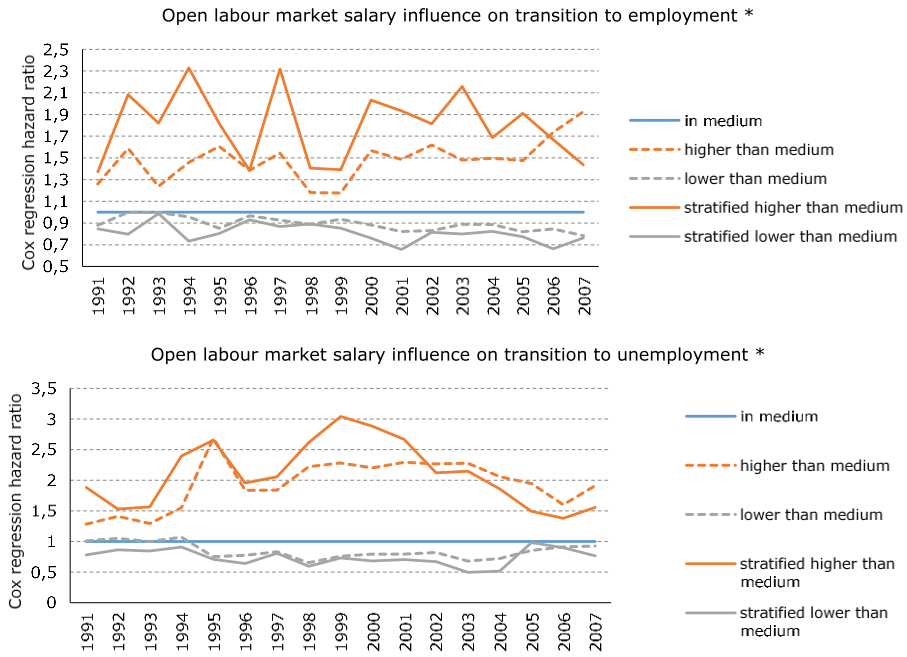


*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, ownership, number of personnel, number of employers, and provincial GDP

Figure 65: Open labour market salary and employment stability in Finland, 1991–2007

A higher starting salary level than the salary level in general in labour markets increases the probability of both job to job transitions and job to unemployment transitions. This effect is quite constant in job to job transitions throughout the observation period. The establishment level influence increases the probability of job changes for the higher salary groups, thus, this means that the workers with higher salaries are selected for longer tenure type establishments (Figure 66; Appendix 17).

The probability of job to unemployment transitions for the highest earner group was highest during 1995 and again 1998–2005. The establishment level has no influence on this phenomenon until 2002. After that, it seems that the highest earners, who end up unemployed, are situated in companies that locate in the provinces where there are in general higher levels of job to unemployment mobility (Figure 66; Appendix 18).



*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, ownership, number of personnel, number of employers, and provincial GDP

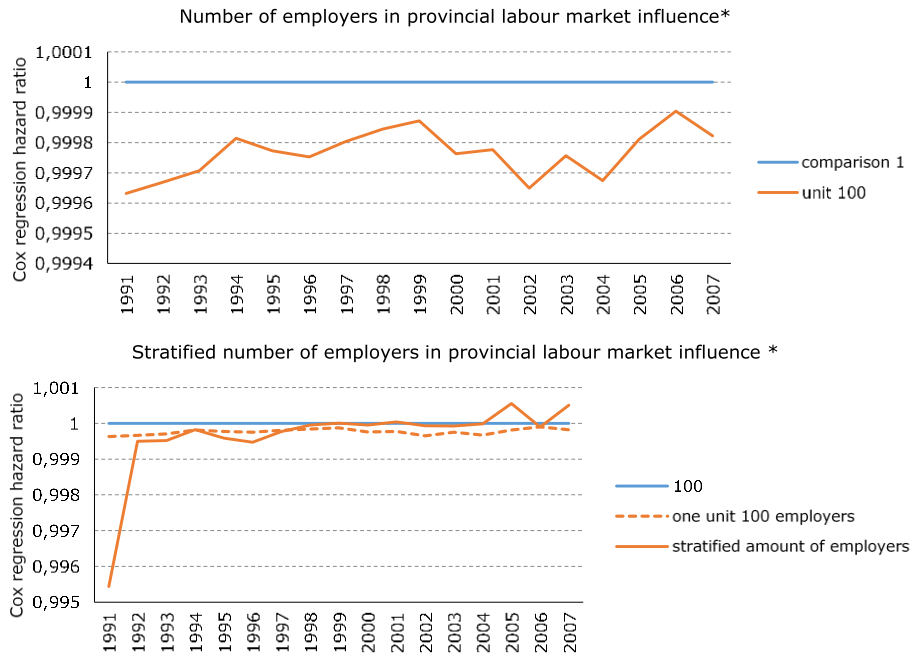
Figure 66: Open labour market salary and employment transitions in Finland, 1991–2007

Number of Employers in the Province

Monopsony in a labour market refers to a situation where there is only one employer but a large number of employees and from the perspective of the worker, the labour market appears to be "thin" (Manning 2003). Monopsony might also exist if there were many employers but they collude in wage setting so that there are only a few effective employers in local labour markets. In the next analysis the labour market general wage level is controlled for.

The number of employers has only a minor effect on the probability of employment ending in Finland. Thus, there is not any clear proof that there are any monopsonistically functioning provincial labour markets in Finland, even though there are labour markets with only a few potential employer organisations. It seems however that the more there are employers, thus possibilities for changing job, the less probable the ending of tenure is. This might be an effect of establishment level human resource policies in that they aim at keeping the existing labour force, when there is competition in labour market for labour force. Or it might be that the matching process has already been better in these labour markets. However, there is practically no establishment level variance in this effect, thus indicating, that this lower

mobility in such regions is caused by better matching and screening processes in the beginning and before the employment tenures (Figure 67; Appendix 16).

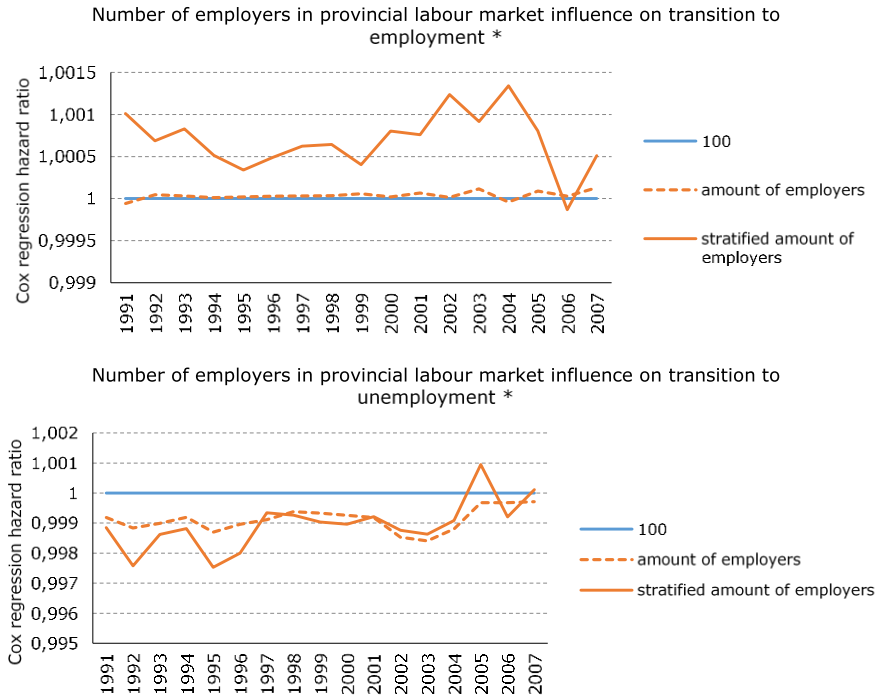


*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, ownership, number of personnel, open labour market salary level, and provincial GDP

Figure 67: Number of employers in province and employment stability in Finland, 1991–2007

The number of employers in provincial labour markets has no effect on the probability of job changing. The stratification mildly increases the risk of job to job transitions during 1991–2007, indicating that the more employers there were in province, the more probably job to job transitions were. Furthermore, the companies with high labour force turnover are situated in provinces where in general there are lower shares of labour force turnover as a job to job pattern. However, the number of employers in a province has a decreasing effect on the probability of job to unemployment transitions throughout the observation period. This indicates that, the more possible employers there are in a province, the less probable it is to end up unemployed after an employment spell. This probability has been slightly increasing since 2003, and further, establishment level selectivity seems to be slightly increasing since 2001. This indicates that the establishments with tenures ending in unemployment are being more situated

in provinces where there are more periods of employment ending in unemployment (Figure 68; Appendix 17; Appendix 18).

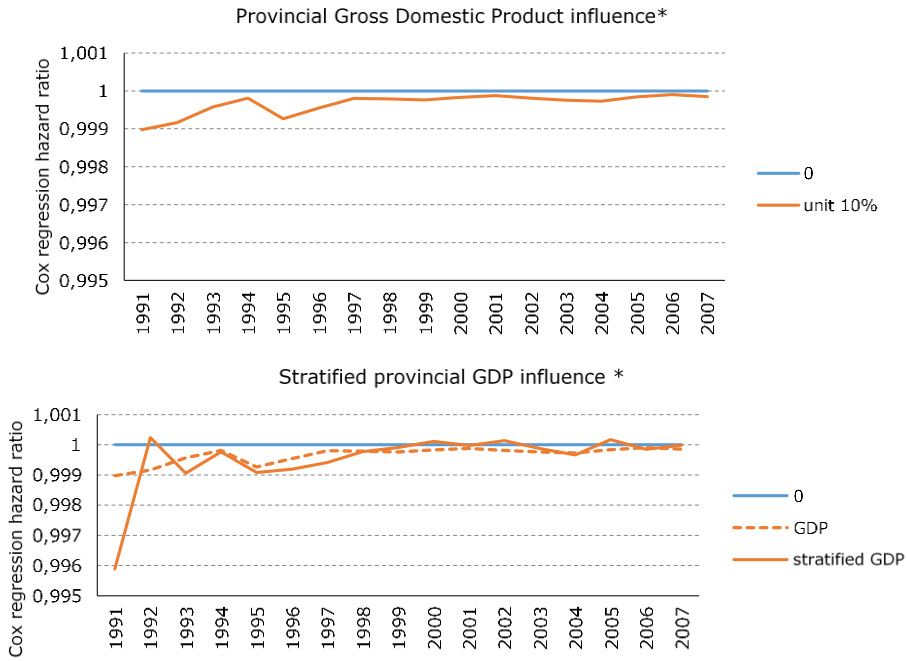


*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, ownership, number of personnel, open labour market salary level, and provincial GDP

Figure 68: Number of employers in province and employment transitions in Finland, 1991–2007

Gross Domestic Product at the Provincial Level

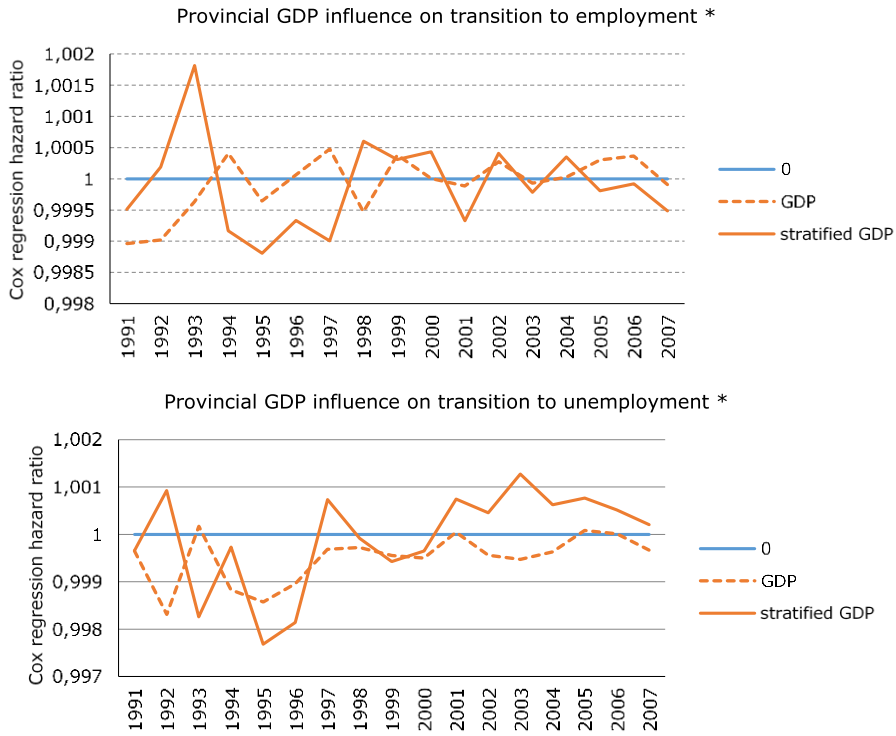
The provincial gross domestic product does not seem to have an impact on the tenures of employment. However, the mild tendency is that the higher the gross domestic product the less probable it is that the employment tenures end. Thus, it indicates that the general economic situation in a particular region influences employment stability; better off regions have better general employment stability. This is in contradiction with the hypothesis that high employment mobility is an indicator of high economic growth. This result is mostly due to the inclusion of differing economic situations of the establishments, and most of the GDP's explanatory influence is actually based on establishment level differences (Figure 69 Appendix 16).



*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, ownership, number of personnel, open labour market salary level, and number of employers

Figure 69: Provincial GDP and employment stability in Finland, 1991–2007

The gross domestic product of a province has a slightly more fluctuating influence on the probability of changing jobs than in general. However, these effects are extremely mild. It might be that during the recession of the 1990s the establishment level effect directed the job to job changers in provinces with higher GDP into establishments where there were in general longer tenures. The higher the GDP in the province the lower the probability is for the labour force to become unemployed. However, this effect has diminished and since 1997 there has not been any clear influence. Since 1997, also, the establishment level effect seem to be higher indicating that since 1997 those who end up unemployed are more directed in higher GDP provinces to establishments where in general the labour force ends up unemployed (Figure 70; Appendix 17; Appendix 18).



*Controlling gender, age, educational level, status before employment, salary, salary increments, family type, housing region, industrial branch, establishment annual capital turnover, economic turnover type, ownership, number of personnel, open labour market salary level, and number of employers

Figure 70: Provincial GDP and employment transitions in Finland, 1991–2007

4.3 CONCLUSIONS – THREE TYPES OF CHANGES IN THE STRUCTURE OF EMPLOYMENT STABILITY

Employment stability as an emergent institution has been analysed in this research. I broke down the structure of employment stability into three distinct levels of social reality: the structural, organisational and individual level. In general the length of tenures, i.e. employment stability, is most influenced by individual level attributes – a high salary or status as a student before employment implies more mobility in the labour market. A high education and prime employee age implies stability in employment also. However, in general the organisational level is also important in the industrial branch segmentation, when in primary production the labour market is more fragmented. Further, the structural level of labour markets comes to the forefront in that the general salary levels in local labour markets have the strongest influence on the mobility

of individuals. From these factors the status as a student and the open labour market salary levels are mainly products of establishment level selective patterns, so that students situate in establishments where in general there are longer tenures (students work as vacation substitutes) and the higher salaries than in general in open labour markets are paid in companies, in general, with longer tenures. This structure of employment stability changes dynamically in relation to economic tendencies in society, but in the long-run, it remains the same.

Beside these apparently continual tendencies in the structure of employment stability, there are multitudes of change. I find in this research that changes in the structure of employment stability may happen at both the individual level and organisational level simultaneously or they may present only in individual patterns of action or in establishment actions. Also, there are changes in the general structure of employment stability.

Changes in the structure of employment stability are twofold. On one hand, the share of short tenures has been growing in an almost cumulative manner from 1998 to 2006. The Finnish labour market has, by the end of 2000s, become similar to liberal labour markets elsewhere in relation to short term employment. Yet, the mean of tenures has not changed. Thus, there has occurred a dualisation of labour market stability: while there is an increase in short tenures, there is also a simultaneous lengthening of tenures. I define these different types of labour markets as being fragmented and stabile labour markets. On the other hand, at the same time there have been gradual longitudinal changes in the shares of employment transitions. During the observation period shares of transitions to unemployment and to employment have been declining. Thus, the share of transitions to outside the labour market has grown steadily: from roughly 60% in 1991 to 76% in 2007. This finding has importance in relation to flexibilisation strategies of Finnish labour policies. While more mobility has been targeted the competition in the labour market has not increased, rather, the flows to outside the labour market have grown.

Next I will conclude the results of this study in relation to the dualisation of employment stability. I wish to create a picture of how this dualisation is formed. The changes in the structure of employment stability are divided here into (1) no change or a cyclical change in relation to economic trends, (2) continuous change, and (3) into cumulative change, that is situated in the same time as the share of short tenures has increased. If the structure of employment stability remains the same, or whether there exists a cyclical change, there have not actually been any radical changes in the structure. The continuous change depicts changes that show continuously increasing or decreasing trend lines, not-withstanding economic trends nor increasing short tenures. These trends might or they might not be linked to the dualisation process. Yet, the changes that are cumulative and situated in the same time that short tenures have increased are clearly

connected to the dualisation process. The results in all the segmentation features targeted in this research are presented in Table 5.

From the major longitudinal categories of the types of changes in the structure of employment stability I first tackle the notions of no change or that the change is cyclical. The cyclical transformations are still rather stable, since there is no visible change in the general trend lines. The stable structures of employment stability include the influence of salary, and local labour market structures. The labour mobility of highly salaried workers is higher during the growth periods of economy. They are probably more capable of churning back and forth between jobs than low salaried workers and, also, they are probably used more as a temporary labour force during upturns of economy. Yet, the highly salaried workers also seem to concentrate in organisations with longer tenures. Thus, inside organisations there is a continuous dualisation of labour force. High salaried workers face fragmentation and the low salaried workers have stability. Thus, the *compensation as a balance between salary and tenure* theory might explain the stability of employment. However, the immobility of low salaried workers is an equally important phenomenon during upturns of economy. If low salaried workers put more weight on the stability of employment, they will not be interested in acquiring higher salaries as a trade-off against security, and as a result they become more locked in to their current place employment. As this social group is the largest in the Finnish labour market, this might explain why the transitional figures of job to job and job to unemployment mobility are declining.

Most changes in the structure of employment stability are continuous in nature. Some of the features increase the differentiation between social groups: female job mobility grows, transitions into unemployment grow for the oldest generations, low level educated workers constantly face a more fragmented labour market, students face a growingly fragmented labour market, and singles constantly face a slightly growingly fragmented labour market. These tendencies create the dualisation of the labour market, however, the transition has been gradual. These long term changes are not situated to the times of growing share of short tenures only. They represent long-term structural changes in the labour market.

However, some of the continuous changes are cohering in the structure of employment stability: the influence of salary increments, the assimilation between regions, and establishments (annual economic turnover, personnel numbers, and the economic situation) all have a cohering tendency in labour markets. These features have in common that they are all situated at the establishment level; while the individual level segmentation patterns are dividing the labour market structure the establishment level patterns are becoming un-differentiating. This means also, that the establishment level divisions are becoming more unpredictable. All establishments act in the same manner, and the divisions are no longer created between establishments (in

terms of economic situation or size), rather the divisions are built up inside the organisations.

Table 5: Results of employment stability in Finland

Research results			
Segments of labour force	**Results of general structure of employment stability**	**Results of differing transition types**	**Type of change**
Gender	- Females face fragmented labour markets all the time. - No establishment level selectivity	- Female job to job mobility has grown, and since 1999 it has been higher than for males. - Males face increasingly fragmented labour markets in relation to probability of unemployment.	Continuous
Age	- The youngest and oldest generation face fragmented labour markets. - Establishment level selects both young and oldest for low job stability establishments.	- The youngest generation transits between jobs and outside the labour market, while the oldest generation transits to unemployment. - Establishment selectivity increasingly sets the pattern of oldest generation mobility.	Continuous *NOTE! Sudden separation during 1998-2001
Education	- Low level educated workers face a growingly fragmented labour market all the time. - Establishment level selectivity increases this phenomenon during the upturns of economy by favouring highly educated workers.	- Low educated workers are more mobile both in job to job transitions and in job to unemployment transitions. - The establishment level selection is especially high in relation to job to unemployment transitions of highly educated workers, as they are selected for firms with less probability of unemployment.	Continuous and cyclical
Status before employment	- Students face growingly fragmented labour markets. - This is produced at the establishment level when students are used as substitutes.	- Students transit to outside the labour force - The unemployed face growingly fragmented labour markets in transitions to unemployment. - Establishment level selectivity has created the segmentation of unemployed.	Continuous for students Cumulative for un-employed
Monthly salary	- Salary levels' influence on employment stability is cyclical. - Highly salaried workers face fragmented labour market during the upturns of economy. - There is no establishment level selectivity according to salary levels.	- Highly salaried workers are constantly more mobile in job to job changes. - Highly salaried workers transit more probably to unemployment during the upturns of economy.	Cyclical
Salary increments	- Salary increments have prolonged the tenures earlier, however this effect is diminishing. - There has been no establishment effect in salary increments, but only at the end of observation period.	- Salary increment has started to lower the probability of job to job mobility and increase the job to unemployment probability since 2003.	Continuous

Family type	- Singles face a slightly growingly fragmented labour market all the time. - Couples and couples with children are selected into long tenured establishments.	- Singles are more mobile in relation to job to job mobility and in transitions to unemployment.	Continuous
Housing region	- Rural areas have a slightly more fragmented labour market, but the division is lowering.	- There are more transitions to unemployment in rural areas.	Continuous
Industrial branch	- The primary sector has a fragmented labour market continually. - New services and other services have a growingly fragmented labour market.	- New services, other services, and high technology industries have increasingly more job mobility and mobility to unemployment.	Cumulative
Establishment economic turnover	- Low turnover companies have had fragmented labour markets previously. However, this difference has gradually vanished and middle turnover establishment have started to ha fragmentation.	- Transitions to employment have begun to be more probable in middle size turnover establishment. - Transitions to unemployment are more probable in small sized turnover establishments.	Continuous
Economic situation	- Fluctuating and diminishing companies have fragmented labour markets.	- Both in transitions to employment and unemployment the firm economic situation have lost its indicative functions. Economically stabile establishments are becoming the most mobile labour markets.	Continuous
Number of personnel	- Small companies have had fragmented labour markets. Gradually large companies have become more fragmented.	- The transitions to employment and unemployment counterbalance each other. Thus, the transitions to outside labour market have grown in large establishments.	Continuous
Ownership	- Foreign owned companies have stable labour markets. This difference is gradually vanishing.	- The transitional figures show no changes between the ownership types.	Continuous
Open labour market salary level	- Highly salaried workers face fragmentation in labour markets. - There is slight increase in establishment level selectivity.	- Highly salaried have more probability to both, transition to employment and unemployment, than others.	Cyclical
Number of employers	- Labour markets that have fewer possibilities for mobility are also fragmented.	- Labour markets that have less possibilities for mobility have more transitions to unemployment.	No change
Provincial GDP	- Labour markets with high GDP are also more fragmented.	- GDP has only minor influence on different transition types.	No change

However, the stratified model found some features that are still divided between establishments' selective patterns. This establishment selectivity is due to something other than the measured establishment features in this study (size, economic turnover, economic situation, ownership or industrial branch). I hypothesised, that these selective patterns are produced by the internal labour markets of the establishments, especially the social norms inside establishments.

Establishments with low employment security especially select a young labour force, but increasingly also the oldest aged and unemployed labour force. Yet, those establishments with high employment stability use students as substitutes, highly educated workers, and couples (and couples with children). The establishment influence varies according to general economic trends especially in the case of highly educated workers. Further, there is an observation that the establishments with high employment stability have also started to use the salary increments as a tool for keeping the labour force. Even though this finding is situated at the end of the observation period, it might be a sign of a step out from the three party negotiations on general levels of salary increases. In these results concerning the influence of establishment selectivity there are three types of changes: no change or cyclical (educational selectivity, young labour force, students), continuous (family type), and cumulative (older and unemployed labour force, and the use of salary increments).

Special note has still to be made of the age group structure in employment stability. The general trend seems to be that the employment stability of the age groups is becoming more un-differentiated; the young are having prolonged tenures and the prime aged employees and oldest generations are facing increasing fragmentation. Yet, there was a sudden separation of these tendencies during 1998–2001. In 1998 unemployment benefit legislation concerning those younger than 25 years old changed (Työttömyysturvalaki, § 13 Ammatillisia valmiuksia antavaa... 1998). Unemployment benefit legislation started to require those under 25 years old, who are unemployed, to apply for at least 3 different schools, and if this is not done, they were not entitled to unemployment security benefits. Further, if they "drop out of education or otherwise themselves sabotage their attendance in education", they were not entitled to unemployment security. The aim of this new legislation was to make sure that young people would remain in education instead of unemployment. This change probably shows in the general employment security of the youngest generation in this study. In 1998 there was a sudden division between younger generations and others in employment stability – instead of transitions to unemployment the young started to be job changers, and transition to outside the labour market. Thus, to some degree the aims of the legislation were achieved during 1998–2001. However, after this period the situation went back to how it was previously. Further, the share of transitions to outside labour markets began to grow from the legislation change, and have continued to grow ever since. It may be that this legislation, together with other changes in the labour markets, provided the push factor for transitions towards education in society in general.

Next I will target the special case of the cumulative changes that occurred especially after 1998. These are rather sudden changes or could even be described as explosive turning points. However, to draw conclusions about this explosive turning point we would need a longer dataset, and see how the

situation develops after the sudden economic crisis in 2008. Yet, in any case the changes are striking in relation to previous structural patterns of these segments in employment stability. The cumulative changes are:

- Even though female workers face fragmented labour markets more than males, male workers have a growing probability of unemployment notwithstanding structural industrial changes.
- The unemployed are being used as a recyclable labour force by particular establishments.
- The probability of unemployment is growing for the highly educated.
- Services, new services, and higher technology industries are becoming more mobile in terms of both job mobility and probability of unemployment.

These changes should be researched more, since in this research setting the linkages or the influencing factors are not straight forwardly detectable to some other empirical features. There are no self-evident empirical, theoretical, or logical explanations for the changes above. In relation to the probability of male unemployment, we cannot (after controlling for industrial sectors, family situation etc.) conclude that this change is due to other factors such as industrial restructuring, changing family compositions, or salary structures. One explanation, drawn from the flexicurity institutional setting and theoretical notions, could be that female workers have started to take more advantage of the institutionally set employability measures than male workers. Further, it might also be that the employability of unemployed workers is not enhanced in employability schemes, as other international research has shown, and further, the establishments are no longer even interested in long-term employment for the unemployed labour force segment. It could also be, as explained in the theoretical chapters of this research, that the normative categorisation of the unemployed inside firms has grown. Yet, neither the growing probability of unemployment for highly educated workers nor the general growth of mobility in services, new services and in higher technology industries are altogether deductible from the idea of employability. These groups should be more capable of adapting the idea of individual agency, at least in theory. Only the growth of job to job mobility in these sectors may be logically tied to employability. Yet, it may also be that in the end of the observation period those who have previously transited to education are now returning to the labour market, yet, their situation has not bettered. Thus, in the long run, this result might also be linked to employability and flexicurity strategies – it might be that in the long term employability actually weakens the employment prospects of highly educated workers. However, I point that the industrial branches are not, per se, continuously fragmented nor stabile. Change is also occurring inside the branches. However, as the previous ponderings are more or less educated

deductions from the theoretical frame, all these sudden cumulative changes may still, if analysed later with more data, be related to this particular time period, in forthcoming recessions, or some other changes in society. However, for now it seems that they are changes per se. This type of "true" change is a particularly important finding and should be studied more.

5 Society in Change – Discussion of Employment Stability

Employment stability has been a central social and economic institution in Western labour markets since the industrialization era and it has functioned as a tool for societal cohesion on which social trust and continuity has been based. Currently, this institution has been seen as obstacle to competitive labour markets and to economic growth. However, internationally, there have been differing views on whether short tenures have actually increased or whether employment stability has actually worsened. Further, implications for these possible changes have received differing interpretations. Some scholars see a dual labour market forming that divides society in two layers where there are social groups employed in the 'better labour market', with considerably better employments stability, salaries, and working conditions, and then the others who are left behind to live as insecure life.

Employment stability was addressed in this research in the point of view of changing social structures in a Nordic welfare state. Society is not only based on norms and individual level internalization of these norms (the feeling of insecurity in employment and trust in labour market), but also on the notions of social structures that are formed by these norms and individual aspirations. The combination of norms and aspirations form the observable social environment in which we live. However, the observable social structure is also a composition of legislation, social security institutions, and behavioural general structures, like bureaucratic systems in organisations, and Nordic welfare state models of flexicurity.

In this research, it has been found that employment stability has dualised into fragmented and stabile labour markets rapidly during the 2000s. In theoretical perspective this dualisation is a major change. It shows a change from traditional Nordic labour market model to liberal labour market model. Dualisation of employment stability means that social research and public discussions should understand that generalisations about shortening tenures are not correct. The general worsening of employment stability is a misunderstanding. In order to better understand this transformation in society, this research focused on describing and understanding structurally the

phenomenon of employment stability. Using the Cox Proportional Hazards regression method, influencing factors were detected, and it was shown that the structure of employment stability has changed, notwithstanding, the amounts of labour force belonging to differing segments.

The structure of employment stability is, on the one hand, rather continuous, yet on the other hand, very dynamic. There are some factors that stay constant, no matter economic context, nor other structural changes in labour market. Particularly students face continually similarly fragmented labour market. Then there are continuous and gradual changes in the structure of employment stability, which in the long-run will change the structure, or create clearer segments of the labour market. Such notions apply especially to the highly educated, prime-time aged labour force segments, and also to the labour force of differing industrial branches. In particular, the labour force segment of the new industries constantly face more fragmented labour markets, whereas the labour force within the high technology sector has rather stable labour markets. Thus, the general structural changes in labour market, as growing educational levels, ageing of the labour force, and industrial restructuring, are all partly explaining the fragmentation of employment, yet the tendencies inside these segments also magnify (especially in the case of highly educated and industrial restructuring) and partly diminish (especially the case of age structure) the structural changes.

Continual changes also depict that the firm level has lost its differentiating mechanism in employment stability. The firm structure of labour markets in relation to size (both personnel and economic turnover) of the employer and as economic situation of the employer has declined. The internal labour market mechanism has vanished in the Finnish labour market. Yet further, these tendencies are continuing, thus leading to a reversed situation. The economically stable and growing are having more fragmented labour markets than the fluctuating or diminishing. The labour force flexibilisation in the level of national institutions aimed particularly to loosen bureaucratic barriers to employment mobility. It seems this aim has been achieved, at least for a while, in Finnish labour markets. The large companies' internal labour markets have become less tying and, thus, in general, employment stability has declined in these companies. Establishment size, measured by amount of personnel, shows growing employment insecurity especially in larger firms, while short-term employment grew in Finnish labour markets. This trend is linked to self-initiated job changing patterns while, also, employment insecurity in relation to probability of unemployment has grown.

Furthermore, some studies imply that many of the traditional pillars of the internal labour markets, especially the promotion ladders, have been dismantled (Grimshaw et Al. 2001; Rubery 1999). Thus, the salary increments should longitudinally have lost their influence on employment stability. This research showed that the influence of salary increments has been important in keeping the labour force inside establishments, yet the salary increments have

continuously lowering influence on employment stability. However, a slight increase in establishment selection processes in salary increases in the end of the observation period might be linked to shortening tenures, the financial crisis of 2008, or to a Nordic model of flexibility and more flexible, individualized, salary negotiations. Traditionally in Finland, general wages were set by national institutions through three party negotiations; now this institutional mechanism is weaker and individual salary bargaining is more easily used in some companies. At the same time, there is impending economic crisis ahead and self-initiated mobility grows particularly within growing and stable establishments.

The notion that the influence of firm size and economic situation of companies has become reversed in employment stability might, as mentioned, point to changes in bureaucratic structures in these companies, as well as, the link between economic situations and the labour force. In contrast, the view that labour turnover effects are negative for firms, some management research has emphasized that labour turnover can be functional and in the interests of the employer organisation; worker turnover may bring new productivity when technological change is rapid (Aghion and Howitt 1996; Ilmakunnas and Maliranta 2007, 5). Thus, it might be that the growth of employment turnover as job change in economically growing and stable establishments during upturns is partly related to positive, new information and knowledge renewal tendencies in these establishments. On the other hand, the increasing probabilities of transition to unemployment in the same companies might indicate that they need to renew their labour force actively through dismissals and using a temporary labour force, instead. However, it may also be that economically fluctuating and diminishing companies are not able to compete against other companies in hiring certain labour force anymore. It could also be that the matching process of workers has worsened in economically growing and stabile establishments, even though, stable and growing establishments are in a powerful position in labour markets, and they can choose their labour force. It should be addressed later in research whether the structural change of employment stability in relation to companies' economic situation is a question of worsening matching process, or deliberate labour renewal policies of companies with growing or stable economic situation; or whether the economically fluctuating and diminishing companies are now holding on to their workforce, or incapable of succeeding in the competition of short term labour force.

The results of socially driven increase in employment selectivity of unemployed and aged labour force create further implications to employability policies. The unemployed are cumulatively used as recyclable labour force in low employment stability establishments. There is increasing normative segmentation of this group in the labour market at the same time the share of short tenures increases. Thus, the policy measures should target even more on not only the process of employing the unemployed, but also in the further

employability of them. It might be advisable to target more effort to that the unemployed would have continuation of employment for example by offering employability measures for them during their employment or for companies that hire labour force especially from unemployed positions. The socially selective patterns in relation to aged labour force, however, have a continuous tendency. The socially driven mechanisms are continuously increasing. The probability of aged labour force to transit to unemployment is growing due to establishment level selectivity. This indicates that the aged are all the time more surplus labour force. Once the Finnish society is aiming in higher employment attendance levels, the mechanisms that produce the selectivity of aged should be addressed. It might be that firms consider aged labour force as too expensive in relation to risks of pension, sick leave payments etc. Employability of this group is probably partly due to their individual features, but also, growingly in the way the public institutions propose barrier to their labour market mobility.

Some of the findings of this research have advances in the international discussion and theoretical understanding of employment stability and also for mechanisms of social change. First of all, there are two viewpoints toward flexibility in Western labour markets: dualisation and polarization. Dualisation discussion claims that Western labour markets are being divided in a dual manner, into a good employment security labour market of certain segments of labour force, and a fragmented labour market with other segments. This division is seen as based mostly between established groups of labour force, like male dominated, middle aged, unionised and bureaucratically ordered labour markets, and those on the margins of the labour markets, such as feminized labour force, new industries, and the new labour force (the young). The other more recent hypothesis of polarization argues that the division is not so much based between old and new economy, but between hierarchical levels in the labour markets. It states that the division is between the middle groups and others, leading to so called "middle-class squeeze".

In this research, it has been revealed that there is a division within the Finnish labour markets; there are two distinct labour markets one is stable and the other fragmented. The analysis shows that this separation has been constant in relation to hierarchical levels within society and there does not appear to be such a duality that the polarization thesis supposes. The middle class is not facing any radical changes in their employment stability, nor is the low salaried or highly salaried. Rather, the duality is more in line with flexibility discussions, when some labour force segments have faced more employment instability than before.

However, the dualisation of Finnish labour markets has not happened as supposed in the theories or in praxis of other European labour markets. The situation of female and the young labour force is actually getting better, yet the situation in large establishment (in personnel amount, referring to bureaucratic systems) male labour market is getting weaker in employment stability. Thus, it

is worth noting that the aging of labour force might actually better the relational situation of the young in labour market. Yet, the employability strategy might be more fitted to female labour force in a Nordic welfare state institutional setting. Further, the division between bureaucratic establishments and flexible establishment is not anymore valid in Finnish labour market.

New understanding of the mechanisms of social change is brought up by this research especially in the cases where the economical cyclical dynamics of the labour market functions are visible. While, the general trend line of the change might be continuous, the fluctuation of economy might increase this separation. Particularly this is the situation in the stability of employment in the segment of the highly educated. While in theory, the highly educated should have more employment stability as they have more probability of advancement in internal labour market (segmentation theory), or, highly educated might have better possibilities in an open labour market, and thus, they should be more mobile, especially in self-initiated mobility (Mincer 1988; Sicherman 1990). The empirical findings of this research actually confirm both of these hypotheses. These results indicate that in good economic times, the highly educated are, indeed, more capable of selecting to situate themselves in such establishments where employment stability is better, and during down turns of economy, their employment stability and security is better; the segmentation and transitions (the mobility) function under different contexts differently.

For theoretical discussions, it's important to notice that establishment level changes in labour force usage should be divided into multiple factors, also. When measuring a firm's size by its annual economic turnover, it was noticed that, already in 1993, companies with mid-sized turnover began to have less employment security than smaller companies. Thus, first of all, the separation of an organisation size into two parts (in economic turnover and amount of personnel) offers detailed analysis of the phenomenon of establishment size. Further, the longitudinal tendencies of these phenomena differentiate between each other; they are different. Secondly, and empirically, short tenures are tied to a large firms labour usage (by amount of personnel), but not in the economic scale of the firm. Also, self-initiated mobility is growing in economically large firms, while the general economic situation influences the probability of unemployment in small establishments. These notions have importance for the employability strategies. It might be that the economically large firms create more employability than small firms, and when the small firms are structurally the largest firm type in Finland the employability of small firm labour force should be more addressed in institutional measures.

The structure of Finnish employment stability points to the direction that the lower paid have more employment stability, both in self-initiated employment mobility and in organisation based mobility to unemployment. Thus, it might be so that wages and employment stability compensate for each other. However, there is no establishment level selectivity in this, thus, in Finnish labour markets,

compensation doesn't concentrate in soma particular firms; rather, it is a dualisation inside firms. However, low salaried is by far the largest group of labour force that starts new employment annually, and their immobility needs more discussion. If low salaried are putting more weight on the stability of employment, thus they are not interested in acquiring more salary as trade of between security, they are all the time more locked in to their current employment. This might explain why the transitional figures of job to job and job to unemployment mobility are declining.

Further, when in political discussions the flexibility of labour force and also more mobilized labour markets are seen as targets there are two different points to make in relation to labour mobility. It should be made clear, which type of labour mobility is the desired one: are we concentrating on advancing the firms possibilities of labour renewal, or are we more concerned in the labour force and labour markets functions aspects. Thus, are we more interested in the flexible usage of labour force in firms regardless to where this labour force then ends up, or is the mobility we are targeted in the job to job mobility. This separation has crucial meaning for the policy setting. The concentration on firm actions might be arguable by referring to actual economic situation of the companies. However, in the long run, these policies might have controversial influence on the dynamics of labour market. It might be that the easing up of labour renewal policies have led to more transitions to outside labour market, lesser mobility of the largest social groups in labour market (like small and middle-sized firms labour market and low salaried), and finally to growing unemployment probability of the highly educated. These long term changes then cumulate into more locked in, more stagnated labour market. In a situation of low economic growth in national level and rising public spending on social security institutions, maybe more attendance should be paid to the labour markets functions and inclusion of social determinants in there, instead of just labour turnover in companies. The national level mobility policies might actually be creating a situation where individuals face more risks in relation to employment mobility, and thus the job to job mobility declines. Even more than before individuals are trading of the salary for security. They stay in their current (secure) employment rather than take the risks involved in job mobility.

When there is growing flow out of the labour markets, we most certainly should be addressing these questions. This tendency might still be related not so much on the mobility discussion, but more concretely to employability discussions. The individuals are enhancing their employability by education, and this has been the target of the policies especially in coping with the industrial structural change. However, I point to that maybe the education should not be seen as the only measure in employability and more measures should be targeted in that labour force could move between jobs. Yet, even though this research has found some prove of this situation, it also needs much more research. We need to know, how the employment of job to education

transitioners then later on develops. Does the education enhance their situation in labour market?

Finally, research setting of this study has aimed in dialoguous relationship between economic, social political and sociologists discussions of the paradox between employment stability and flexibility in the era after industrialization in Western societies. This research has used register base analyses for uncovering this paradox and has found that bot these streams are partly right and partly wrong in their statements. Both the stabilization and flexibilisation are occurring at the same time. We can now move beyond the discussion of "whether/not there are changes" into discussions of "what then". Based on this research we can more concretely focus the sociological research into some particular social groups that face fragmentation or to those that have stability. We also understand that there is continuous structural changes occurring, and there might be some sudden changes, also. These changes are unobservable in cross cutting study or if the qualitative study ties its analyses only of this instant. We are able to frame the social labour research better.

Further, this research shows explicitly how the social and the economic sphere are related to each other in the functions of labour market. Rejecting either might lead to unexpected changes in the level of society. This research setting has offered also for the economic investigations some new interpretative tools. The frame of levels of social reality in this study shows, explicitly, the pros of applying social theoretical frameworks to such a phenomenon that has been empirically studied more in labour economics. The understanding of the interplay between economic rationales and social dynamics creates a more targeted analysis of social change. The social intake into employment stability shows how important socially set structures are for our society and for economics to functions. Further, the social explanation models are not in contradiction to economy, rather, they only increase the validity of research. Social normative structure is actually not a hindrance to free markets, actually it is the foundation of it. Further, the socially set action patterns might be a distortion in the economical logics, yet, they are the real life factors of our society. At the structural level, it is clear that the dynamics between labour force mobility and economic growth are much more diverse and face multiple social, structural, individual, and economical mechanisms at the same time. Analytically, we may then understand that there are contradictions between individual behaviour patterns or individual feelings of employment security, and the institutional and structural changes that are occurring in Nordic labour markets. However, at the same time, the normative expectation of employment stability might still be high.

Even though, this research has not targeted on individual life sphere per se, I see that this kind of structural research is able to uncover the structures, the iron gage which we have created ourselves or previously in our social institutions. Yet, this iron gage is not dictator once it is revealed. As shown in this research,

the structures are changing, thus, we may now also decide whether we are willing to create new iron gages or lower them. Promise of sociology is uncovering the social structures that dictate human action. It offers a possibility to understand, which may also be empowering, when it reveals the possibly false ideologies behind our society. After revealing these structures we may understand the barriers that we face, but also, we may choose which windmills we want to fight against.

This research has targeted the phenomenon of employment stability, which has been one of the cornerstones to Western industrialized society. Sociologically, the norm of stability, predictability of life and economic relations, has been one of the keys to the growth of Western social systems and a basis for the development of welfare states. The dismantling of this norm presents some radical changes to Western societies and needs to change the norm of stability. It has become clear that in research it is vital to address the phenomenon in question from many differing levels of society and, especially, that social change is a product of all these levels influences intermingling together. If research only deals with one level of society the results may be misleading and their interpretations are incomplete. When "change" in the labour markets is widely used as a popularized term, it has actually lost its meaning as to what kind of "change" are we talking about. Actually, many changes in labour markets are tied to general economic changes and, thus, they are not actually structural ones. The more profound changes are those that reoccur regardless of differing economic contexts. Furthermore, some changes are interlinked while others aren't. Thus, we should be careful in generalizations of results about margins or about particular industrial branches or particular types of companies. In these interpretations, we need more research on the mechanisms of how these changes transform between social totalities, groups, and segments in labour market. Based on this research, we now have a much clearer picture of the structural changes in the Finnish labour market, and we can target our policies and scientific research more concretely on the phenomenon of fragmented and stable labour markets. For the first time in Finland, we know that even though employment stability may appear at first glance as an unchanged phenomenon, there are several changes occurring, and an actual dualisation of employment stability.

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Appendices

APPENDIX 1: TENURES BY GENDER

	Started tenures n.	Male		Female	
		n.	%	n.	%
1991	33,687	19,047	56.5	14,640	43.5
1992	26,952	15,391	57.1	11,561	42.9
1993	27,060	15,660	57.9	11,400	42.1
1994	28,146	17,362	61.7	10,784	38.3
1995	41,896	25,531	60.9	16,365	39.1
1996	40,280	24,267	60.25	16,013	39.75
1997	51,409	31,902	62.06	19,507	37.94
1998	68,187	40,426	59.29	27,761	40.71
1999	61,053	36,592	59.93	24,461	40.07
2000	67,146	41,214	61.38	25,932	38.62
2001	64,615	37,711	58.36	26,904	41.64
2002	52,773	32,252	61.11	20,521	38.89
2003	48,701	30,160	61.93	18,541	38.07
2004	68,427	40,560	59.27	27,867	40.73
2005	106,616	61,085	57.29	45,531	42.71
2006	60,199	36,270	60.25	23,929	39.75
2007	118,887	67,341	56.64	51,546	43.36
2008	111,207	62,327	56.05	48,880	43.95

	Started tenures n.	Ended during the first year			
		Male		Female	
		n.	%	n.	%
1991	33,687	9,429	62.7	5,601	37.3
1992	26,952	7,618	61.4	4,797	38.6
1993	27,060	6,979	60.4	4,583	39.6
1994	28,146	5,821	63.2	3,388	36.8
1995	41,896	9,945	62.7	5,914	37.3
1996	40,280	9,529	62.00	5,840	38.0
1997	51,409	12,043	64.45	6,643	35.55
1998	68,187	13,038	62.35	7,873	37.65
1999	61,053	12,483	64.16	6,972	35.84
2000	67,146	16,186	63.09	9,468	36.91
2001	64,615	15,997	61.16	10,157	38.84
2002	52,773	16,599	65.19	8,864	34.81
2003	48,701	15,690	65.65	8,208	34.35
2004	68,427	20,699	62.87	12,223	37.13
2005	106,616	36,574	58.56	25,883	41.44
2006	60,199	22,941	61.58	14,315	38.42
2007	118,887	35,305	59.09	24,445	40.91
2008	111,207	36,382	58.85	25,444	41.15

APPENDIX 2: TENURES BY AGE

	Started tenures n.	<25		25-34		35-44		>44	
		n.	%	n.	%	n.	%	n.	%
1991	33,687	13,814	41.0	11,060	32.8	6,231	18.5	2,582	7.7
1992	26,952	9,910	36.8	9,095	33.8	5,403	20.1	2,544	9.4
1993	27,060	9,154	33.8	9,532	35.2	5,383	19.9	2,991	11.1
1994	28,146	8,383	29.8	10,495	37.3	5,844	20.8	3,424	12.2
1995	41,896	13,655	32.6	14,885	35.5	8,260	19.7	5,096	12.2
1996	40,280	13,272	32.95	14,139	35.10	7,914	19.65	4,955	12.3
1997	51,409	17,204	33.46	17,247	33.55	9,975	19.4	6,983	13.58
1998	68,187	25,965	38.08	19,824	29.07	12,605	18.49	9,793	14.36
1999	61,053	21,910	35.89	17,914	29.34	11,673	19.12	9,556	15.65
2000	67,146	23,177	34.52	19,486	29.02	13,327	19.85	11,156	16.61
2001	64,615	24,109	37.31	18,057	27.95	12,156	18.81	10,293	15.93
2002	52,773	19,817	37.55	13,788	26.13	9,844	18.65	9,324	17.67
2003	48,701	17,730	36.41	12,994	26.68	9,091	18.67	8,886	18.25
2004	68,428	24,906	36.40	18,915	27.64	12,540	18.33	12,067	17.63
2005	106,617	46,174	43.31	25,944	24.33	15,945	14.96	18,554	17.40
2006	60,199	25,911	43.04	15.897	26.41	8,283	13.76	10,108	16.79
2007	118,889	52,242	43.94	29.015	24.41	16,876	14.19	20,756	17.46
2008	111,210	49,087	44.14	26.745	24.05	14,406	12.95	20,972	18.86

	Ended during the first year n.	<25		25-34		35-44		>44	
		n.	%	n.	%	n.	%	n.	%
1991	15,030	7,027	46.8	4,389	29.2	2,519	16.8	1,095	7.3
1992	12,415	5,213	42	3,853	31.0	2,227	17.9	1,122	9.0
1993	11,562	4,644	40.2	3,673	31.8	2,015	17.4	1,230	10.6
1994	9,209	3,084	33.5	3,154	34.3	1,775	19.3	1,196	13.0
1995	15,859	6,093	44.6	4,916	31.0	2,854	18.0	1,996	12.6
1996	15,369	5,892	38.34	4,763	30.99	2,737	17.81	1,977	12.86
1997	18,686	7,248	38.79	5,421	29.01	3,322	17.78	2,695	14.42
1998	20,911	9,542	45.63	5,086	24.32	3,331	15.93	2,952	14.12
1999	19,455	7,846	40.33	4,759	24.46	3,468	17.83	3,382	17.38
2000	25,654	10,821	42.18	6,318	24.63	4,361	17	4,154	16.19
2001	26,154	11,967	45.76	6,031	23.06	4,079	15.6	4,077	15.59
2002	25,463	10,447	41.03	5,713	22.44	4,352	17.09	4,951	19.44
2003	23,898	9,696	40.57	5,369	22.47	4,012	16.79	4,821	20.17
2004	32,922	14,378	43.67	7,461	22.66	5,048	18.33	6,035	18.33
2005	62,457	32,336	51.77	12,849	20.57	7,477	11.97	9,795	15.68
2006	37,256	18,027	48.39	8,520	22.87	4,439	11.91	6,270	16.83
2007	59,139	31,599	52.89	12,188	20.40	6,775	11.34	9,188	15.38
2008	61,827	31,588	51.09	12,375	20.02	6,358	10.28	11,506	18.61

APPENDIX 3: TENURES BY EDUCATIONAL LEVEL

	Started tenures n.	Basic		Secondary level		Higher (polytechnic or university)	
		n.	%	n.	%	n.	%
1991	33,687	12,906	38.31	18,830	55.90	1,951	5.79
1992	26,952	9,354	34.71	15,836	58.76	1,762	6.54
1993	27,060	8,839	32.66	15,969	59.01	2,252	8.32
1994	28,146	8,419	29.91	17,125	60.84	2,602	9.24
1995	41,896	12,440	29.77	25,585	61.07	3,871	9.24
1996	40,280	11,672	28.98	24,874	61.75	3,734	9.27
1997	51,409	14,637	28.47	32,034	62.31	4,738	9.22
1998	68,187	21,674	31.79	40,487	59.38	6,026	8.84
1999	61,053	18,593	30.45	36,998	60.6	5,462	8.95
2000	67,146	19,885	29.61	40,962	61	6,299	9.38
2001	64,615	19,406	30.03	38,485	59.56	6,724	10.41
2002	52,773	15,551	29.47	32,632	61.83	4,590	8.7
2003	48,701	13,853	28.45	30,394	62.41	4,454	9.15
2004	68,428	18,586	27.16	41,962	61.32	7,880	11.52
2005	106,617	27,851	26.12	68,243	64.01	10,523	9.87
2006	60,199	12,277	20.39	41,919	69.63	6,003	9.97
2007	118,889	32,417	27.27	73,928	62.18	12,544	10.55
2008	111,210	3,3025	29.70	65,542	58.94	12,643	11.37

	Ended during the first year n.	Basic		Secondary level		Higher (polytechnic or university)	
		n.	%	n.	%	n.	%
1991	15,030	5,636	37.50	8,931	59.42	463	3.08
1992	12,415	4,121	33.19	7,749	62.42	545	4.39
1993	11,562	3,705	32.04	7,203	62.30	654	5.66
1994	9,209	2,757	29.94	5,777	62.73	675	7.33
1995	15,859	4,721	29.77	10,223	64.46	915	5.77
1996	15,369	4,430	28.82	10,065	65.49	874	5.69
1997	18,686	5,393	28.86	12,283	65.73	1,010	5.41
1998	20,911	7,433	35.55	12,526	59.9	952	4.55
1999	19,455	6,539	33.61	12,058	61.98	858	4.41
2000	25,654	7,961	31.03	16,322	63.62	1,371	5.34
2001	26,154	8,387	32.07	16,306	62.35	1,461	5.59
2002	25,463	7,975	31.32	16,148	63.42	1,340	5.26
2003	23,898	7,365	30.82	15,257	63.84	1,276	5.34
2004	32,922	10,311	31.32	20,494	62.25	2,117	6.43
2005	62,457	16,807	26.91	41,630	66.65	4,020	6.44
2006	37,256	7,722	20.73	27,059	72.63	2,475	6.64
2007	59,750	16,904	28.29	38,922	65.14	3,924	6.57
2008	61,827	19,241	31.12	37,936	61.36	4,650	7.52

APPENDIX 4: TENURES BY MONTHLY SALARY

	Started tenures	< € 1,000 / month		€ 1,000-1,999 / month		€ 2,000-2,999 / month		more than € 2,999 / month	
	n.	n.	%	n.	%	n.	%	n.	%
1991	33,161	5,037	15.19	13,637	41.12	8,076	24.35	6,411	19.33
1992	26,616	4,593	17.26	11,083	41.64	6,188	23.25	4,752	17.85
1993	27,058	5,022	18.56	11,910	44.02	6,084	22.49	4,042	14.94
1994	28,146	4,542	16.14	12,705	45.14	6,378	22.66	4,521	16.06
1995	41,896	6,305	15.05	17,916	42.76	10,309	24.61	7,366	17.58
1996	70,280	6,443	16.00	16,452	40.84	3,916	25.27	7,206	17.89
1997	51,409	7,649	14.88	20,121	39.14	13,464	26.19	10,175	19.79
1998	68,187	18,346	26.91	24,146	35.41	15,393	22.57	10,302	15.11
1999	61,053	13,778	22.57	21,758	35.64	13,841	22.67	11,676	19.12
2000	67,146	11,584	17.25	22,233	33.11	17,601	26.21	15,728	23.42
2001	64,615	12,479	19.31	20,476	31.69	15,761	24.39	15,899	24.61
2002	52,773	8,968	16.99	16,312	30.91	13,220	25.05	14,273	27.05
2003	48,701	7,935	16.29	14,878	30.55	12,657	25.99	13,231	27.17
2004	68,428	12,822	18.74	21,378	31.24	17,479	25.54	16,749	24.48
2005	106,617	22,594	21.19	36,071	33.83	26,740	25.08	21,212	19.90
2006	60,199	10,558	17.54	18,957	31.49	16,593	27.56	14,091	23.41
2007	118,889	28,577	24.04	38,258	32.45	28,679	24.12	23,053	19.39

	Ended during the first year n.	< € 1,000 / month		€ 1,000-1,999 / month		€ 2,000-2,999 / month		more than € 2,999 / month	
		n.	%	n.	%	n.	%	n.	%
1991	14,817	1,759	11.87	4,652	31.40	3,916	26.43	4,490	30.30
1992	12,225	1,690	13.82	4,255	34.81	3,006	24.59	3,274	26.78
1993	11,562	1,825	15.78	4,333	37.48	2,762	23.89	2,642	22.85
1994	9,209	1,279	13.89	3,068	33.32	2,108	22.89	4,521	29.91
1995	15,859	1,995	12.58	5,252	33.12	3,870	24.40	4,742	29.90
1996	15,369	2,104	13.69	4,936	32.05	3,916	25.48	4,423	28.78
1997	18,686	2,152	11.52	5,494	29.4	4,786	25.61	6,254	33.47
1998	20,911	5,842	27.94	6,074	29.05	4,675	22.36	4,320	20.66
1999	19,455	3,711	19.07	5,451	28.02	4,275	21.97	6,018	30.93
2000	25,654	3,620	14.11	6,410	24.99	6,293	24.53	9,331	36.37
2001	26,154	4,170	15.94	6,365	24.34	6,005	22.96	9,614	36.76
2002	25,463	3,263	12.81	5,737	22.53	5,972	23.45	10,491	41.2
2003	23,898	3,009	12.59	5,356	22.41	5,739	24.01	9,795	40.99
2004	32,922	6,088	18.49	8,533	25.92	7,685	23.34	10,616	32.25
2005	62,457	12,323	19.73	21,037	33.68	15,401	24.66	13,696	21.93
2006	37,256	5,286	14.19	11,240	30.17	10,205	27.39	10,525	28.25
2007	59,750	11,733	19.64	19,859	33.24	14,492	24.25	13,666	22.87

APPENDIX 5: TENURES BY SALARY INCREMENT

Started tenures					
	n.	Increment		No increment	
		n.	%	n.	%
1991	33,687	12,347	36.7	21,340	63.4
1992	26,952	10,947	40.62	16,005	59.38
1993	27,060	12,258	45.30	14,802	54.70
1994	28,146	15,347	54.53	12,799	45.47
1995	41,896	21,073	50.30	20,823	49.70
1996	40,280	20,985	52.10	19,295	47.90
1997	51,409	26,522	51.59	24,887	48.41
1998	68,187	34,766	50.99	33,421	49.01
1999	61,053	30,683	50.26	30,370	49.74
2000	67,146	33,176	49.41	33,970	50.59
2001	64,615	33,140	51.29	31,475	48.71
2002	52,773	25,852	48.99	26,921	51.01
2003	48,701	25,175	51.69	23,526	48.31
2004	68,428	34,808	50.87	33,620	49.13
2005	106,617	42,224	39.60	64,393	60.40
2006	60,199	8,788	14.60	51,411	85.40
2007	118,889	22,405	18.85	96,484	81.15

	Ended during the first year n.	Ended during the first year			
		Increment		No increment	
		n.	%	n.	%
1991	15,030	3,657	24.3	11,373	75.7
1992	12,415	3,683	29.67	8,732	70.33
1993	11,562	3,992	34.53	7,570	65.47
1994	9,209	4,229	45.92	4,980	54.08
1995	15,859	6,328	39.90	9,531	60.10
1996	15,369	6,585	42.85	8,784	57.15
1997	18,686	7,871	42.12	10,815	57.88
1998	20,911	12,738	60.92	8,173	39.08
1999	19,455	11,208	57.61	8,247	42.39
2000	25,654	15,646	60.99	10,008	39.01
2001	26,154	16,400	62.71	9,754	37.29
2002	25,463	14,561	57.18	10,902	42.82
2003	23,898	13,248	55.44	10,650	44.56
2004	32,922	14,705	44.67	18,217	55.33
2005	62,457	21,211	33.96	41,246	66.04
2006	37,256	5,122	13.75	32,134	86.25
2007	59,750	7,867	13.17	51,883	86.83

APPENDIX 6: TENURES BY LABOUR MARKET STATUS BEFORE THE TENURE

	Started tenures n.	Employment		Unemployment		Studies		Other outside labour market	
		n.	%	n.	%	n.	%	n.	%
1991	33,152	17,521	52.85	3,769	11.37	8,255	24.90	3,607	10.88
1992	26,764	11,721	43.79	6,254	23.37	6,206	23.19	2,583	9.65
1993	26,863	10,343	38.50	7,951	29.60	5,816	21.65	2,753	10.25
1994	28,029	8,145	29.06	11,221	40.03	5,838	20.83	2,825	10.08
1995	41,748	14,146	33.88	13,413	32.13	10,388	24.88	3,801	9.10
1996	40,007	13,754	34.38	11,613	29.03	10,812	27.03	3,828	9.57
1997	51,093	18,149	35.52	14,904	29.17	13,006	25.46	5,034	9.85
1998	67,042	26,297	39.22	14,568	21.73	19,971	29.79	6,206	9.26
1999	60,093	28,532	47.48	12,699	21.13	13,701	22.8	5,161	8.59
2000	66,589	33,612	50.48	13,000	19.52	13,988	21.01	5,989	8.99
2001	63,495	34,263	53.96	9,985	15.73	13,919	21.92	5,328	8.39
2002	52,020	27,053	52	9,880	18.99	10,865	20.89	4,222	8.12
2003	47,947	24,413	50.92	9,592	20.01	10,001	20.86	3,941	8.22
2004	67,247	34,487	51.28	11,986	17.82	14,775	21.97	5,999	8.92
2005	105,383	36,957	35.07	22,120	20.99	34,895	33.11	11,411	10.83
2006	60,199	26,660	44.29	11,937	19.83	17,346	28.81	4,256	7.07
2007	116,967	43,038	36.79	20,056	17.15	40,599	34.71	13,274	11.35

	Ended during the first year n.	Employment		Unemployment		Studies		Other outside labour market	
		n.	%	n.	%	n.	%	n.	%
1991	14,851	7,295	49.12	2,100	14.14	4,131	27.82	1,325	8.92
1992	12,369	4,963	40.12	3,267	26.41	3,274	26.47	865	6.99
1993	11,497	3,981	34.63	3,821	33.23	2,850	24.79	845	7.35
1994	9,191	2,823	30.71	3,672	39.95	2,096	22.80	600	6.53
1995	15,852	4,941	31.17	5,361	33.82	4,478	28.25	1,072	6.76
1996	15,278	4,438	29.05	4,974	32.56	4,661	30.51	1,205	7.89
1997	18,633	5,809	31.18	6,002	32.21	5,237	28.11	1,585	8.51
1998	20,412	5,773	28.28	5,344	26.18	7,492	36.7	1,803	8.83
1999	19,105	7,658	40.08	5,135	26.88	4,802	25.13	1,510	7.9
2000	25,543	11,679	45.72	5,401	21.14	6,333	24.79	2,130	8.34
2001	25,741	12,741	49.5	4,485	17.42	6,484	25.19	2,031	7.89
2002	25,115	12,743	50.74	5,165	20.57	5,444	21.68	1,763	7.02
2003	23,551	11,459	48.66	5,141	21.83	5,271	22.83	1,680	7.13
2004	32,157	15,395	47.87	6,341	19.72	8,032	24.98	2,389	7.43
2005	62,007	17,997	29.02	13,395	21.60	25,176	40.60	5,439	8.77
2006	37,256	14,770	39.64	7,718	20.72	12,552	33.69	2,216	5.95
2007	59,121	17,038	30.39	10,744	18.17	24,918	42.15	5,490	9.29

APPENDIX 7: TENURES BY FAMILY TYPE

	Started tenures	Single household		Single parent		Couple		Couple with children	
	n.	n.	%	n.	%	n.	%	n.	%
1991	33,687	5,913	17.55	2,830	8.40	7,107	21.10	17,837	52.95
1992	26,952	4,829	17.92	2,107	7.82	5,780	21.45	14,236	52.82
1993	27,060	3,386	21.51	2,300	8.50	5,932	21.92	15,442	57.07
1994	28,145	5,335	18.95	1,924	6.84	6,493	23.07	14,394	51.14
1995	41,896	8,521	20.34	3,101	7.40	9,612	22.94	20,662	49.32
1996	40,280	8,536	21.19	3,059	7.59	9,096	22.58	19,589	48.63
1997	51,409	11,704	22.77	3,935	7.65	11,596	22.56	24,174	47.02
1998	68,187	15,188	22.27	5,701	8.36	14,937	21.91	32,361	47.46
1999	61,053	14,458	23.68	5,055	8.28	13,728	22.49	27,812	45.55
2000	67,146	16,402	24.43	5,438	8.1	15,587	23.21	29,719	44.26
2001	64,615	16,102	24.92	5,288	8.18	15,331	23.73	27,894	43.17
2002	52,773	13,481	25.55	4,261	8.07	12,564	23.81	22,467	42.57
2003	48,701	12,978	26.65	3,959	8.13	11,691	24.01	20,073	41.22
2004	68,428	18,482	27.01	5,493	8.03	16,741	24.47	27,712	40.50
2005	106,617	31,485	29.53	8,906	8.35	25,146	23.59	41,080	38.53
2006	60,199	19,362	32.16	4,249	7.06	15,684	26.05	20,904	34.72
2007	118,889	36,642	30.82	10,174	8.56	27,681	23.28	44,392	37.34

	Ended during the first year	Single household		Single parent		Couple		Couple with children	
	n.	n.	%	n.	%	n.	%	n.	%
1991	15,030	2,625	17.47	1,345	8.95	2,837	18.88	8,223	54.71
1992	12,415	2,230	17.96	1,074	8.65	2,407	19.39	6,704	54.00
1993	11,562	1,519	13.14	1,069	9.25	2,344	20.27	6,630	57.34
1994	9,209	1,864	20.24	632	6.86	2,103	22.84	4,610	50.06
1995	15,859	3,267	20.60	1,275	8.04	3,396	21.41	7,921	49.95
1996	15,369	3,357	21.84	1,244	8.09	3,289	21.40	7,479	48.66
1997	18,686	4,424	23.68	1,526	8.17	4,042	21.63	8,694	46.53
1998	20,911	4,569	21.85	2,004	9.58	4,116	19.68	10,222	48.88
1999	19,455	4,653	23.92	1,804	9.27	3,921	20.15	9,077	46.66
2000	25,654	6,710	26.16	2,311	9.01	5,633	21.96	11,000	42.88
2001	26,154	6,903	26.39	2,385	9.12	5,743	21.96	11,123	42.53
2002	25,463	6,850	26.9	2,140	8.4	5,664	22.24	10,809	42.45
2003	23,898	6,673	27.92	2,000	8.37	5,451	22.81	9,774	40.90
2004	32,922	9,184	27.90	2,954	8.97	7,568	22.99	13,216	40.14
2005	62,457	19,602	31.38	5,582	8.94	13,919	22.29	23,354	37.39
2006	37,256	12,711	34.12	2,704	7.26	9,339	25.07	12,502	33.56
2007	59,750	19,725	33.01	5,406	9.05	12,901	21.59	21,718	36.35

APPENDIX 8: TENURES BY TYPE OF THE HOUSING REGION

	Started tenures n.	City		Densely inhabited rural area		Sparsely inhabited rural area	
		n.	%	n.	%	n.	%
1991	33,683	23,468	69.67	5,290	15.71	4,925	14.62
1992	26,950	18,574	68.92	4,195	15.57	4,181	15.51
1993	27,057	18,570	68.63	4,277	15.81	4,210	15.56
1994	28,142	19,515	69.34	4,495	15.97	4,132	14.68
1995	41,886	29,692	70.89	6,481	15.47	5,713	13.64
1996	40,276	29,111	72.28	5,788	14.37	5,377	13.35
1997	51,400	36,343	70.71	7,762	15.1	7,295	14.19
1998	68,168	48,750	71.51	10,045	14.74	9,373	13.75
1999	61,040	43,486	71.24	8,965	14.69	8,589	14.07
2000	67,130	48,163	71.75	9,482	14.12	9,485	14.13
2001	64,597	47,361	73.32	8,897	13.77	8,339	12.91
2002	52,757	36,983	70.1	7,802	14.79	7,972	15.11
2003	48,687	34,025	69.89	7,162	14.71	7,500	15.40
2004	68,407	48,926	71.52	9,655	14.11	9,826	14.36
2005	106,591	76,656	71.92	14,774	13.86	15,161	14.22
2006	60,187	43,764	72.71	7,980	13.26	8,443	14.03
2007	118,862	86,683	72.93	16,062	13.51	16,117	13.56

	Ended during the first year n.	City		Densely inhabited rural area		Sparsely inhabited rural area	
		n.	%	n.	%	n.	%
1991	15,029	9,992	66.48	2,465	16.40	2,572	17.11
1992	12,415	8,108	65.31	2,053	16.54	2,254	18.16
1993	11,561	7,509	64.95	1,952	16.88	2,100	18.16
1994	9,207	6,214	67.49	1,498	16.27	1,495	16.24
1995	15,854	10,642	67.13	2,594	16.36	2,618	16.51
1996	15,369	10,536	68.55	2,410	15.68	2,423	15.77
1997	18,684	12,695	67.95	2,961	15.85	3,028	16.21
1998	20,908	14,454	69.13	3,287	15.72	3,167	15.15
1999	19,451	13,194	67.83	3,105	15.96	3,152	16.2
2000	25,646	18,047	70.37	3,692	14.4	3,907	15.23
2001	26,145	18,464	70.62	3,834	14.66	3,847	14.71
2002	25,457	17,171	67.45	3,927	15.43	4,359	17.12
2003	23,888	16,084	67.33	3,673	15.38	4,131	17.29
2004	32,910	22,622	68.74	4,800	17.59	5,488	16.68
2005	62,441	44,679	71.55	8,594	13.76	9,168	14.68
2006	37,247	26,888	72.19	4,865	13.06	8,443	14.03
2007	59,738	43,315	72.51	8,000	13.39	8,423	14.10

APPENDIX 9: TENURES BY INDUSTRIAL BRANCH

		1991	1992	1993	1994	1995	1996	1997	1998	1999
Started tenures	n.	33,602	26,782	26,896	27,911	41,451	40,076	51,038	67,799	60,623
Basic industry	n.	11,397	8,832	9,130	10,540	14,947	13,733	18,352	21,455	19,120
	%	33.9	33.0	34.0	37.8	36.1	34.3	36.0	31.7	31.5
High technology industry	n.	1,318	1,527	1,481	2,017	2,955	2,284	3,109	3,719	3,333
	%	3.9	5.7	5.5	7.2	7.1	5.7	6.1	5.5	5.5
Basic services	n.	10,922	8,896	8,622	7,882	11,994	12,284	14,997	20,293	17,711
	%	32.5	33.2	32.1	28.2	28.9	30.7	29.4	29.9	29.2
New services	n.	6,063	4,323	4,363	4,609	7,073	7,454	9,266	14,331	12,930
	%	18.0	16.1	16.2	16.5	17.1	18.6	18.2	21.1	21.3
Privately produced public services	n.	2,791	2,180	2,198	2,017	3,281	3,335	3,936	6,248	5,673
	%	8.3	8.1	8.2	7.2	7.9	8.3	7.7	9.2	9.4
Primary production	n.	1,111	1,024	1,102	846	1,201	986	1,378	1,753	1,856
	%	3.3	3.8	4.1	3.0	2.9	2.5	2.7	2.6	3.1

		2000	2001	2002	2003	2004	2005	2006	2007
Started tenures	n.	66,461	63,919	52,070	47,742	65,924	73,059	40,844	87,613
Basic industry	n.	22,295	19,609	18,774	17,230	20,197	19,747	12,959	22,793
	%	33.6	30.7	36.1	36.1	30.6	27.0	31.7	26.0
High technology industry	n.	3,311	2,942	1,771	1,489	2,445	1,428	753	2,873
	%	5.0	4.6	3.4	3.1	3.7	2.0	1.8	3.3
Basic services	n.	18,532	18,767	14,264	12,779	19,235	22,228	12,274	23,371
	%	27.9	29.4	27.4	26.8	29.2	30.4	30.1	26.7
New services	n.	14,572	15,471	10,524	9,752	14,770	17,111	9,469	27,066
	%	21.9	24.2	20.2	20.4	22.4	23.4	23.2	30.9
Privately produced public services	n.	5,595	5,775	4,743	4,748	7,314	9,841	3,914	8,676
	%	8.4	9.0	9.1	10.0	11.1	13.5	9.6	9.9
Primary production	n.	2,156	1,355	1,994	1,744	1,963	2,704	1,475	2,834
	%	3.2	2.1	3.8	3.7	3.0	3.7	3.6	3.2

		1991	1992	1993	1994	1995	1996	1997	1998	1999
Ended during the first year	n.	15,017	12,410	11,557	9,206	15,850	15,365	18,685	20,910	19,452
Basic industry	n.	6,319	4,786	4,433	3,789	6,542	6,122	7,862	8,102	7,663
	%	42.08	38.57	38.36	41.16	41.27	39.84	42.08	38.75	39.39
High technology industry	n.	468	502	461	425	648	582	814	925	719
	%	3.12	4.05	3.99	4.62	4.09	3.79	4.36	4.42	3.7
Basic services	n.	3,844	3,542	3,174	2,196	3,775	3,830	4,426	4,840	4,445
	%	26.6	28.54	27.46	23.85	23.82	24.93	23.69	23.15	22.85
New services	n.	2,570	1,838	1,766	1,501	2,607	2,692	3,184	4,116	3,637
	%	17.11	14.81	15.28	16.30	16.45	17.52	17.04	19.68	18.7
Privately produced public services	n.	1,055	960	980	831	1,533	1,532	1,566	2,085	1,974
	%	7.03	7.74	8.48	9.03	9.67	9.97	8.38	9.97	10.15
Primary production	n.	761	782	743	464	745	607	833	842	1,014
	%	5.07	6.30	6.43	5.04	4.70	3.95	4.46	4.03	5.21

		2000	2001	2002	2003	2004	2005	2006	2007
Ended during the first year	n.	25,636	26,143	25,459	23,857	31,487	31,114	19,122	31,481
Basic industry	n.	9,636	9,538	10,506	9,898	11,301	8,508	6,394	8,556
	%	37.59	36.48	41.27	41.49	35.89	27.34	33.44	27.18
High technology industry	n.	931	954	706	583	826	386	214	796
	%	3.63	3.65	2.77	2.44	2.62	1.24	1.12	2.53
Basic services	n.	6,413	6,193	5,229	4,817	7,456	8,480	5,040	7,552
	%	25.02	23.69	20.54	20.19	23.68	27.25	26.36	23.99
New services	n.	5,394	6,206	5,200	5,009	7,028	7,795	4,573	10,485
	%	21.04	23.74	20.42	21.00	22.32	25.05	23.91	33.31
Privately produced public services	n.	2,318	2,340	2,342	2,246	3,380	4,428	1,889	2,651
	%	9.04	8.95	9.2	9.41	10.73	14.13	9.88	8.42
Primary production	n.	944	912	1,476	1,304	1,496	1,517	1,012	1,441
	%	3.68	3.49	5.8	5.47	4.75	4.88	5.29	4.58

APPENDIX 10: TENURES BY ESTABLISHMENT ANNUAL CAPITAL TURNOVER

	Started tenures n.	<= € 50,000		€ 50,000– 500,000		€ 500,000– 5,000,000		more than € 5,000,000	
		n.	%	n.	%	n.	%	n.	%
1991	33,687	4,188	12.43	5,900	17.51	12,992	38.57	10,607	31.49
1992	26,952	3,704	13.74	5,485	20.35	9,737	36.13	8,026	29.78
1993	27,060	3,764	13.91	5,511	20.37	9,679	35.77	8,106	29.96
1994	28,146	3,685	13.09	5,841	20.75	9,813	34.86	8,807	31.29
1995	41,896	5,465	13.04	8,096	19.32	14,945	35.67	13,390	31.96
1996	40,280	5,298	13.15	7,504	18.63	14,790	36.72	12,688	31.5
1997	51,409	6,333	12.32	9,991	19.43	18,285	35.57	16,800	32.68
1998	68,187	10,193	14.95	13,635	20	23,600	34.61	20,759	30.44
1999	61,053	9,451	15.48	12,051	19.74	21,507	35.23	18,044	29.55
2000	67,146	9,225	13.74	12,340	18.38	24,007	35.75	21,574	32.13
2001	64,615	8,881	13.74	11,744	18.18	23,187	35.88	20,803	32.2
2002	52,773	7,521	14.25	10,372	19.65	19,731	37.39	15,149	28.71
2003	48,701	7,080	14.54	9,603	19.72	18,539	38.07	13,479	27.68
2004	68,428	10,675	15.60	14,021	20.49	25,474	37.23	18,258	26.68
2005	106,617	17,304	16.23	19,024	17.84	35,774	33.55	34,515	32.37
2006	60,199	8,698	14.45	9,361	15.55	22,145	36.79	19,995	33.21
2007	118,889	20,227	17.01	20,461	17.21	41,978	35.31	36,223	30.47

	Ended during the first year n.	<=€ 50,000		€ 50,000– 500,000		€ 500,000– 5,000,000		>€ 5,000,000	
		n.	%	n.	%	n.	%	n.	%
1991	15,030	1,932	12.85	2,212	14.72	5,860	38.99	5,026	33.44
1992	12,415	1,891	15.23	2,267	18.26	4,539	36.56	3,718	29.95
1993	11,562	1,927	16.67	2,064	17.85	4,196	36.29	3,375	29.19
1994	9,209	1,454	15.79	1,889	20.51	3,232	35.10	2,634	28.60
1995	15,859	2,325	14.66	2,997	18.90	5,871	37.02	4,666	29.42
1996	15,369	2,320	15.1	2,738	17.82	5,758	37.47	4,553	29.62
1997	18,686	2,538	13.58	3,566	19.08	6,871	36.77	5,711	30.56
1998	20,911	3,262	15.6	4,107	19.64	7,466	35.7	6,076	29.06
1999	19,455	3,190	16.4	3,772	19.39	7,063	36.3	5,430	27.91
2000	25,654	3,460	13.49	4,483	17.47	9,622	37.51	8,089	31.53
2001	26,154	3,486	13.33	4,752	18.17	9,997	38.22	7,919	30.28
2002	25,463	3,820	15	5,473	21.49	9,681	38.02	6,489	25.48
2003	23,898	3,568	14.93	5,003	20.93	9,299	38.91	6,028	25.22
2004	32,922	5,161	15.68	6,790	20.62	12,857	39.05	8,114	24.65
2005	62,457	10,127	16.21	10,566	16.92	21,412	34.28	20,352	32.59
2006	37,256	5,673	15.23	5,793	15.55	13,508	36.26	12,282	32.97
2007	59,750	9,711	16.25	9,318	15.59	21,386	35.79	19,335	32.36

APPENDIX 11: TENURES BY AMOUNT OF PERSONNEL

	Started tenures n.	<50		50–199		200–499		>499	
		n.	%	n.	%	n.	%	n.	%
1991	33,687	22,350	66.35	6,228	18.49	2,489	7.39	2,620	7.78
1992	26,952	18,406	68.29	4,527	16.80	2,089	7.75	1,930	7.16
1993	27,060	18,475	68.27	4,318	15.96	1,740	6.43	2,527	9.34
1994	28,146	19,142	68.01	4,569	16.23	2,298	8.16	2,137	7.59
1995	41,896	28,271	67.48	7,328	17.49	3,113	7.43	3,184	7.60
1996	40,280	27,864	69.18	6,935	17.22	2,707	6.72	2,774	6.89
1997	51,409	34,807	67.71	8,722	16.97	3,581	6.97	4,299	8.36
1998	68,187	47,519	69.69	11,438	16.77	3,822	5.61	5,408	7.93
1999	61,053	42,493	69.6	10,282	16.84	3,484	5.71	4,794	7.85
2000	67,146	45,892	68.35	11,649	17.35	4,614	6.87	4,991	7.43
2001	64,615	43,894	67.93	11,398	17.64	4,371	6.76	4,952	7.66
2002	52,773	36,589	69.33	9,371	17.76	3,152	5.97	3,661	6.94
2003	48,701	34,286	70.40	8,533	17.52	2,897	5.95	2,985	6.13
2004	68,428	48,834	71.37	11,598	16.95	3,758	5.49	4,238	6.19
2005	106,617	69,698	65.37	18,620	17.46	7,344	6.89	10,955	10.28
2006	60,199	39,433	65.50	11,474	19.06	4,925	8.18	4,367	7.25
2007	118,889	80,948	68.09	20,824	17.52	8,681	7.30	8,436	7.10

	Ended during the first year n.	<50		50–199		200–499		>499	
		n.	%	n.	%	n.	%	n.	%
1991	15,030	9,668	64.32	2,836	18.87	1,212	8.06	1,314	8.74
1992	12,415	8,460	68.14	2,122	17.09	930	7.27	903	7.27
1993	11,562	7,895	68.28	1,949	16.86	754	6.52	964	8.34
1994	9,209	6,447	70.01	1,496	16.24	669	7.26	597	6.48
1995	15,859	11,121	70.12	2,635	16.62	1,057	6.66	1,046	6.60
1996	15,369	10,698	69.61	2,746	17.87	948	6.17	977	6.36
1997	18,686	12,767	68.32	3,257	17.43	1,276	6.83	1,386	7.42
1998	20,911	14,609	69.86	3,728	17.83	1,135	5.43	1,439	6.88
1999	19,455	13,707	70.45	3,399	17.47	1,089	5.6	1,260	6.48
2000	25,654	17,307	67.46	4,733	18.45	1,860	7.25	1,754	6.84
2001	26,154	17,870	68.33	4,792	18.32	1,724	6.59	1,768	6.76
2002	25,463	18,276	71.77	4,381	17.21	1,342	5.27	1,464	5.75
2003	23,898	17,170	71.85	4,150	17.37	1,403	5.87	1,175	4.92
2004	32,922	23,845	72.43	5,696	17.30	1,742	5.29	1,639	4.98
2005	62,457	40,180	64.33	11,362	18.19	4,834	7.74	6,081	9.74
2006	37,256	24,391	65.47	7,014	18.83	3,147	8.45	2,704	7.26
2007	59,750	38,771	64.89	11,459	19.18	5,066	8.48	4,454	7.45

APPENDIX 12: TENURES BY ESTABLISHMENT ECONOMIC SITUATION

	Started tenures n.	Stable		Growing		Diminishing		Fluctuating	
		n.	%	n.	%	n.	%	n.	%
1991	28,743	14,326	49.84	3,898	13.56	7,419	25.81	3,100	10.79
1992	22,985	11,371	49.47	5,129	22.31	3,803	16.55	2,682	11.67
1993	23,654	11,653	49.26	6,410	27.10	2,992	12.65	2,599	10.99
1994	25,582	12,661	49.49	7,363	28.78	2,969	11.61	2,589	10.12
1995	38,153	20,880	54.73	9,410	24.66	3,816	10.00	4,047	10.61
1996	36,920	20,590	55.77	9,858	26.7	3,589	9.72	2,883	7.81
1997	47,309	26,665	56.36	11,173	23.62	5,622	11.88	3,849	8.14
1998	61,931	35,365	57.1	14,498	23.41	7,046	11.38	5,022	8.11
1999	55,566	31,897	57.4	13,097	23.57	6,056	10.9	4,516	8.13
2000	61,776	37,631	60.92	11,403	18.46	8,063	13.05	4,679	7.57
2001	59,365	37,812	63.69	10,496	17.68	7,350	12.38	3,707	6.24
2002	49,019	31,306	63.87	9,176	18.72	5,621	11.47	2,916	5.95
2003	44,708	28,210	63.10	8,873	19.85	4,549	10.17	3,076	6.88
2004	63,213	38,466	60.85	13,682	21.64	6,784	10.73	4,281	6.77
2005	96,727	58,580	60.56	21,298	22.02	10,097	10.44	6,752	6.98
2006	55,275	34,951	63.23	10,166	18.39	7,102	12.85	3,056	5.53
2007	107,831	60,341	55.96	16,602	15.40	22,093	20.49	8,795	8.16

	Ended during the first year n.	Stable		Growing		Diminishing		Fluctuating	
		n.	%	n.	%	n.	%	n.	%
1991	12,284	5,837	47.52	1,362	11.09	3,554	28.93	1,531	12.46
1992	10,045	5,107	50.84	1,688	16.80	1,932	19.23	1,318	13.12
1993	9,531	4,918	51.60	3,155	22.61	1,338	14.04	1,120	11.75
1994	7,956	3,991	50.16	1,948	24.48	1,110	13.95	907	11.40
1995	13,914	7,571	54.41	3,102	22.29	1,498	10.77	1,743	12.53
1996	13,684	7,772	56.8	3,221	23.54	1,479	10.81	1,212	8.86
1997	16,694	9,592	57.46	3,577	21.43	2,029	12.15	1,496	8.96
1998	18,527	10,863	58.63	3,938	21.26	2,129	11.49	1,597	8.62
1999	17,196	10,117	58.83	3,592	20.89	2,026	11.78	1,461	8.5
2000	22,862	14,073	61.56	3,645	15.94	3,247	14.2	1,897	8.3
2001	23,197	14,732	63.51	3,753	16.18	3,130	13.49	1,582	6.82
2002	23,070	14,457	62.67	4,149	17.98	2,831	12.27	1,633	7.08
2003	21,380	13,299	62.20	4,115	19.25	2,270	10.62	1,696	7.93
2004	29,714	18,035	60.70	6,101	20.53	3,330	11.21	2,248	7.57
2005	56,049	34,362	61.31	11,613	20.72	6,193	11.05	3,881	6.92
2006	34,102	21,580	63.28	6,175	18.11	4,416	12.95	1,931	5.66
2007	53,316	29,301	54.96	7,008	13.14	12,470	23.39	4,537	8.51

APPENDIX 13: TENURES BY TYPE OF OWNERSHIP

	Started tenures n.	Finnish		Foreign	
		n.	%	n.	%
1991	33,687	33,017	98.0	670	2.0
1992	26,952	26,235	97.8	583	2.2
1993	27,060	26,377	97.5	683	2.5
1994	28,146	27,200	96.6	946	3.4
1995	41,896	40,096	95.7	1,800	4.3
1996	40,280	38,092	94.6	2,188	5.4
1997	51,409	47,249	91.9	4,160	8.1
1998	68,187	60,647	88.9	7,540	11.1
1999	61,053	55,828	91.4	5,225	8.6
2000	67,146	60,836	90.6	6,310	9.4
2001	64,615	57,867	89.6	6,748	10.4
2002	52,773	47,931	90.8	4,842	9.2
2003	48,701	43,723	89.78	4,978	10.22
2004	68,428	61,640	90.08	6,788	9.92
2005	106,617	96,055	90.09	10,562	9.91
2006	60,199	53,397	88.70	6,802	11.30
2007	118,889	105,261	88.54	13,628	11.46

	Ended during the first year n.	Finnish		Foreign	
		n.	%	n.	%
1991	15,030	14,861	98.9	169	1.1
1992	12,415	12,235	98.6	180	1.5
1993	11,562	11,361	98.3	201	1.7
1994	9,209	8,969	97.4	240	2.6
1995	15,859	15,334	96.7	525	3.3
1996	15,369	14,758	96.0	611	4.0
1997	18,686	17,465	93.5	1,221	6.5
1998	20,911	18,912	90.4	1,999	9.6
1999	19,455	18,079	92.9	1,376	7.1
2000	25,654	23,554	91.8	2,100	8.2
2001	26,154	23,929	91.5	2,225	8.5
2002	25,463	23,518	92.4	1,945	7.6
2003	23,898	21,820	91.30	2,078	8.70
2004	32,922	30,170	91.64	2,752	8.36
2005	62,457	56,345	90.21	6,112	9.79
2006	37,256	33,320	89.44	3,936	10.56
2007	59,750	52,945	88.61	6,805	11.39

APPENDIX 14: TENURES BY SALARY IN RELATION TO OPEN LABOUR MARKET SALARY

	Started tenures n.	In medium		Higher than medium		Lower than medium	
		n.	%	n.	%	n.	%
1991	33,687	11,839	35.14	4,338	12.88	17,510	51.98
1992	26,952	9,432	35.00	3,593	13.33	13,927	51.67
1993	27,060	9,846	36.39	3,234	11.95	13,980	51.66
1994	28,146	10,185	36.19	3,669	13.04	14,292	50.78
1995	41,896	15,066	35.96	5,108	12.19	21,722	51.85
1996	40,280	14,540	36.1	4,494	11.16	21,246	52.75
1997	51,409	18,331	35.66	6,173	12.01	26,905	52.34
1998	68,187	22,558	33.08	7,508	11.01	38,121	55.91
1999	61,053	19,575	32.06	7,827	12.82	33,651	55.12
2000	67,146	23,339	34.76	9,412	14.02	34,395	51.22
2001	64,615	21,444	33.19	9,600	14.86	33,571	51.96
2002	52,773	17,608	33.37	8,673	16.43	26,492	50.2
2003	48,701	16,313	33.50	7,655	15.72	24,733	50.79
2004	68,428	22,546	32.95	8,303	12.13	37,579	54.92
2005	106,617	34,524	32.38	10,993	10.31	61,100	57.31
2006	60,199	20,653	34.31	6,472	10.75	33,074	54.94
2007	118,889	35,566	29.92	10,979	9.23	72,344	60.85

	Ended during the first year n.	In medium		Higher than medium		Lower than medium	
		n.	%	n.	%	n.	%
1991	15,030	5,699	37.92	3,107	20.67	6,224	41.41
1992	12,415	4,457	35.90	2,607	21.00	5,351	43.10
1993	11,562	4,208	36.40	2,230	19.29	5,124	44.32
1994	9,209	3,195	34.69	2,472	26.84	3,542	38.46
1995	15,859	5,958	37.57	3,855	24.31	6,046	38.12
1996	15,369	5,894	38.35	3,179	20.68	6,296	40.97
1997	18,686	7,074	37.86	4,395	23.52	7,217	38.62
1998	20,911	7,236	34.6	3,623	17.33	10,052	48.07
1999	19,455	6,591	33.88	4,661	23.96	8,203	42.16
2000	25,654	9,594	37.4	6,319	24.63	9,741	37.97
2001	26,154	9,069	34.68	6,712	25.66	10,373	39.66
2002	25,463	9,011	35.39	7,129	28	9,323	36.61
2003	23,898	8,596	35.97	6,366	26.64	8,936	37.39
2004	32,922	11,456	34.80	5,850	17.77	15,616	47.43
2005	62,457	20,971	33.58	7,426	11.89	34,060	54.53
2006	37,256	13,919	37.36	5,145	13.81	18,192	48.83
2007	59,750	19,588	32.78	6,918	11.58	33,244	55.64

APPENDIX 15: TENURES BY TRANSITION AFTER TENURE

	Started tenures n.	Transition to employment		Transition to unemployment		Transition to other than pension outside labour market	
		n.	%	n.	%	n.	%
1991	28,927	3,844	13.29	7,992	27.63	17,091	59.08
1992	22,806	2,994	13.13	6,375	27.95	13,437	58.92
1993	22,249	3,501	15.74	5,907	26.55	12,841	57.71
1994	21,936	4,246	19.36	5,314	24.23	12,376	56.42
1995	33,159	5,980	18.03	8,831	26.63	18,348	55.33
1996	31,557	6,002	19.02	7,769	24.62	17,786	56.36
1997	39,689	7,522	18.95	8,353	21.05	23,814	60.00
1998	51,888	8,392	16.17	9,186	17.70	34,310	66.12
1999	46,339	7,692	16.60	8,236	17.77	30,411	65.63
2000	52,378	8,322	15.89	9,338	17.83	34,718	66.28
2001	48,692	7,856	16.13	8,182	16.80	32,654	67.06
2002	42,318	5,490	12.97	6,656	15.73	30,172	71.30
2003	38,914	5,242	13.47	5,684	14.61	27,988	71.92
2004	52,031	8,633	16.59	5,786	11.12	37,612	72.29
2005	83,411	9,836	11.79	11,469	13.75	62,106	74.46
2006	46,062	5,554	12.06	4,945	10.74	35,563	77.21
2007	70,806	7,537	10.64	9,193	12.98	54,076	76.37

	Ended during the first year n.	Transition to employment		Transition to unemployment		Transition to other than pension outside labour market	
		n.	%	n.	%	n.	%
1991	15,030	1,226	8.16	4,350	28.94	9,454	62.90
1992	12,415	903	7.27	3,872	31.19	7,640	61.54
1993	11,562	993	8.59	3,614	31.26	6,955	60.15
1994	9,209	1,320	14.33	2,608	28.32	5,281	57.35
1995	15,859	1,640	10.34	8,511	33.49	8,908	56.17
1996	15,369	1,837	11.95	4,996	32.51	8,536	55.54
1997	18,686	2,513	13.45	4,882	26.13	11,291	60.42
1998	20,911	1,844	8.82	4,416	21.12	14,651	70.06
1999	19,455	1,659	8.53	4,081	20.98	13,715	70.50
2000	25,654	2,890	11.27	4,858	18.94	17,654	69.80
2001	26,154	2,537	9.70	5,120	19.58	18,497	70.72
2002	25,386	1,703	6.71	4,515	17.79	19,168	75.51
2003	23,898	1,644	6.88	3,884	16.25	18,370	76.87
2004	32,922	3,405	10.34	3,309	10.05	26,208	79.61
2005	62,457	4,992	7.99	8,805	14.10	49,660	77.91
2006	37,256	3,433	9.21	3,974	10.67	29,849	80.12
2007	59,750	5,321	8.91	7,744	12.96	46,685	78.13

APPENDIX 16: COX PROPORTIONAL HAZARDS REGRESSION MODEL, TABLE 1/9

Cox Proportional Hazard regression		1991 n. 27,777				1992 n. 22,418			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.031	0.035	1.098	0.002	1.071	0.000	1.148	0.000
Age	25-34	0.681	0.000	0.649	0.000	0.681	0.000	0.656	0.000
	35-44	0.558	0.000	0.508	0.000	0.557	0.000	0.523	0.000
	more than 44	0.530	0.000	0.504	0.000	0.591	0.000	0.553	0.000
Educational level	secondary	0.998	0.911	0.996	0.869	1.026	0.092	1.062	0.032
	higher	0.513	0.000	0.608	0.000	0.627	0.000	0.791	0.000
Status before employment	unemployment	1.161	0.000	1.078	0.116	1.163	0.000	1.074	0.253
	studies	1.152	0.000	1.347	0.000	1.122	0.000	1.314	0.000
	other	0.849	0.000	1.012	0.750	0.860	0.000	0.979	0.664
Monthly salary	€ 1,000-2,000	1.084	0.000	1.132	0.002	1.106	0.000	1.193	0.000
	€ 2,000-3,000	1.582	0.000	1.566	0.000	1.545	0.000	1.549	0.000
	>€ 3,000	2.593	0.000	2.302	0.000	2.256	0.000	2.315	0.000
Salary increment	Yes	0.673	0.000	0.656	0.000	0.683	0.000	0.689	0.000
Family type	single parent	1.099	0.000	1.041	0.382	1.096	0.003	1.115	0.047
	couple	0.906	0.000	0.904	0.004	0.923	0.001	0.922	0.050
	couple with children	1.028	0.115	0.993	0.803	0.996	0.830	0.994	0.931
Housing region	densely inhabited rural	0.990	0.538	0.962	0.343	1.028	0.233	1.008	0.820
	sparsely inhabited rural	1.079	0.000	1.048	0.275	1.074	0.003	1.013	0.855
Industrial branch	high-technology	0.753	0.000			0.679	0.000		
	basic services	0.813	0.000			0.900	0.000		
	new services	0.845	0.000			0.917	0.000		
	public services	0.725	0.000			0.827	0.000		
	primary production	1.632	0.000			1.578	0.000		
Annual capital turnover	€ 50,000-500,000	0.885	0.000			0.851	0.000		
	€ 500,000-5 million	0.898	0.000			0.855	0.000		
	>€ 5 million	0.831	0.000			0.775	0.000		
Ownership	foreign	0.751	0.000			0.727	0.000		
Establishment size	50-199	1.002	0.851			0.904	0.000		
	200-499	0.990	0.762			0.899	0.003		
	>499	0.986	0.690			0.925	0.060		
Economic situation	growing	0.876	0.000			0.852	0.000		
	diminishing	1.234	0.000			1.275	0.000		
	fluctuating	1.162	0.000			1.168	0.000		
Open labour market salary level	higher than	1.729	0.000	1.670	0.000	1.632	0.000	1.895	0.000
	lower than	1.024	0.245	0.969	0.433	1.074	0.007	0.960	0.299
Number of establishments		1.000	0.000	0.995	0.000	1.000	0.000	0.999	0.000
GDP %		0.999	0.000	0.996	0.368	0.999	0.001	1.000	0.707

APPENDIX 16: COX PROPORTIONAL HAZARDS REGRESSION MODEL. TABLE 2/9

Cox Proportional Hazard regression Table continued		1993 n. 23,327				1994 n. 24,961			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.044	0.008	1.086	0.016	1.049	0.005	1.203	0.000
Age	25-34	0.687	0.000	0.639	0.000	0.758	0.000	0.706	0.000
	35-44	0.554	0.000	0.525	0.000	0.625	0.000	0.561	0.000
	more than 44	0.585	0.000	0.530	0.000	0.687	0.000	0.614	0.000
Educational level	secondary	0.990	0.439	1.015	0.624	0.932	0.000	1.019	0.534
	higher	0.621	0.000	0.800	0.000	0.597	0.000	0.741	0.000
Status before employment	unemployment	1.140	0.000	1.107	0.011	0.989	0.853	1.032	0.369
	studies	1.188	0.000	1.420	0.000	1.106	0.000	1.297	0.000
	other	0.811	0.000	0.902	0.045	0.786	0.000	0.934	0.183
Monthly salary	€ 1,000-2,000	1.070	0.008	1.067	0.192	0.936	0.007	0.915	0.047
	€ 2,000-3,000	1.406	0.000	1.368	0.000	1.148	0.000	1.159	0.017
	>€ 3,000	2.246	0.000	2.261	0.000	1.664	0.000	1.747	0.000
Salary increment	Yes	0.734	0.000	0.709	0.000	0.839	0.000	0.789	0.000
Family type	single parent	0.981	0.510	0.987	0.795	0.991	0.825	0.980	0.713
	couple	0.883	0.000	0.922	0.072	0.898	0.000	0.935	0.073
	couple with children	0.909	0.000	0.917	0.033	0.875	0.000	0.889	0.001
Housing region	densely inhabited rural	1.008	0.767	0.977	0.638	0.985	0.472	0.998	0.959
	sparsely inhabited rural	1.069	0.003	1.108	0.041	1.028	0.214	1.055	0.283
Industrial branch	high-technology	0.702	0.000			0.665	0.000		
	basic services	0.873	0.000			0.804	0.000		
	new services	0.948	0.000			0.893	0.026		
	public services	1.078	0.000			0.991	0.036		
	primary production	1.554	0.000			1.657	0.000		
Annual capital turnover	€ 50,000-500,000	1.051	0.000			1.043	0.098		
	€ 500,000-5 million	0.967	0.000			1.011	0.288		
	>€ 5 million	0.898	0.000			0.925	0.001		
Ownership	foreign	0.840	0.000			0.861	0.000		
Establishment size	50-199	0.974	0.371			0.929	0.003		
	200-499	0.900	0.004			0.838	0.000		
	>499	0.918	0.018			0.846	0.000		
Economic situation	growing	0.900	0.000			0.898	0.000		
	diminishing	1.187	0.000			1.280	0.000		
	fluctuating	1.127	0.000			1.225	0.000		
Open labour market salary level	higher than	1.321	0.000	1.489	0.000	1.598	0.000	1.758	0.000
	lower than	1.025	0.297	0.968	0.418	1.012	0.544	0.978	0.601
Number of establishments		1.000	0.000	1.000	0.000	1.000	0.000	1.000	0.006
GDP %		1.000	0.051	0.999	0.115	1.000	0.351	1.000	0.664

APPENDIX 16: COX PROPORTIONAL HAZARDS REGRESSION MODEL. TABLE 3/9

Cox Proportional Hazard regression Table continued		1995 n. 37,392				1996 n. 36,448			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.094	0.000	1.107	0.000	1.071	0.000	1.088	0.001
Age	25-34	0.729	0.000	0.691	0.000	0.746	0.000	0.698	0.000
	35-44	0.608	0.000	0.550	0.000	0.632	0.000	0.568	0.000
	more than 44	0.648	0.000	0.565	0.000	0.677	0.000	0.565	0.000
Educational level	secondary	0.958	0.001	0.998	0.940	0.949	0.000	0.970	0.195
	higher	0.563	0.000	0.734	0.000	0.567	0.000	0.670	0.000
Status before employment	unemployment	1.076	0.000	1.069	0.024	1.175	0.000	1.071	0.014
	studies	1.194	0.000	1.379	0.000	1.244	0.000	1.363	0.000
	other	0.832	0.000	0.968	0.413	0.920	0.000	1.072	0.080
Monthly salary	€ 1,000-2,000	0.989	0.559	1.089	0.018	0.982	0.501	1.052	0.156
	€ 2,000-3,000	1.074	0.006	1.186	0.000	1.159	0.000	1.174	0.001
	>€ 3,000	1.335	0.000	1.465	0.000	1.611	0.000	1.689	0.000
Salary increment	Yes	0.780	0.000	0.751	0.000	0.781	0.000	0.761	0.000
Family type	single parent	1.045	0.071	1.060	0.150	0.999	0.985	0.927	0.065
	couple	0.912	0.000	0.915	0.001	0.911	0.000	0.881	0.000
	couple with children	0.916	0.000	0.925	0.002	0.907	0.000	0.876	0.000
Housing region	densely inhabited rural	1.017	0.315	1.029	0.435	1.057	0.001	1.055	0.165
	sparsely inhabited rural	1.048	0.009	0.977	0.556	1.031	0.100	1.037	0.376
Industrial branch	high-technology	0.670	0.000			0.713	0.000		
	basic services	0.801	0.000			0.778	0.000		
	new services	0.881	0.000			0.825	0.000		
	public services	1.019	0.761			0.892	0.441		
	primary production	1.638	0.000			1.721	0.000		
Annual capital turnover	€ 50,000-500,000	1.080	0.110			1.135	0.003		
	€ 500,000- 5 million	1.008	0.662			1.055	0.752		
	>€ 5 million	0.859	0.002			0.880	0.000		
Ownership	foreign	0.940	0.033			0.861	0.000		
Establishment size	50-199	0.884	0.000			1.011	0.638		
	200-499	0.790	0.000			0.985	0.000		
	>499	0.866	0.000			0.903	0.001		
Economic situation	growing	0.975	0.092			0.965	0.014		
	diminishing	1.186	0.000			1.215	0.000		
	fluctuating	1.183	0.000			1.215	0.000		
Open labour market salary level	higher than	2.260	0.000	2.359	0.000	1.792	0.000	1.917	0.000
	lower than	0.810	0.000	0.783	0.000	0.884	0.000	0.801	0.000
Number of establishments		1.000	0.000	1.000	0.000	1.000	0.000	0.999	0.000
GDP %		0.999	0.000	0.999	0.023	0.995	0.002	0.999	0.029

APPENDIX 16: COX PROPORTIONAL HAZARDS REGRESSION MODEL. TABLE 4/9

Cox Proportional Hazard regression Table continued		1997 n. 46,665				1998 n. 60,445			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.078	0.000	1.144	0.000	0.969	0.002	1.038	0.042
Age	25-34	0.707	0.000	0.631	0.000	0.772	0.000	0.716	0.000
	35-44	0.627	0.000	0.508	0.000	0.690	0.000	0.595	0.000
	more than 44	0.652	0.000	0.510	0.000	0.721	0.000	0.609	0.000
Educational level	secondary	0.936	0.000	0.956	0.029	0.896	0.000	0.937	0.000
	higher	0.525	0.000	0.628	0.000	0.606	0.000	0.658	0.000
Status before employment	unemployment	1.094	0.000	1.057	0.038	1.237	0.000	1.203	0.000
	studies	1.178	0.000	1.333	0.000	1.269	0.000	1.409	0.000
	other	0.893	0.000	1.017	0.626	1.027	0.124	1.171	0.000
Monthly salary	€ 1,000-2,000	1.028	0.082	1.063	0.069	0.912	0.000	1.015	0.603
	€ 2,000-3,000	1.231	0.000	1.240	0.000	0.946	0.005	1.018	0.622
	>€ 3,000	1.741	0.000	1.801	0.000	1.020	0.462	1.138	0.004
Salary increment	Yes	0.761	0.000	0.730	0.000	0.837	0.000	0.877	0.000
Family type	single parent	1.040	0.065	1.001	0.976	1.032	0.096	1.043	0.151
	couple	0.915	0.000	0.918	0.000	0.927	0.000	0.951	0.016
	couple with children	0.912	0.000	0.911	0.000	0.954	0.000	0.971	0.114
Housing region	densely inhabited rural	0.960	0.008	0.996	0.899	0.956	0.001	0.960	0.140
	sparsely inhabited rural	1.019	0.219	1.008	0.809	0.965	0.015	0.924	0.009
Industrial branch	high-technology	0.697	0.000			0.684	0.000		
	basic services	0.751	0.000			0.741	0.000		
	new services	0.822	0.000			0.788	0.000		
	public services	0.914	0.000			0.911	0.000		
	primary production	1.203	0.000			1.426	0.000		
Annual capital turnover	€ 50,000-500,000	1.083	0.000			1.161	0.000		
	€ 500,000- 5 million	1.097	0.014			1.149	0.000		
	>€ 5 million	0.990	0.000			1.000	0.531		
Ownership	foreign	0.865	0.000			0.907	0.000		
Establishment size	50-199	1.003	0.920			1.000	0.932		
	200-499	0.937	0.008			0.935	0.003		
	>499	0.831	0.000			0.895	0.000		
Economic situation	growing	0.949	0.000			0.966	0.004		
	diminishing	1.104	0.000			1.093	0.000		
	fluctuating	1.128	0.000			1.077	0.000		
Open labour market salary level	higher than	1.941	0.000	2.210	0.000	1.352	0.000	1.839	0.000
	lower than	0.894	0.000	0.818	0.000	0.789	0.000	0.773	0.000
Number of establishments		1.000	0.000	1.000	0.000	1.000	0.000	1.000	0.092
GDP %									

APPENDIX 16: COX PROPORTIONAL HAZARDS REGRESSION MODEL. TABLE 5/9

Cox Proportional Hazard regression Table continued		1999 n. 54,242				2000 n. 60,668			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.042	0.000	1.142	0.000	0.993	0.553	1.020	0.331
Age	25-34	0.611	0.000	0.593	0.000	0.723	0.000	0.697	0.000
	35-44	0.576	0.000	0.493	0.000	0.662	0.000	0.591	0.000
	more than 44	0.617	0.000	0.495	0.000	0.697	0.000	0.600	0.000
Educational level	secondary	0.884	0.000	0.945	0.001	0.900	0.000	0.945	0.003
	higher	0.477	0.000	0.582	0.000	0.544	0.000	0.651	0.000
Status before employment	unemployment	1.084	0.000	1.095	0.000	1.177	0.000	1.148	0.000
	studies	1.163	0.000	1.375	0.000	1.134	0.000	1.300	0.000
	other	0.873	0.000	1.008	0.806	0.937	0.001	1.090	0.006
Monthly salary	€ 1,000-2,000	0.996	0.861	1.116	0.000	0.985	0.301	1.085	0.003
	€ 2,000-3,000	1.169	0.000	1.290	0.000	1.105	0.000	1.205	0.000
	>€ 3,000	1.676	0.000	1.922	0.000	1.356	0.000	1.415	0.000
Salary increment	Yes	0.714	0.000	0.715	0.000	0.867	0.000	0.916	0.000
Family type	single parent	1.023	0.207	0.959	0.142	1.034	0.090	0.982	0.518
	couple	0.888	0.000	0.916	0.000	0.904	0.000	0.901	0.000
	couple with children	0.884	0.000	0.906	0.000	0.922	0.000	0.925	0.000
Housing region	densely inhabited rural	0.980	0.164	1.007	0.818	0.993	0.631	1.047	0.114
	sparsely inhabited rural	1.006	0.615	1.022	0.456	0.990	0.527	0.965	0.247
Industrial branch	high-technology	0.740	0.000			0.704	0.000		
	basic services	0.741	0.000			0.754	0.000		
	new services	0.873	0.000			0.814	0.000		
	public services	0.903	0.686			0.989	0.000		
	primary production	1.311	0.000			1.271	0.000		
Annual capital turnover	€ 50,000-500,000	1.223	0.000			1.227	0.000		
	€ 500,000-5 million	1.235	0.000			1.244	0.000		
	>€ 5 million	1.023	0.889			0.999	0.978		
Ownership	foreign	0.925	0.000			0.926	0.000		
Establishment size	50-199	1.043	0.007			1.011	0.515		
	200-499	0.993	0.703			0.891	0.000		
	>499	0.911	0.000			0.808	0.000		
Economic situation	growing	0.891	0.000			0.903	0.000		
	diminishing	1.140	0.000			1.126	0.000		
	fluctuating	1.117	0.000			1.086	0.000		
Open labour market salary level	higher than	1.614	0.000	2.187	0.000	1.534	0.000	1.932	0.000
	lower than	0.845	0.000	0.796	0.000	0.867	0.000	0.836	0.000
Number of establishments		1.000	0.000	1.000	0.157	1.000	0.000	1.000	0.732
GDP %									

APPENDIX 16: COX PROPORTIONAL HAZARDS REGRESSION MODEL. TABLE 6/9

Cox Proportional Hazard regression Table continued		2001 n. 57,621				2002 n. 47,624			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.095	0.000	1.176	0.000	1.044	0.000	1.153	1.042
Age	25-34	0.589	0.000	0.575	0.000	0.638	0.000	0.597	0.611
	35-44	0.482	0.000	0.440	0.000	0.535	0.000	0.475	0.576
	more than 44	0.514	0.000	0.448	0.000	0.617	0.000	0.510	0.617
Educational level	secondary	0.892	0.000	0.932	0.000	0.880	0.000	0.921	0.884
	higher	0.475	0.000	0.596	0.000	0.467	0.000	0.607	0.477
Status before employment	unemployment	1.139	0.000	1.103	0.000	1.039	0.005	1.047	1.084
	studies	1.149	0.000	1.348	0.000	1.157	0.000	1.385	1.163
	other	0.909	0.000	1.059	0.057	0.889	0.000	1.093	0.873
Monthly salary	€ 1,000-2,000	1.033	0.028	1.159	0.000	1.068	0.000	1.154	0.996
	€ 2,000-3,000	1.281	0.000	1.401	0.000	1.298	0.000	1.329	1.169
	>€ 3,000	1.774	0.000	1.831	0.000	2.034	0.000	1.995	1.676
Salary increment	Yes	0.709	0.000	0.745	0.000	0.755	0.000	0.785	0.714
Family type	single parent	1.015	0.437	1.011	0.717	0.978	0.282	1.040	1.023
	couple	0.881	0.000	0.877	0.000	0.863	0.000	0.907	0.888
	couple with children	0.904	0.000	0.909	0.000	0.878	0.000	0.932	0.884
Housing region	densely inhabited rural	0.977	0.104	0.984	0.585	0.971	0.044	0.978	0.980
	sparsely inhabited rural	1.028	0.062	1.029	0.345	0.994	0.691	0.967	1.006
Industrial branch	high-technology	0.761	0.000			0.771	0.000		0.740
	basic services	0.707	0.000			0.694	0.000		0.741
	new services	0.908	0.000			0.933	0.000		0.873
	public services	0.885	0.000			0.789	0.000		0.903
	primary production	1.433	0.000			1.582	0.000		1.311
Annual capital turnover	€ 50,000-500,000	1.187	0.000			1.120	0.000		1.223
	€ 500,000-5 million	1.077	0.000			0.999	0.000		1.235
	>€ 5 million	0.883	0.267			0.856	0.000		1.023
Ownership	foreign	0.872	0.000			0.897	0.000		0.925
Establishment size	50-199	1.037	0.021			0.977	0.164		1.043
	200-499	0.963	0.095			0.923	0.002		0.993
	>499	0.917	0.000			0.875	0.000		0.911
Economic situation	growing	0.898	0.000			0.935	0.000		0.891
	diminishing	1.106	0.000			1.107	0.000		1.140
	fluctuating	1.111	0.000			1.145	0.000		1.117
Open labour market salary level	higher than	1.752	0.000	2.405	0.000	1.925	0.000	2.302	1.614
	lower than	0.862	0.000	0.788	0.000	0.885	0.000	0.770	0.845
Number of establishments		1.000	0.000	1.000	0.253	1.000	0.000	1.000	1.000
GDP %									

APPENDIX 16: COX PROPORTIONAL HAZARDS REGRESSION MODEL. TABLE 7/9

Cox Proportional Hazard regression Table continued		2003 n. 34,347				2004 n. 45,387			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.400	0.000	1.084	0.000	1.213	0.000	1.164	0,708
Age	25-34	0.526	0.000	0.693	0.000	0.606	0.000	0.602	0,000
	35-44	0.344	0.000	0.390	0.000	0.411	0.000	0.364	0.000
	more than 44	0.328	0.000	0.353	0.000	0.413	0.000	0.359	0.000
Educational level	secondary	1.008	0.000	1.132	0.637	1.013	0.000	0.915	0.899
	higher	0.476	0.000	1.043	0.091	0.542	0.000	0.732	0.235
Status before employment	unemployment	0.775	0.001	1.141	0.007	0.841	0.000	1.018	0.063
	studies	1.289	0.000	1.644	0.000	1.265	0.000	1.638	0.002
	other	1.186	0.430	1.735	0.218	0.951	0.074	1.362	0.766
Monthly salary	€ 1,000-2,000	1.315	0.000	1.392	0.004	1.097	0.000	1.487	0.061
	€ 2,000-3,000	2.153	0.000	2.818	0.118	1.821	0.000	2.524	0.000
	>€ 3,000	4.715	0.000	8.480	0.005	3.419	0.000	5.884	0.000
Salary increment	Yes	0.640	0.000	0.760	0.000	0.561	0.000	0.666	0.164
Family type	single parent	0.748	0.817	0.902	0.956	0.827	0.125	0.886	0.295
	couple	1.117	0.001	0.838	0.024	0.945	0.000	0.962	0.457
	couple with children	1.017	0.035	0.818	0.271	0.852	0.000	0.887	0.607
Housing region	densely inhabited rural	0.961	0.232	1.069	0.343	0.871	0.534	0.771	0.560
	sparsely inhabited rural	0.856	0.013	1.041	0.635	0.948	0.000	0.877	0.865
Industrial branch	high-technology	0.901	0.000			0.602	0.000		
	basic services	0.878	0.000			0.735	0.000		
	new services	1.398	0.314			1.112	0.153		
	public services	1.019	0.353			0.974	0.277		
	primary production	1.740	0.000			2.147	0.000		
Annual capital turnover	€ 50,000-500,000	1.074	0.728			1.263	0.471		
	€ 500,000-5 million	1.167	0.000			1.296	0.024		
	>€ 5 million	0.636	0.000			0.966	0.000		
Ownership	foreign	0.881	0.000			0.950	0.000		
Establishment size	50-199	1.268	0.881			1.096	0.526		
	200-499	1.639	0.207			0.936	0.025		
	>499	1.334	0.156			0.885	0.852		
Economic situation	growing	1.111	0.000			0.995	0.000		
	diminishing	0.817	0.771			0.901	0.050		
	fluctuating	1.006	0.000			0.929	0.011		
Open labour market salary level	higher than	2.028	0.000	2.117	0.000	1.941	0.000	1.641	0.000
	lower than	0.632	0.000	0.642	0.000	0.699	0.000	0.704	0.053
Number of establishments		1.000	0.000	1.001	0.001	1.000	0.000	1.001	0.000
GDP %		1.000	0.004	1.001	0.110	1.000	0.002	0.999	0.579

APPENDIX 16: COX PROPORTIONAL HAZARDS REGRESSION MODEL. TABLE 8/9

Cox Proportional Hazard regression Table continued		2005 n. 44,792				2006 n. 24,980			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.039	0.002	1.051	0.979	1.105	0.000	1.007	0.852
Age	25-34	0.562	0.000	0.673	0.000	0.641	0.000	0.595	0.000
	35-44	0.401	0.000	0.453	0.000	0.543	0.000	0.492	0.000
	more than 44	0.347	0.000	0.401	0.000	0.465	0.000	0.490	0.000
Educational level	secondary	0.943	0.000	0.958	0.709	0.898	0.001	1.004	0721
	higher	0.721	0.000	0.793	0.142	0.608	0.000	0.870	0.949
Status before employment	unemployment	0.710	0.000	0.946	0.396	0.730	0.309	0.769	0.045
	studies	1.047	0.000	1.261	0.019	1.202	0.000	1.259	0.018
	other	0.797	0.008	0.916	0.587	0.995	0.102	1.194	0.350
Monthly salary	€ 1,000-2,000	1.055	0.051	1.016	0.828	1.009	0.000	0.747	0.204
	€ 2,000-3,000	1.648	0.000	1.332	0.085	1.459	0.000	1.173	0.971
	>€ 3,000	2.616	0.000	1.929	0.002	2.469	0.000	2.043	0.011
Salary increment	Yes	0.516	0.000	0.595	0.000	0.646	0.000	0.763	0.000
Family type	single parent	1.050	0.632	1.043	0.386	0.904	0.439	0.822	0.370
	couple	0.947	0.000	1.007	0.742	0.927	0.051	1.063	0.609
	couple with children	1.076	0.000	1.158	0.277	0.921	0.025	1.053	0.833
Housing region	densely inhabited rural	0.897	0.064	0.962	0.782	0.929	0.257	0.899	0.762
	sparsely inhabited rural	0.966	0.007	1.092	0.328	0.938	0.790	1.011	0.730
Industrial branch	high-technology	0.838	0.037			0.735	0.150		
	basic services	0.991	0.000			1.032	0.015		
	new services	1.305	0.000			1.346	0.000		
	public services	0.943	0.000			0.866	0.000		
	primary production	1.554	0.000			1.489	0.000		
Annual capital turnover	€ 50,000-500,000	1.265	0.848			0.949	0.007		
	€ 500,000-5 million	1.373	0.617			0.901	0.000		
	>€ 5 million	1.055	0.107			0.824	0.000		
Ownership	foreign	0.849	0.003			0.813	0.000		
Establishment size	50-199	1.257	0.008			1.038	0.656		
	200-499	1.288	0.000			1.024	0.062		
	>499	1.179	0.110			1.237	0.016		
Economic situation	growing	0.978	0.000			1.012	0.026		
	diminishing	0.963	0.181			1.008	0.517		
	fluctuating	0.934	0.023			0.911	0.863		
Open labour market salary level	higher than	1.688	0.000	2.018	0.000	1.692	0.000	1.544	0.000
	lower than	0.683	0.000	0.701	0.002	0.680	0.000	0.649	0.000
Number of establishments		1.000	0.000	1.001	0.000	1.000	0.021	1.000	0.282
GDP %		1.000	0.274	1.000	0.669	1.000	0.958	1.000	0.894

APPENDIX 16: COX PROPORTIONAL HAZARDS REGRESSION MODEL. TABLE 9/9

Cox Proportional Hazard regression Table continued		2007 n. 23,380			
		Basic	Sig.	Stratified	Sig.
Gender	female	1.189	0.068	1.250	0.068
Age	25-34	0.693	0.000	0.726	0.000
	35-44	0.496	0.000	0.541	0.000
	more than 44	0.452	0.000	0.594	0.000
Educational level	secondary	1.121	0.000	1.011	0.000
	higher	0.992	0.000	0.998	0.000
Status before employment	unemployment	0.751	0.000	1.035	0.000
	studies	1.209	0.000	1.520	0.000
	other	1.145	0.561	1.359	0.561
Monthly salary	1000-2000	1.262	0.000	1.206	0.000
	2000-3000	1.764	0.000	1.556	0.000
	>3000	2.800	0.000	2.681	0.000
Salary increment	Yes	0.207	0.000	0.246	0.000
Family type	single parent	1.164	0.000	1.135	0.000
	couple	1.061	0.000	1.065	0.000
	couple with children	1.060	0.030	1.046	0.030
Housing region	densely inhabited rural	0.931	0.143	0.951	0.143
	sparsely inhabited rural	1.072	0.000	0.974	0.000
Industrial branch	high-technology	1.051	0.498		
	basic services	1.239	0.575		
	new services	1.406	0.000		
	public services	1.092	0.000		
	primary production	1.780	0.000		
Annual capital turnover	50 000-500000	1.562	0.894		
	500 000-5 million	1.736	0.150		
	>5 million	1.364	0.016		
Ownership	foreign	0.859	0.000		
Establishment size	50-199	1.084	0.777		
	200-499	1.162	0.603		
	>499	1.473	0.921		
Economic situation	growing	0.970	0.071		
	diminishing	0.952	0.257		
	fluctuating	0.793	0.149		
Open labour market salary level	higher than	1.843	0.000	1.461	0.000
	lower than	0.651	0.000	0.696	0.000
Number of establishments		1.000	0.609	1.001	0.609
GDP %		1.000	0.108	1.000	0.108

APPENDIX 17: COMPETING RISKS – TRANSITION TO EMPLOYMENT. TABLE 1/9

Competing risks model – Transition to employment		1991 n. 9,807				1992 n. 7,804			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	0.937	0.103	1.189	0.166	0.866	0.001	0.841	0.241
Age	25-34	0.827	0.000	0.808	0.098	0.762	0.000	0.837	0.243
	35-44	0.668	0.000	0.685	0.012	0.604	0.000	0.501	0.000
	more than 44	0.747	0.001	0.723	0.077	0.517	0.000	0.475	0.003
Educational level	secondary	1.139	0.001	1.227	0.036	1.074	0.121	1.115	0.407
	higher	0.741	0.000	0.709	0.099	0.917	0.248	0.992	0.973
Status before employment	unemployment	0.617	0.000	0.672	0.045	0.836	0.001	0.712	0.051
	studies	1.051	0.312	1.370	0.034	1.133	0.032	1.167	0.389
	other	0.862	0.021	1.109	0.563	0.989	0.875	1.121	0.622
Monthly salary	€ 1,000-2,000	1.083	0.217	1.014	0.942	0.977	0.730	1.039	0.857
	€ 2,000-3,000	1.664	0.000	1.400	0.169	1.549	0.000	1.946	0.025
	>€ 3,000	2.446	0.000	1.754	0.050	2.057	0.000	2.798	0.006
increment	Yes	0.969	0.385	1.012	0.897	1.031	0.462	1.285	0.041
Family type	single parent	1.020	0.806	1.235	0.265	1.085	0.360	0.985	0.951
	couple	1.133	0.021	1.201	0.167	1.116	0.070	0.954	0.780
	couple with children	0.972	0.571	1.017	0.889	0.966	0.534	0.877	0.420
Housing region	densely inhabited rural	1.049	0.372	0.963	0.824	0.896	0.068	0.874	0.544
	sparcely inhabited rural	0.998	0.969	1.368	0.075	0.917	0.190	0.618	0.036
Industrial branch	high-technology	1.110	0.248			0.743	0.001		
	basic services	1.174	0.001			1.021	0.700		
	new services	1.469	0.000			1.161	0.021		
	public services	1.591	0.000			1.156	0.158		
	primary production	2.138	0.000			1.729	0.000		
Annual capital turnover	€ 50,000-500,000	1.104	0.254			0.977	0.804		
	€ 500,000-5 million	1.168	0.044			1.065	0.447		
	>€ 5 milllion	1.178	0.053			0.868	0.122		
Ownership	foreign	0.917	0.351			0.837	0.117		
Establishment size	50-199	0.938	0.283			1.063	0.380		
	200-499	0.938	0.458			1.062	0.522		
	>499	1.464	0.000			0.954	0.669		
Economic situation	growing	0.957	0.408			0.857	0.003		
	diminishing	1.214	0.000			1.331	0.000		
	fluctuating	1.264	0.000			0.998	0.981		
Open labour market salary level	higher than	1.261	0.001	1.372	0.039	1.587	0.000	2.082	0.006
	lower than	0.879	0.021	0.846	0.290	0.999	0.983	0.798	0.278
Number of establishments		1.000	0.125	1.001	0.005	1.000	0.282	1.001	0.009
GDP %		0.999	0.092	1.000	0.756	0.999	0.149	1.000	0.937

APPENDIX 17: COMPETING RISKS – TRANSITION TO EMPLOYMENT. TABLE 2/9

Competing risks model – Transition to employment		1993 n. 8,097				1994 n. 8,432			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	0.891	0.005	1.091	0.511	0.936	0.079	1.056	0.635
Age	25-34	0.872	0.004	0.924	0.569	0.778	0.000	0.681	0.001
	35-44	0.652	0.000	0.667	0.020	0.585	0.000	0.472	0.000
	more than 44	0.524	0.000	0.500	0.001	0.486	0.000	0.404	0.000
Educational level	secondary	1.089	0.047	1.061	0.626	1.083	0.050	1.025	0.825
	higher	1.044	0.509	1.400	0.101	0.960	0.507	0.819	0.258
Status before employment	unemployment	0.850	0.000	0.945	0.672	0.817	0.000	0.935	0.577
	studies	1.072	0.195	1.214	0.218	1.128	0.014	1.291	0.056
	other	0.807	0.002	0.809	0.316	0.883	0.043	1.040	0.817
Monthly salary	€ 1,000-2,000	1.081	0.192	0.956	0.833	1.020	0.725	0.969	0.860
	€ 2,000-3,000	1.491	0.000	1.497	0.135	1.417	0.000	1.194	0.424
	>€ 3,000	2.153	0.000	1.920	0.058	1.812	0.000	1.474	0.147
increment	Yes	1.075	0.058	1.149	0.206	0.931	0.039	0.986	0.888
Family type	single parent	0.943	0.504	1.034	0.886	0.953	0.525	1.394	0.084
	couple	1.059	0.376	1.312	0.119	0.996	0.938	1.073	0.563
	couple with children	1.015	0.802	1.397	0.040	1.004	0.933	1.157	0.207
Housing region	densely inhabited rural	0.899	0.055	0.988	0.949	0.917	0.083	0.975	0.880
	sparcely inhabited rural	0.951	0.413	1.149	0.535	0.920	0.131	0.800	0.228
Industrial branch	high-technology	0.878	0.107			0.778	0.000		
	basic services	1.043	0.402			1.091	0.053		
	new services	1.094	0.130			1.195	0.001		
	public services	0.992	0.928			1.311	0.002		
	primary production	1.542	0.001			1.324	0.043		
Annual capital turnover	€ 50,000-500,000	0.921	0.313			1.019	0.806		
	€ 500,000-5 million	0.918	0.248			1.024	0.738		
	>€ 5 milllion	0.794	0.004			0.941	0.417		
Ownership	foreign	0.827	0.049			0.890	0.166		
Establishment size	50-199	1.068	0.293			0.990	0.866		
	200-499	1.030	0.745			0.985	0.839		
	>499	0.860	0.084			1.006	0.944		
Economic situation	growing	0.994	0.893			0.952	0.236		
	diminishing	1.366	0.000			1.191	0.002		
	fluctuating	1.233	0.001			1.106	0.090		
Open labour market salary level	higher than	1.238	0.007	1.821	0.013	1.457	0.000	2.328	0.000
	lower than	0.996	0.944	0.987	0.943	0.956	0.354	0.734	0.027
Number of establishments		1.000	0.368	1.001	0.007	1.000	0.746	1.001	0.007
GDP %		1.000	0.536	1.002	0.340	1.000	0.373	0.999	0.607

APPENDIX 17: COMPETING RISKS – TRANSITION TO EMPLOYMENT. TABLE 3/9

Competing risks model – transition to employment Table continued		1995 n. 37,392				1996 n. 12,445			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	0.916	0.005	0.913	0.813	0.982	0.554	1.180	0.064
Age	25-34	0.822	0.000	0.855	0.758	0.808	0.000	0.771	0.005
	35-44	0.579	0.000	0.573	0.489	0.662	0.000	0.697	0.003
	more than 44	0.405	0.000	0.477	0.393	0.503	0.000	0.616	0.001
Educational level	secondary	1.004	0.913	1.065	0.953	1.023	0.494	0.968	0.703
	higher	0.919	0.085	1.173	0.989	0.815	0.000	0.964	0.786
Status before employment	unemployment	0.856	0.000	0.889	0.787	0.861	0.000	0.981	0.838
	studies	0.959	0.272	1.084	0.954	1.058	0.131	1.306	0.005
	other	0.724	0.000	0.865	0.718	0.858	0.005	1.367	0.029
Monthly salary	€ 1,000-2,000	1.129	0.011	1.262	1.056	1.005	0.921	1.236	0.125
	€ 2,000-3,000	1.439	0.000	1.585	1.259	1.450	0.000	1.676	0.004
	>€ 3000	1.922	0.000	2.102	1.577	2.037	0.000	2.942	0.000
increment	Yes	1.035	0.226	1.076	0.976	1.018	0.527	1.071	0.333
Family type	single parent	1.002	0.971	1.060	0.869	0.961	0.534	0.978	0.884
	couple	0.993	0.851	1.035	0.911	1.065	0.116	1.107	0.295
	couple with children	0.888	0.001	0.925	0.821	1.003	0.927	0.977	0.801
Housing region	densely inhabited rural	0.932	0.091	1.123	0.941	0.985	0.735	1.080	0.566
	sparsely inhabited rural	0.841	0.000	0.895	0.727	0.977	0.628	0.976	0.873
Industrial branch	high-technology	0.898	0.052			0.846	0.008		
	basic services	1.187	0.000			1.057	0.131		
	new services	1.218	0.000			1.127	0.004		
	public services	1.067	0.373			1.137	0.080		
	primary production	1.006	0.964			1.461	0.010		
Annual capital turnover	€ 50,000-500,000	1.177	0.013			0.980	0.754		
	€ 500,000-5 million	1.263	0.000			1.014	0.812		
	>€ 5 million	1.142	0.025			0.911	0.112		
Ownership	foreign	1.144	0.016			1.007	0.893		
Establishment size	50-199	0.973	0.561			1.053	0.260		
	200-499	0.789	0.000			0.932	0.281		
	>499	0.861	0.024			1.004	0.954		
Economic situation	growing	0.959	0.224			0.971	0.378		
	diminishing	1.304	0.000			1.203	0.000		
	fluctuating	1.071	0.158			1.184	0.001		
Open labour market salary level	higher than	1.606	0.000	1.817	1.476	1.386	0.000	1.385	0.014
	lower than	0.851	0.000	0.803	0.690	0.968	0.453	0.930	0.554
Number of establishments		1.000	0.491	1.000	1.000	1.000	0.279	1.000	0.005
GDP %		1.000	0.344	0.999	0.997	1.000	0.854	0.999	0.615

APPENDIX 17: COMPETING RISKS – TRANSITION TO EMPLOYMENT. TABLE 4/9

Competing risks model – transition to employment Table continued		1997 n. 14,414				1998 n. 15,744			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.055	0.051	1.253	0.005	0.967	0.195	1.011	0.873
Age	25-34	0.739	0.000	0.646	0.000	0.841	0.000	0.890	0.117
	35-44	0.597	0.000	0.464	0.000	0.698	0.000	0.671	0.000
	more than 44	0.502	0.000	0.434	0.000	0.566	0.000	0.591	0.000
Educational level	secondary	1.018	0.554	1.005	0.948	1.079	0.007	1.089	0.222
	higher	0.820	0.000	0.964	0.758	0.969	0.454	0.923	0.452
Status before employment	unemployment	0.828	0.000	0.826	0.018	0.798	0.000	0.879	0.123
	studies	1.027	0.423	1.134	0.143	1.106	0.001	1.217	0.008
	other	0.901	0.024	1.006	0.962	1.051	0.256	1.123	0.308
Monthly salary	1000-2000	1.102	0.025	1.200	0.165	1.027	0.455	1.257	0.021
	2000-3000	1.548	0.000	1.840	0.000	1.202	0.000	1.455	0.005
	>3000	2.191	0.000	2.952	0.000	1.406	0.000	1.950	0.000
increment	Yes	0.937	0.009	0.870	0.029	1.050	0.040	1.033	0.568
Family type	single parent	0.924	0.149	0.837	0.167	0.912	0.071	1.048	0.700
	couple	1.060	0.094	1.074	0.384	1.019	0.574	1.019	0.813
	couple with children	1.052	0.112	0.917	0.281	0.973	0.368	1.003	0.965
Housing region	densely inhabited rural	0.970	0.410	0.958	0.727	0.985	0.686	1.029	0.796
	sparsely inhabited rural	0.858	0.000	1.134	0.326	0.964	0.367	1.005	0.968
Industrial branch	high-technology	0.847	0.002			0.883	0.018		
	basic services	1.071	0.043			1.049	0.142		
	new services	1.091	0.022			1.128	0.001		
	public services	1.210	0.002			1.231	0.001		
	primary production	1.273	0.032			1.521	0.000		
Annual capital turnover	50 000-500 000	1.087	0.149			1.004	0.946		
	500 000- 5 million	1.008	0.875			1.098	0.048		
	>5 million	0.880	0.016			0.999	0.989		
Ownership	foreign	0.888	0.005			0.877	0.000		
Establishment size	50-199	1.003	0.933			1.083	0.041		
	200-499	1.040	0.488			1.021	0.709		
	>499	0.936	0.250			1.050	0.372		
Economic situation	growing	0.940	0.046			0.927	0.011		
	diminishing	1.156	0.000			1.096	0.013		
	fluctuating	1.089	0.062			1.081	0.082		
Open labour market salary level	higher than	1.543	0.000	2.319	0.000	1.181	0.001	1.406	0.003
	lower than	0.926	0.047	0.867	0.192	0.889	0.001	0.891	0.229
Number of establishments		1.000	0.184	1.001	0.000	1.000	0.104	1.001	0.000
GDP %		1.000	0.080	0.999	0.308	0.999	0.024	1.001	0.447

APPENDIX 17: COMPETING RISKS – TRANSITION TO EMPLOYMENT. TABLE 5/9

Competing risks model – transition to employment Table continued		1999 n. 14,256				2000 n. 15,897			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.003	0.909	1.067	0.387	1.132	0.000	1.223	0.005
Age	25-34	0.802	0.000	0.873	0.080	0.661	0.000	0.672	0.000
	35-44	0.648	0.000	0.600	0.000	0.494	0.000	0.430	0.000
	more than 44	0.537	0.000	0.551	0.000	0.373	0.000	0.408	0.000
Educational level	secondary	1.072	0.021	1.108	0.188	1.008	0.769	1.198	0.012
	higher	0.930	0.106	0.937	0.569	0.733	0.000	0.784	0.022
Status before employment	unemployment	0.774	0.000	0.779	0.007	0.674	0.000	0.734	0.001
	studies	0.980	0.535	0.992	0.923	0.965	0.277	1.074	0.373
	other	0.884	0.008	0.990	0.934	0.845	0.000	0.951	0.669
Monthly salary	1000-2000	1.089	0.026	1.188	0.124	1.032	0.456	1.125	0.334
	2000-3000	1.315	0.000	1.302	0.062	1.460	0.000	1.761	0.000
	>3000	1.630	0.000	1.973	0.000	2.189	0.000	2.769	0.000
increment	Yes	1.087	0.001	1.215	0.002	0.948	0.023	0.910	0.113
Family type	single parent	1.037	0.492	1.048	0.703	0.950	0.325	0.930	0.578
	couple	1.027	0.433	1.023	0.773	1.014	0.677	1.165	0.042
	couple with children	0.993	0.828	0.952	0.525	0.981	0.539	0.969	0.674
Housing region	densely inhabited rural	0.946	0.148	0.862	0.228	1.031	0.422	1.169	0.177
	sparsely inhabited rural	0.932	0.105	0.940	0.680	0.954	0.257	1.099	0.442
Industrial branch	high-technology	0.874	0.021			0.882	0.028		
	basic services	0.996	0.907			1.104	0.003		
	new services	1.065	0.086			1.123	0.001		
	public services	1.159	0.023			1.368	0.000		
	primary production	1.035	0.774			1.104	0.378		
Annual capital turnover	50 000-500 000	1.161	0.007			1.301	0.000		
	500 000- 5 million	1.212	0.000			1.440	0.000		
	>5 million	1.149	0.008			1.070	0.174		
Ownership	foreign	0.965	0.369			0.982	0.601		
Establishment size	50-199	0.980	0.612			1.076	0.050		
	200-499	0.794	0.000			0.912	0.095		
	>499	0.923	0.152			1.059	0.310		
Economic situation	growing	0.960	0.178			0.914	0.004		
	diminishing	1.065	0.115			1.115	0.002		
	fluctuating	1.029	0.537			1.028	0.544		
Open labour market salary level	higher than	1.177	0.002	1.392	0.010	1.567	0.000	2.032	0.000
	lower than	0.935	0.061	0.852	0.106	0.881	0.000	0.760	0.005
Number of establishments		1.000	0.014	1.000	0.000	1.000	0.365	1.001	0.000
GDP %		1.000	0.086	1.000	0.614	1.000	0.979	1.000	0.405

APPENDIX 17: COMPETING RISKS – TRANSITION TO EMPLOYMENT. TABLE 6/9

Competing risks model – transition to employment Table continued		2001 n. 14,367				2002 n. 10,990			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.258	0.000	1.372	0.000	1.046	0.169	1.147	0.178
Age	25-34	0.646	0.000	0.656	0.000	0.672	0.000	0.582	0.000
	35-44	0.510	0.000	0.468	0.000	0.539	0.000	0.518	0.000
	more than 44	0.439	0.000	0.423	0.000	0.464	0.000	0.436	0.000
Educational level	secondary	1.068	0.027	1.037	0.636	1.072	0.053	1.261	0.014
	higher	0.789	0.000	0.974	0.823	0.840	0.001	1.167	0.319
Status before employment	unemployment	0.760	0.000	0.895	0.273	0.691	0.000	0.748	0.013
	studies	1.057	0.091	1.420	0.000	0.998	0.966	1.018	0.877
	other	0.920	0.069	1.207	0.125	0.857	0.004	0.944	0.711
Monthly salary	€ 1,000-2,000	1.088	0.041	1.328	0.020	1.014	0.778	1.047	0.780
	€ 2,000-3,000	1.425	0.000	1.771	0.000	1.285	0.000	1.470	0.055
	>€ 3,000	1.975	0.000	2.552	0.000	1.619	0.000	2.127	0.002
increment	Yes	0.971	0.238	1.011	0.867	0.968	0.280	1.001	0.991
Family type	single parent	0.984	0.769	0.890	0.369	0.972	0.650	0.837	0.285
	couple	1.023	0.489	1.040	0.631	0.989	0.788	1.048	0.640
	couple with children	1.023	0.468	1.073	0.373	0.984	0.664	0.956	0.653
Housing region	densely inhabited rural	1.028	0.458	0.957	0.714	0.996	0.939	1.028	0.854
	sparsely inhabited rural	0.972	0.518	0.971	0.826	1.026	0.580	1.133	0.432
Industrial branch	high-technology	0.891	0.056			0.922	0.319		
	basic services	0.971	0.403			0.998	0.957		
	new services	1.002	0.957			1.062	0.171		
	public services	1.240	0.001			1.189	0.022		
	primary production	1.043	0.743			1.502	0.002		
Annual capital turnover	€ 50,000-500,000	1.297	0.000			1.297	0.000		
	€ 500,000-5 million	1.342	0.000			1.321	0.000		
	>€ 5 million	1.042	0.427			1.019	0.770		
Ownership	foreign	0.945	0.131			0.970	0.513		
Establishment size	50-199	1.105	0.012			1.077	0.118		
	200-499	1.013	0.820			0.860	0.024		
	>499	1.107	0.074			1.075	0.306		
Economic situation	growing	0.928	0.022			1.015	0.710		
	diminishing	1.040	0.293			1.121	0.012		
	fluctuating	0.979	0.688			1.126	0.053		
Open labour market salary level	higher than	1.487	0.000	1.934	0.000	1.619	0.000	0.239	0.000
	lower than	0.821	0.000	0.656	0.000	0.830	0.000	0.116	0.148
amount of establishments		1.000	0.003	1.001	0.000	1.000	0.737	0.000	0.000
GDP %		1.000	0.563	0.999	0.334	1.000	0.195	0.001	0.494

APPENDIX 17: COMPETING RISKS – TRANSITION TO EMPLOYMENT. TABLE 7/9

Competing risks model – transition to employment Table continued		2003 n. 9,688				2004 n. 12,629			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.096	0.008	0.964	0.722	1.081	0.003	1.027	0.708
Age	25-34	0.706	0.000	0.848	0.114	0.749	0.000	0.695	0.000
	35-44	0.584	0.000	0.582	0.000	0.583	0.000	0.505	0.000
	more than 44	0.472	0.000	0.458	0.000	0.529	0.000	0.487	0.000
Educational level	secondary	0.982	0.619	1.023	0.819	1.017	0.568	1.009	0.899
	higher	0.803	0.000	0.873	0.384	0.807	0.000	0.881	0.235
Status before employment	unemployment	0.694	0.000	0.932	0.541	0.776	0.000	0.853	0.063
	studies	1.010	0.816	1.266	0.047	1.030	0.353	1.287	0.002
	other	0.974	0.636	1.351	0.064	0.876	0.003	0.966	0.766
Monthly salary	€ 1,000-2,000	1.097	0.081	1.282	0.126	1.078	0.069	1.252	0.061
	€ 2,000-3,000	1.458	0.000	1.717	0.005	1.324	0.000	1.634	0.000
	>€ 3000	1.979	0.000	2.674	0.000	1.745	0.000	2.547	0.000
increment	Yes	1.014	0.651	0.963	0.658	0.873	0.000	0.919	0.164
Family type	single parent	0.849	0.012	0.942	0.707	0.934	0.180	1.134	0.295
	couple	1.029	0.477	0.893	0.293	0.976	0.435	1.056	0.457
	couple with children	0.997	0.942	0.841	0.102	0.882	0.000	0.962	0.607
Housing region	densely inhabited rural	0.952	0.297	1.048	0.773	0.952	0.172	0.936	0.560
	sparsely inhabited rural	0.933	0.161	0.933	0.698	0.962	0.334	0.979	0.865
Industrial branch	high-technology	0.741	0.001			0.731	0.000		
	basic services	0.921	0.045			0.918	0.009		
	new services	1.122	0.010			1.079	0.029		
	public services	0.926	0.353			0.959	0.489		
	primary production	1.454	0.006			1.750	0.000		
Annual capital turnover	€ 50,000-500,000	1.196	0.015			1.246	0.000		
	€ 500,000-5 million	1.270	0.000			1.338	0.000		
	>€ 5 million	1.038	0.592			1.098	0.072		
Ownership	foreign	0.907	0.031			0.988	0.736		
Establishment size	50-199	1.031	0.535			1.132	0.001		
	200-499	0.925	0.290			1.020	0.726		
	>499	1.022	0.762			1.067	0.260		
Economic situation	growing	1.056	0.166			0.989	0.708		
	diminishing	1.098	0.057			1.062	0.098		
	fluctuating	1.072	0.249			1.125	0.011		
Open labour market salary level	higher than	1.481	0.000	2.157	0.000	1.496	0.000	1.685	0.000
	lower than	0.888	0.010	0.799	0.089	0.885	0.001	0.823	0.053
Number of establishments		1.000	0.011	1.001	0.000	1.000	0.210	1.001	0.000
GDP %		1.000	0.765	1.000	0.776	1.000	0.881	1.000	0.579

APPENDIX 17: COMPETING RISKS – TRANSITION TO EMPLOYMENT. TABLE 8/9

Competing risks model – transition to employment Table continued		2005 n. 12,880				2006 n. 6,527			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.012	0.652	1.002	0.979	1.011	0.759	0.982	0.852
Age	25-34	0.714	0.000	0.756	0.000	0.752	0.000	0.627	0.000
	35-44	0.548	0.000	0.537	0.000	0.605	0.000	0.524	0.000
	more than 44	0.450	0.000	0.457	0.000	0.513	0.000	0.483	0.000
Educational level	secondary	0.972	0.320	0.976	0.709	0.987	0.751	1.038	0.721
	higher	0.873	0.001	0.868	0.142	0.778	0.000	0.990	0.949
Status before employment	unemployment	0.772	0.000	0.938	0.396	0.719	0.000	0.791	0.045
	studies	1.038	0.217	1.186	0.019	1.133	0.002	1.289	0.018
	other	0.916	0.029	1.054	0.587	1.037	0.549	1.169	0.350
Monthly salary	€ 1,000-2,000	1.010	0.802	1.022	0.828	1.068	0.215	0.831	0.204
	€ 2,000-3,000	1.298	0.000	1.234	0.085	1.322	0.000	0.994	0.971
	>€ 3,000	1.609	0.000	1.617	0.002	1.935	0.000	1.648	0.011
increment	Yes	0.787	0.000	0.785	0.000	0.619	0.000	0.619	0.000
Family type	single parent	0.978	0.635	1.090	0.386	0.947	0.420	0.861	0.370
	couple	0.960	0.189	0.978	0.742	0.954	0.225	1.051	0.609
	couple with children	1.067	0.028	1.075	0.277	0.940	0.107	1.021	0.833
Housing region	densely inhabited rural	0.954	0.191	0.972	0.782	0.993	0.878	0.956	0.762
	sparsely inhabited rural	0.956	0.239	1.111	0.328	0.911	0.068	1.056	0.730
Industrial branch	high-technology	0.873	0.108			0.893	0.293		
	basic services	1.054	0.113			1.166	0.000		
	new services	1.241	0.000			1.375	0.000		
	public services	0.811	0.000			0.899	0.150		
	primary production	1.136	0.201			1.513	0.001		
Annual capital turnover	€ 50,000-500,000	1.198	0.000			0.924	0.244		
	€ 500,000-5 million	1.301	0.000			0.996	0.949		
	>€ 5 million	1.071	0.171			0.889	0.052		
Ownership	foreign	0.932	0.048			0.864	0.001		
Establishment size	50-199	1.189	0.000			0.973	0.543		
	200-499	1.234	0.000			1.015	0.815		
	>499	1.088	0.115			1.111	0.135		
Economic situation	growing	0.984	0.577			0.993	0.852		
	diminishing	1.062	0.097			0.984	0.731		
	fluctuating	1.006	0.901			0.916	0.190		
Open labour market salary level	higher than	1.476	0.000	1.910	0.000	1.735	0.000	1.670	0.000
	lower than	0.821	0.000	0.774	0.002	0.844	0.000	0.662	0.000
Number of establishments		1.000	0.009	1.001	0.000	1.000	0.462	1.000	0.282
GDP %		1.000	0.084	1.000	0.669	1.000	0.093	1.000	0.894

APPENDIX 17: COMPETING RISKS – TRANSITION TO EMPLOYMENT. TABLE 9/9

Competing risks model – transition to employment Table continued		2007 n. 9,421			
		Basic	Sig.	Stratified	Sig.
Gender	female	1.139	0.000	1.205	0.013
Age	25-34	0.738	0.000	0.719	0.000
	35-44	0.545	0.000	0.572	0.000
	more than 44	0.459	0.000	0.601	0.000
Educational level	secondary	1.125	0.001	1.032	0.672
	higher	1.094	0.069	1.116	0.365
Status before employment	unemployment	0.742	0.000	1.044	0.665
	studies	1.261	0.000	1.477	0.000
	other	1.170	0.001	1.314	0.019
Monthly salary	€ 1,000-2,000	1.297	0.000	1.044	0.709
	€ 2,000-3,000	1.670	0.000	1.342	0.038
	>€ 3,000	2.330	0.000	2.184	0.000
increment	Yes	0.522	0.000	0.486	0.000
Family type	single parent	1.143	0.019	1.070	0.580
	couple	1.100	0.008	1.024	0.767
	couple with children	1.065	0.068	1.004	0.962
Housing region	densely inhabited rural	0.907	0.023	0.997	0.980
	sparsely inhabited rural	0.985	0.734	0.947	0.670
Industrial branch	high-technology	1.153	0.065		
	basic services	1.297	0.000		
	new services	1.375	0.000		
	public services	1.155	0.045		
	primary production	1.892	0.000		
Annual capital turnover	€ 50,000-500,000	1.495	0.000		
	€ 500,000-5 million	1.637	0.000		
	>€ 5 million	1.333	0.000		
Ownership	foreign	0.893	0.004		
Establishment size	50-199	1.103	0.019		
	200-499	1.062	0.310		
	>499	1.358	0.000		
Economic situation	growing	0.980	0.639		
	diminishing	0.959	0.225		
	fluctuating	0.890	0.017		
Open labour market salary level	higher than	1.926	0.000	1.436	0.002
	lower than	0.784	0.000	0.764	0.007
Number of establishments		1.000	0.001	1.001	0.000
GDP %		1.000	0.567	0.999	0.181

APPENDIX 18: COMPETING RISKS – TRANSITION TO UNEMPLOYMENT. TABLE 1/9

Competing risks model – transition to unemployment		1991 n. 9,807				1992 n. 7,804			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.235	0.000	1.165	0.042	1.318	0.000	1.279	0.007
Age	25-34	0.678	0.000	0.676	0.000	0.682	0.000	0.624	0.000
	35-44	0.643	0.000	0.540	0.000	0.676	0.000	0.569	0.000
	more than 44	0.780	0.000	0.563	0.000	0.828	0.000	0.648	0.000
Educational level	secondary	0.997	0.924	0.909	0.100	1.016	0.611	1.072	0.334
	higher	0.371	0.000	0.392	0.000	0.473	0.000	0.790	0.192
Status before employment	unemployment	1.502	0.000	1.017	0.838	1.469	0.000	1.239	0.013
	studies	1.198	0.000	1.453	0.000	1.349	0.000	1.371	0.003
	other	1.018	0.683	1.156	0.150	1.048	0.404	1.300	0.063
Monthly salary	€ 1,000-2,000	1.313	0.000	1.474	0.002	1.377	0.000	1.252	0.116
	€ 2,000-3,000	1.770	0.000	1.590	0.004	1.733	0.000	1.422	0.055
	>€ 3000	2.677	0.000	2.020	0.000	2.825	0.000	2.545	0.000
increment	Yes	0.574	0.000	0.507	0.000	0.578	0.000	0.586	0.000
Family type	single parent	1.185	0.001	1.183	0.114	1.115	0.052	1.452	0.003
	couple	0.945	0.158	0.913	0.285	0.890	0.008	0.964	0.714
	couple with children	1.003	0.929	1.044	0.566	0.979	0.583	1.086	0.346
Housing region	densely inhabited rural	1.042	0.232	0.994	0.952	1.055	0.163	0.759	0.015
	sparsely inhabited rural	1.108	0.004	0.963	0.698	1.121	0.003	0.940	0.590
Industrial branch	high-technology	0.669	0.000			0.610	0.000		
	basic services	0.720	0.000			0.803	0.000		
	new services	0.689	0.000			0.777	0.000		
	public services	0.714	0.000			0.814	0.002		
	primary production	1.367	0.000			1.485	0.000		
Annual capital turnover	€ 50,000-500,000	0.767	0.000			0.761	0.000		
	€ 500,000-5 million	0.795	0.000			0.649	0.000		
	>€ 5 million	0.756	0.000			0.668	0.000		
Ownership	foreign	0.585	0.000			0.672	0.000		
Establishment size	50-199	0.947	0.169			0.845	0.000		
	200-499	0.928	0.193			0.810	0.001		
	>499	0.854	0.012			0.765	0.001		
Economic situation	growing	0.819	0.000			0.896	0.005		
	diminishing	1.230	0.000			1.251	0.000		
	fluctuating	1.069	0.128			1.131	0.008		
Open labour market salary level	higher than	1.282	0.000	1.882	0.000	1.411	0.000	1.531	0.002
	lower than	1.011	0.782	0.779	0.016	1.051	0.250	0.865	0.197
amount of establishments		0.999	0.000	0.999	0.000	0.999	0.000	0.998	0.000
GDP %		1.000	0.372	1.000	0.788	0.998	0.000	1.001	0.605

APPENDIX 18: COMPETING RISKS – TRANSITION TO UNEMPLOYMENT. TABLE 2/9

Competing risks model – transition to unemployment		1993 n. 8097				1994 n. 8432			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.305	0.000	1.191	0.056	1.352	0.000	1.598	0.000
Age	25-34	0.741	0.000	0.717	0.000	0.768	0.000	0.760	0.002
	35-44	0.746	0.000	0.678	0.000	0.806	0.000	0.720	0.002
	more than 44	0.916	0.083	0.684	0.002	1.067	0.195	0.778	0.040
Educational level	secondary	0.962	0.214	0.967	0.645	0.924	0.016	0.946	0.465
	higher	0.475	0.000	0.662	0.019	0.486	0.000	0.575	0.001
Status before employment	unemployment	1.671	0.000	1.278	0.006	1.430	0.000	1.274	0.015
	studies	1.437	0.000	1.656	0.000	1.128	0.020	1.399	0.007
	other	1.105	0.086	1.307	0.068	0.926	0.216	0.932	0.636
Monthly salary	€ 1,000-2,000	1.303	0.000	1.509	0.006	1.100	0.064	1.074	0.639
	€ 2,000-3,000	1.678	0.000	1.689	0.005	1.432	0.000	1.499	0.030
	>€ 3,000	2.682	0.000	2.344	0.000	1.877	0.000	1.801	0.009
increment	Yes	0.605	0.000	0.567	0.000	0.763	0.000	0.691	0.000
Family type	single parent	1.083	0.193	1.046	0.746	1.155	0.018	1.335	0.042
	couple	0.903	0.044	0.990	0.929	0.998	0.969	0.942	0.552
	couple with children	0.929	0.102	0.912	0.353	0.963	0.359	0.985	0.865
Housing region	densely inhabited rural	1.105	0.010	0.901	0.385	1.085	0.041	1.008	0.948
	sparsely inhabited rural	1.243	0.000	1.228	0.091	1.155	0.001	0.992	0.945
Industrial branch	high-technology	0.660	0.000			0.619	0.000		
	basic services	0.762	0.000			0.735	0.000		
	new services	0.741	0.000			0.765	0.000		
	public services	0.848	0.011			1.105	0.174		
	primary production	1.127	0.131			1.312	0.002		
Annual capital turnover	€ 50,000-500,000	0.821	0.001			0.963	0.581		
	€ 500,000-5 million	0.761	0.000			0.811	0.001		
	>€ 5 million	0.717	0.000			0.795	0.001		
Ownership	foreign	0.726	0.001			0.737	0.001		
Establishment size	50-199	0.849	0.001			0.885	0.014		
	200-499	0.930	0.285			0.871	0.038		
	>499	0.876	0.062			0.785	0.002		
Economic situation	growing	0.830	0.000			0.885	0.001		
	diminishing	1.121	0.013			1.279	0.000		
	fluctuating	1.068	0.182			1.163	0.003		
Open labour market salary level	higher than	1.293	0.000	1.564	0.002	1.552	0.000	2.399	0.000
	lower than	0.998	0.962	0.847	0.127	1.071	0.107	0.911	0.399
Number of establishments		0.999	0.000	0.999	0.000	0.999	0.000	0.999	0.000
GDP %		1.000	0.686	0.998	0.244	0.999	0.006	1.000	0.852

APPENDIX 18: COMPETING RISKS – TRANSITION TO UNEMPLOYMENT. TABLE 3/9

Competing risks model – transition to unemployment Table continued		1995 n. 37,392				1996 n. 12,445			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.343	0.000	1.270	0.000	1.417	0.000	1.282	0.001
Age	25-34	0.756	0.000	0.713	0.000	0.726	0.000	0.654	0.000
	35-44	0.768	0.000	0.677	0.000	0.786	0.000	0.678	0.000
	more than 44	0.882	0.001	0.737	0.000	1.008	0.841	0.689	0.000
Educational level	secondary	0.950	0.043	0.961	0.345	0.967	0.208	0.977	0.694
	higher	0.453	0.000	0.614	0.000	0.508	0.000	0.541	0.000
Status before employment	unemployment	2.044	0.000	1.590	0.000	1.780	0.000	1.244	0.003
	studies	1.402	0.000	1.452	0.000	1.456	0.000	1.580	0.000
	other	1.157	0.003	1.170	0.047	1.412	0.000	1.391	0.003
Monthly salary	€ 1,000-2,000	1.564	0.000	1.651	0.000	1.186	0.000	1.055	0.670
	€ 2,000-3,000	1.526	0.000	1.630	0.000	1.352	0.000	1.138	0.402
	>€ 3,000	1.677	0.000	1.895	0.000	1.699	0.000	1.511	0.020
increment	Yes	0.645	0.000	0.615	0.000	0.689	0.000	0.671	0.000
Family type	single parent	1.028	0.547	0.967	0.659	1.056	0.263	1.070	0.512
	couple	0.882	0.000	0.821	0.000	0.919	0.020	0.918	0.257
	couple with children	0.839	0.000	0.816	0.000	0.917	0.007	0.937	0.328
Housing region	densely inhabited rural	1.061	0.060	0.997	0.961	1.070	0.041	0.953	0.601
	sparsely inhabited rural	1.091	0.008	0.983	0.808	1.107	0.003	1.011	0.908
Industrial branch	high-technology	0.624	0.000			0.594	0.000		
	basic services	0.675	0.000			0.633	0.000		
	new services	0.721	0.000			0.656	0.000		
	public services	0.948	0.327			1.019	0.741		
	primary production	1.097	0.210			1.381	0.000		
Annual capital turnover	€ 50,000-500,000	1.060	0.280			1.081	0.175		
	€ 500,000-5 million	0.943	0.224			0.880	0.014		
	>€ 5 million	0.894	0.027			0.816	0.000		
Ownership	foreign	0.888	0.054			0.787	0.000		
Establishment size	50-199	0.771	0.000			0.853	0.000		
	200-499	0.695	0.000			0.879	0.022		
	>499	0.634	0.000			0.887	0.050		
Economic situation	growing	0.973	0.355			0.847	0.000		
	diminishing	1.257	0.000			1.049	0.243		
	fluctuating	1.290	0.000			0.986	0.765		
Open labour market salary level	higher than	2.687	0.000	2.655	0.000	1.837	0.000	1.954	0.000
	lower than	0.753	0.000	0.707	0.000	0.776	0.000	0.639	0.000
amount of establishments		0.999	0.000	0.998	0.000	0.999	0.000	0.998	0.000
GDP %		0.999	0.000	0.998	0.005	0.999	0.001	0.998	0.133

APPENDIX 18: COMPETING RISKS – TRANSITION TO UNEMPLOYMENT. TABLE 4/9

Competing risks model – transition to unemployment Table continued		1997 n. 14414				1998 n. 15744			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.394	0.000	1.524	0.000	1.294	0.000	1.352	0.000
Age	25-34	0.765	0.000	0.705	0.000	0.906	0.002	0.779	0.000
	35-44	0.856	0.000	0.663	0.000	0.982	0.611	0.800	0.003
	more than 44	1.083	0.040	0.632	0.000	1.321	0.000	0.942	0.463
Educational level	secondary	0.931	0.006	0.890	0.030	0.895	0.000	0.928	0.170
	higher	0.437	0.000	0.497	0.000	0.441	0.000	0.462	0.000
Status before employment	unemployment	1.791	0.000	1.318	0.000	1.908	0.000	1.578	0.000
	studies	1.372	0.000	1.469	0.000	1.417	0.000	1.912	0.000
	other	1.299	0.000	1.392	0.001	1.396	0.000	1.687	0.000
Monthly salary	€ 1,000-2,000	1.218	0.000	1.066	0.599	1.127	0.001	1.422	0.000
	€ 2,000-3,000	1.414	0.000	1.402	0.021	1.036	0.481	1.390	0.007
	>€ 3,000	1.962	0.000	2.165	0.000	0.881	0.056	1.343	0.058
increment	Yes	0.668	0.000	0.639	0.000	0.754	0.000	0.816	0.000
Family type	single parent	1.125	0.009	1.132	0.176	1.043	0.318	0.983	0.855
	couple	0.932	0.039	0.885	0.075	0.887	0.000	0.909	0.162
	couple with children	0.950	0.090	0.937	0.284	0.852	0.000	0.894	0.055
Housing region	densely inhabited rural	0.977	0.484	0.969	0.712	1.093	0.004	1.039	0.652
	sparsely inhabited rural	1.040	0.222	0.982	0.833	1.092	0.006	1.067	0.474
Industrial branch	high-technology	0.679	0.000			0.680	0.000		
	basic services	0.611	0.000			0.576	0.000		
	new services	0.608	0.000			0.579	0.000		
	public services	0.892	0.043			0.961	0.448		
	primary production	1.301	0.000			0.991	0.899		
Annual capital turnover	€ 50,000-500,000	1.054	0.342			1.104	0.049		
	€ 500,000-5 million	0.862	0.003			0.948	0.237		
	>€ 5 million	0.769	0.000			0.855	0.002		
Ownership	foreign	0.829	0.000			0.901	0.005		
Establishment size	50-199	0.938	0.092			1.005	0.894		
	200-499	0.961	0.454			0.991	0.872		
	>499	0.881	0.020			1.036	0.518		
Economic situation	growing	0.816	0.000			0.939	0.029		
	diminishing	1.062	0.099			1.052	0.170		
	fluctuating	1.015	0.743			1.007	0.877		
Open labour market salary level	higher than	1.840	0.000	2.059	0.000	2.223	0.000	2.618	0.000
	lower than	0.831	0.000	0.809	0.017	0.653	0.000	0.594	0.000
Number of establishments		0.999	0.000	0.999	0.000	0.999	0.000	0.999	0.000
GDP %		1.000	0.223	1.001	0.356	1.000	0.206	1.000	0.911

APPENDIX 18: COMPETING RISKS – TRANSITION TO UNEMPLOYMENT. TABLE 5/9

Competing risks model – transition to unemployment Table continued		1999 n. 14,256				2000 n. 15,897			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.277	0.000	1.481	0.000	1.329	0.000	1.442	0.000
Age	25-34	0.933	0.039	0.732	0.000	0.827	0.000	0.720	0.000
	35-44	1.097	0.012	0.788	0.004	0.907	0.005	0.757	0.000
	more than 44	1.244	0.000	0.746	0.001	1.113	0.002	0.743	0.000
Educational level	secondary	0.874	0.000	0.907	0.098	0.924	0.001	0.944	0.267
	higher	0.432	0.000	0.587	0.000	0.396	0.000	0.498	0.000
Status before employment	unemployment	1.935	0.000	1.524	0.000	1.775	0.000	1.297	0.000
	studies	1.365	0.000	1.522	0.000	1.422	0.000	1.715	0.000
	other	1.257	0.000	1.685	0.000	1.224	0.000	1.272	0.015
Monthly salary	€ 1,000-2,000	1.005	0.889	1.310	0.012	1.096	0.024	1.417	0.001
	€ 2,000-3,000	0.951	0.323	1.388	0.013	1.085	0.113	1.524	0.001
	>€ 3,000	0.882	0.061	1.040	0.816	1.278	0.000	1.916	0.000
increment	Yes	0.730	0.000	0.775	0.000	0.635	0.000	0.564	0.000
Family type	single parent	1.033	0.472	0.958	0.662	1.133	0.003	1.070	0.438
	couple	0.885	0.000	0.901	0.161	0.865	0.000	0.798	0.000
	couple with children	0.875	0.000	0.888	0.070	0.891	0.000	0.935	0.246
Housing region	densely inhabited rural	1.140	0.000	1.016	0.857	1.130	0.000	1.130	0.145
	sparsely inhabited rural	1.130	0.000	1.030	0.768	1.205	0.000	1.076	0.360
Industrial branch	high-technology	0.677	0.000			0.654	0.000		
	basic services	0.551	0.000			0.565	0.000		
	new services	0.574	0.000			0.560	0.000		
	public services	0.905	0.065			1.059	0.265		
	primary production	1.114	0.111			0.999	0.990		
Annual capital turnover	€ 50,000-500,000	0.935	0.184			1.135	0.014		
	€ 500,000-5 million	0.857	0.001			1.010	0.832		
	>€ 5 million	0.808	0.000			0.886	0.015		
Ownership	foreign	0.890	0.008			0.872	0.000		
Establishment size	50-199	0.877	0.001			0.948	0.139		
	200-499	0.925	0.173			1.065	0.208		
	>499	0.862	0.013			1.043	0.434		
Economic situation	growing	0.921	0.008			0.854	0.000		
	diminishing	1.127	0.002			1.144	0.000		
	fluctuating	1.046	0.301			1.032	0.439		
Open labour market salary level	higher than	2.282	0.000	3.045	0.000	2.204	0.000	2.883	0.000
	lower than	0.762	0.000	0.732	0.000	0.794	0.000	0.682	0.000
amount of establishments		0.999	0.000	0.999	0.000	0.999	0.000	0.999	0.000
GDP %		1.000	0.051	0.999	0.465	0.999	0.009	1.000	0.555

APPENDIX 18: COMPETING RISKS – TRANSITION TO UNEMPLOYMENT. TABLE 6/9

Competing risks model – transition to unemployment Table continued		2001 n. 14,367				2002 n.18,532			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.375	0.000	1.342	0.000	1.263	0.000	1.396	0.000
Age	25-34	0.729	0.000	0.757	0.000	0.808	0.000	0.758	0.000
	35-44	0.733	0.000	0.623	0.000	0.857	0.000	0.752	0.002
	more than 44	0.976	0.512	0.656	0.000	1.002	0.955	0.819	0.029
Educational level	secondary	0.917	0.001	0.968	0.569	0.864	0.000	0.926	0.209
	higher	0.420	0.000	0.661	0.000	0.412	0.000	0.621	0.000
Status before employment	unemployment	1.868	0.000	1.375	0.000	1.711	0.000	1.282	0.000
	studies	1.466	0.000	1.638	0.000	1.472	0.000	1.570	0.000
	other	1.203	0.000	1.108	0.333	1.201	0.001	1.229	0.081
Monthly salary	€ 1,000-2,000	1.237	0.000	1.272	0.037	1.191	0.000	1.146	0.373
	€ 2,000-3,000	1.383	0.000	1.459	0.007	1.205	0.004	1.196	0.334
	>€ 3,000	1.665	0.000	1.779	0.000	1.699	0.000	1.870	0.003
increment	Yes	0.604	0.000	0.655	0.000	0.627	0.000	0.620	0.000
Family type	single parent	1.112	0.016	1.081	0.402	1.054	0.286	1.161	0.156
	couple	0.854	0.000	0.742	0.000	0.847	0.000	0.880	0.087
	couple with children	0.866	0.000	0.781	0.000	0.856	0.000	0.922	0.233
Housing region	densely inhabited rural	1.100	0.004	1.058	0.513	1.127	0.001	1.102	0.311
	sparsely inhabited rural	1.212	0.000	1.174	0.081	1.036	0.332	1.057	0.576
Industrial branch	high-technology	0.757	0.000			0.710	0.000		
	basic services	0.564	0.000			0.476	0.000		
	new services	0.591	0.000			0.590	0.000		
	public services	0.902	0.067			0.902	0.094		
	primary production	1.085	0.323			1.232	0.005		
Annual capital turnover	€ 50,000-500,000	1.039	0.491			1.109	0.079		
	€ 500,000-5 million	0.901	0.032			0.930	0.173		
	>€ 5 million	0.837	0.001			0.854	0.008		
Ownership	foreign	0.909	0.016			0.895	0.016		
Establishment size	50-199	0.897	0.006			0.867	0.001		
	200-499	0.876	0.014			0.771	0.000		
	>499	0.958	0.454			0.892	0.070		
Economic situation	growing	0.873	0.000			0.900	0.004		
	diminishing	1.117	0.002			1.045	0.280		
	fluctuating	1.130	0.011			1.062	0.265		
Open labour market salary level	higher than	2.293	0.000	2.666	0.000	2.269	0.000	2.123	0.000
	lower than	0.794	0.000	0.706	0.000	0.822	0.000	0.671	0.001
Number of establishments		0.999	0.000	0.999	0.000	0.999	0.000	0.999	0.000
GDP %		1.000	0.816	1.001	0.212	1.000	0.023	1.000	0.453

APPENDIX 18: COMPETING RISKS – TRANSITION TO UNEMPLOYMENT. TABLE 7/9

Competing risks model – transition to unemployment Table continued		2003 n. 9,688				2004 n. 12,629			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.319	0.000	1.364	0.000	1.332	0.000	1.097	0.219
Age	25-34	0.773	0.000	0.711	0.000	0.847	0.000	0.614	0.000
	35-44	0.721	0.000	0.645	0.000	0.975	0.581	0.626	0.000
	more than 44	0.930	0.106	0.694	0.000	1.156	0.001	0.694	0.001
Educational level	secondary	0.883	0.000	0.969	0.637	0.917	0.009	0.951	0.492
	higher	0.441	0.000	0.769	0.091	0.517	0.000	0.620	0.000
Status before employment	unemployment	1.899	0.000	1.242	0.007	2.251	0.000	1.429	0.000
	studies	1.738	0.000	1.816	0.000	1.480	0.000	1.453	0.000
	other	1.248	0.000	1.181	0.218	1.452	0.000	1.137	0.313
Monthly salary	€ 1,000-2,000	1.350	0.000	1.587	0.004	0.995	0.903	1.014	0.912
	€ 2,000-3,000	1.414	0.000	1.363	0.118	0.791	0.000	0.682	0.020
	>€ 3,000	1.811	0.000	1.876	0.005	0.693	0.000	0.776	0.217
increment	Yes	0.667	0.000	0.734	0.000	0.697	0.000	0.719	0.000
Family type	single parent	0.995	0.922	1.006	0.956	1.028	0.602	0.965	0.748
	couple	0.816	0.000	0.834	0.024	0.862	0.000	0.916	0.295
	couple with children	0.882	0.000	0.923	0.271	0.863	0.000	0.986	0.857
Housing region	densely inhabited rural	1.161	0.000	0.902	0.343	1.103	0.015	1.003	0.984
	sparsely inhabited rural	1.160	0.000	0.952	0.635	1.171	0.000	1.176	0.159
Industrial branch	high-technology	0.772	0.002			0.890	0.096		
	basic services	0.614	0.000			0.654	0.000		
	new services	0.697	0.000			0.681	0.000		
	public services	1.014	0.838			0.943	0.338		
	primary production	1.388	0.000			1.227	0.065		
Annual capital turnover	€ 50,000-500,000	1.043	0.518			0.771	0.000		
	€ 500,000-5 million	0.797	0.000			0.687	0.000		
	>€ 5 million	0.722	0.000			0.721	0.000		
Ownership	foreign	0.834	0.000			0.872	0.005		
Establishment size	50-199	0.902	0.031			0.907	0.038		
	200-499	0.942	0.375			1.121	0.086		
	>499	0.968	0.656			1.097	0.180		
Economic situation	growing	0.907	0.015			0.881	0.002		
	diminishing	0.980	0.662			1.065	0.177		
	fluctuating	1.061	0.293			1.118	0.054		
Open labour market salary level	higher than	2.278	0.000	2.149	0.000	2.060	0.000	1.860	0.000
	lower than	0.680	0.000	0.496	0.000	0.720	0.000	0.515	0.000
Number of establishments		0.998	0.000	0.999	0.001	0.999	0.000	0.999	0.047
GDP %		0.999	0.015	1.001	0.110	1.000	0.092	1.001	0.430

APPENDIX 18: COMPETING RISKS – TRANSITION TO UNEMPLOYMENT. TABLE 8/9

Competing risks model – transition to unemployment Table continued		2005 n. 12,880				2006 n. 6,527			
		Basic	Sig.	Stratified	Sig.	Basic	Sig.	Stratified	Sig.
Gender	female	1.177	0.000	1.232	0.002	1.292	0.000	1.441	0.013
Age	25-34	0.938	0.112	0.875	0.120	0.880	0.039	0.720	0.043
	35-44	1.004	0.929	0.946	0.567	0.916	0.236	0.864	0.470
	more than 44	1.069	0.132	0.896	0.262	1.063	0.389	0.966	0.862
Educational level	secondary	0.964	0.264	0.986	0.837	0.841	0.001	0.785	0.123
	higher	0.573	0.000	0.680	0.001	0.562	0.000	0.695	0.127
Status before employment	unemployment	2.522	0.000	1.515	0.000	2.600	0.000	1.640	0.001
	studies	1.593	0.000	1.292	0.009	1.358	0.000	1.218	0.253
	other	1.667	0.000	1.264	0.043	1.387	0.002	1.252	0.376
Monthly salary	€ 1,000-2,000	0.855	0.000	0.848	0.093	0.813	0.005	0.940	0.770
	€ 2,000-3,000	0.676	0.000	0.904	0.470	0.806	0.015	1.027	0.911
	>€ 3,000	0.697	0.000	1.305	0.163	1.106	0.352	2.242	0.007
increment	Yes	0.904	0.000	0.914	0.148	0.780	0.000	0.592	0.003
Family type	single parent	1.033	0.500	0.938	0.510	1.067	0.453	0.707	0.140
	couple	0.892	0.003	0.917	0.252	0.902	0.081	0.836	0.232
	couple with children	0.813	0.000	0.878	0.078	0.879	0.026	0.765	0.081
Housing region	densely inhabited rural	1.223	0.000	1.167	0.206	1.214	0.003	1.209	0.394
	sparsely inhabited rural	1.151	0.001	0.886	0.290	1.204	0.005	1.041	0.853
Industrial branch	high-technology	1.000	0.997			0.917	0.570		
	basic services	0.868	0.001			0.957	0.488		
	new services	0.874	0.004			0.875	0.053		
	public services	1.170	0.007			1.414	0.000		
	primary production	0.902	0.491			1.111	0.612		
Annual capital turnover	€ 50,000-500,000	0.788	0.000			1.067	0.469		
	€ 500,000-5 million	0.785	0.000			0.881	0.092		
	>€ 5 million	0.878	0.025			0.861	0.083		
Ownership	foreign	0.861	0.003			0.909	0.198		
Establishment size	50-199	0.945	0.218			0.997	0.970		
	200-499	1.176	0.018			1.202	0.057		
	>499	1.108	0.113			1.221	0.070		
Economic situation	growing	0.827	0.000			0.942	0.336		
	diminishing	1.010	0.840			0.995	0.946		
	fluctuating	0.941	0.298			0.808	0.047		
Open labour market salary level	higher than	1.947	0.000	1.494	0.006	1.600	0.000	1.379	0.159
	lower than	0.855	0.000	0.981	0.841	0.911	0.138	0.898	0.511
Number of establishments		1.000	0.000	1.001	0.001	1.000	0.000	0.999	0.004
GDP %		1.000	0.698	1.001	0.249	1.000	0.979	1.001	0.596

APPENDIX 18: COMPETING RISKS – TRANSITION TO UNEMPLOYMENT. TABLE 9/9

Competing risks model – transition to unemployment Table continued		2007 n. 9,421			
		Basic	Sig.	Stratified	Sig.
Gender	female	1.103	0.007	1.126	0.179
Age	25-34	1.000	0.995	0.812	0.064
	35-44	1.097	0.077	0.787	0.053
	more than 44	1.142	0.008	0.710	0.009
Educational level	secondary	0.915	0.016	0.873	0.094
	higher	0.690	0.000	0.674	0.009
Status before employment	unemployment	2.759	0.000	1.511	0.000
	studies	1.802	0.000	1.237	0.083
	other	1.851	0.000	1.163	0.286
Monthly salary	€ 1,000-2,000	1.059	0.220	1.181	0.212
	€ 2,000-3,000	0.881	0.038	1.175	0.393
	>€ 3,000	0.968	0.676	1.425	0.159
increment	Yes	1.246	0.000	1.228	0.016
Family type	single parent	1.120	0.046	1.185	0.187
	couple	0.847	0.000	0.840	0.072
	couple with children	0.872	0.001	0.953	0.597
Housing region	densely inhabited rural	1.155	0.002	1.306	0.110
	sparsely inhabited rural	1.134	0.012	1.163	0.349
Industrial branch	high-technology	1.203	0.039		
	basic services	0.846	0.001		
	new services	0.899	0.035		
	public services	1.046	0.518		
	primary production	0.748	0.069		
Annual capital turnover	€ 50,000-500,000	0.800	0.001		
	€ 500,000-5 million	0.752	0.000		
	>€ 5 million	0.937	0.344		
Ownership	foreign	0.797	0.000		
Establishment size	50-199	0.848	0.002		
	200-499	0.896	0.144		
	>499	0.732	0.001		
Economic situation	growing	0.899	0.060		
	diminishing	0.895	0.015		
	fluctuating	0.799	0.001		
Open labour market salary level	higher than	1.913	0.000	1.559	0.011
	lower than	0.926	0.091	0.767	0.033
amount of establishments		1.000	0.000	1.000	0.761
GDP %		1.000	0.120	1.000	0.819

Tiina Soininen

Changing Expectations and Realities of Employment Stability. Longitudinal Analysis of Tenures in Finland

During the past two decades there has been a multitude of research and numerous reports on how individual feelings of insecurity have grown, yet, international research has not found any remarkable decline in statistically measured employment stability. This research pictures vividly the structural changes and mechanisms of those in labour market. The results elaborate both new theoretical understanding of social change and the need of new policy measures in order to maintain the Nordic welfare state model.

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