

OXANA KRUTOVA



Entailing Temporality

Longitudinal Analysis of
Labor Market Integration of Immigrants
in Finland



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ACADEMIC DISSERTATION

To be presented, with the permission of
the Board of the School of Social Sciences and Humanities
of the University of Tampere,
for public discussion in the Väinö Linna auditorium K104,
Kalevantie 5, Tampere,
on 19 August 2016, at 12 o'clock.

UNIVERSITY OF TAMPERE

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Acta Universitatis Tamperensis 2190
Tampere University Press
Tampere 2016



UNIVERSITY
OF TAMPERE

ACADEMIC DISSERTATION
University of Tampere
School of Social Sciences and Humanities
Finland

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Cover design by
Mikko Reinikka

Distributor:
verkkokauppa@juvenesprint.fi
<https://verkkokauppa.juvenes.fi>

Acta Universitatis Tamperensis 2190
ISBN 978-952-03-0179-8 (print)
ISSN-L 1455-1616
ISSN 1455-1616

Acta Electronica Universitatis Tamperensis 1689
ISBN 978-952-03-0180-4 (pdf)
ISSN 1456-954X
<http://tampub.uta.fi>

Suomen Yliopistopaino Oy – Juvenes Print
Tampere 2016



Dedicated to Pjotr

ABSTRACT

This research deals with labor market integration of immigrants in Finland. Combining macro nature of integration with analysis of its individual measurements, the research brings new insight of significance of the time factor in the integration processes. This research is based on representative Finnish databases as integrated employee-employer data (FLEED) and administrative data of unemployment and employment measures (URA-database), including large samplings and covering large observation periods (i.e. 1952-2014 years). New methodological solutions are proposed in combination with recently developed quantitative methods. Taken into account importance of inclusion of immigrants into working life and understanding the mechanisms, which contribute to successful labor market inclusion, this research is useful for elaboration of integration programs and integration policy in Finland.

The main results of research confirm that time is a decisive factor in labor market integration of immigrants. Despite the high value of previous studies, this research proves that in a long term immigrants go through specific trajectories of “adaptation”, which includes various transitions between statuses in the labour market. In time, the employment trajectories of immigrants strengthen, however, the differences between groups of immigrant becomes more evident in term of labour market integration.

As the results show, immigrants experience either quick integration with few transitions on the way to employment or integration requiring a significant period of time, when delayed entry decreases the probability of being sustainably employed. In terms of labour market transitions and stability of employment, labour market integration becomes a socially selective process. The intensity and forms of labour market integration vary according to the life course, social position, and resources of the individual.

Labour market integration often becomes a more time consuming process because of the lack of adequate policies that support the immigrant’s labour market integration over their life course. A longer period outside the labour market often confirms poor flexibility and poor adjustment to the labour market. Likewise, a longer period outside the labour market aggravates the rigidity of

behaviour among individuals and the rigidity of the labour market towards less flexible regulation of unemployment risks and economic inactivity.

It's also hard to estimate the effect from employment policy measures on final job placement of immigrants, because allocation of unemployed immigrants after completing an employment policy measure is rather complicated and depends on many external factors. Poor indicators of disposal of unemployed after policy measures are conditioned by complicated structural character of unemployment and, as a result, complicated influence of employment policy measures to various 'problem' groups in the structure of unemployment.

TIIVISTELMÄ

Tutkimuksessa tarkastellaan maahanmuuttajien työmarkkinoille kiinnittymistä Suomessa. Käytetyt aineistot mahdollistavat yksilöiden työurien pitkittäisen tarkastelun sekä myös sen arvioimisen miten työvoimapolitiittiset toimenpiteet kohdistuvan maahanmuuttajien eri ryhmiin ja vaikuttavat heidän työuriansa kehitykseen. Yhdistäen integroitumista kuvaavat makrotaloudelliset tiedot yksilötason tietoihin tutkimus tuo uutta ja kiinnostavaa tietoa siitä miten ajalliset tekijät, kuten ajankohta, työntekijän ikä ja kuulumine tiettyyn kohorttiin, vaikuttavat maahanmuuttajien työmarkkinoille kiinnittymiseen, sen kestoon ja sen eriytymiseen maahanmuuttajien eri ryhmien kesken. Tutkimuksessa käytetään edustavia aineistoja kuten Tilastokeskuksen yhdistettyä työntekijä-työntantaja-aineistoa (FLEED) ja työ- ja elinkeinotoimistojen asiakaspalvelurekisterin tietoja (URA – tietokanta).

Tutkimukseen sisällytetään laajat otokset ja havainnot periodilta 1952–2014. Edellä esitetyt datat ja innovatiiviset tilastolliset ja metodologiset ratkaisut mahdollistavat sen, että tutkimus tuottaa uutta ja kiinnostavaa tietoa Suomen työmarkkinoiden toiminnasta, maahanmuuttajien kiinnittymisestä työmarkkinoille ja työvoimapolitiittisten toimien vaikuttavuudesta. Ottaen huomioon maahanmuuttajien työelämään kiinnittymisen vaikeuden on tärkeää ymmärtää niitä mekanismeja, jotka vaikuttavat menestykselliseen työmarkkinoille kiinnittymiseen tai syrjäytymiseen työmarkkinoilla.

Empiiristen tulosten mukaan, samanaikaisesti kuin maahanmuuttajien työmarkkinastatusten vaihtelu heikkenee ensimmäisten kymmenen seurantavuoden aikana, maahanmuuttajat kokevat työllisyyden epävakaisuutta. Se liittyy pääosin työttömyyteen ja koulutukseen ja koskee siirtymiä näistä statuksista työllisyyteen. Vastakkainen tendenssi liittyy siirtymiin työttömyydestä taloudelliseen epäaktiivisuuteen ja johtaa työmarkkinoille pitkittävään adaptaatioon tai eristäytymiseen ja maahanmuuttajien sosiaaliseen eksklusioon. Seuraamalla maahanmuuttajien työmarkkinoille kiinnittymistä eri kohorteissa tutkimus osoittaa, että työmarkkinoille integroituminen on aikaa vievä ja sosiaalisesti eriytyvä prosessi. Pitkittäisseurantaan perustuvan

tutkimuksen havainnot poikkeavat siitä mihin on päädytty esimerkiksi poikkileikkauksiin perustuvissa tutkimuksissa.

Tässä tutkimuksessa työmarkkinoille kiinnittymistä tarkastellaan työmarkkinasiirtymien ja niihin sisältyvien työllisyysriskien avulla mikä tuo esille työmarkkinoiden kykyä integroida maahanmuuttajien työvoimaa. Ajallisten tekijöiden lisäksi maahanmuuttajien työmarkkinoille kiinnittymiseen ja vaikuttavat myös ikä, sukupuoli, koulutustaso sekä maahanmuuttajien omat valinnat ja kvalifikaatiot. Yhteen, nämä tekijät päättyvät olemaan elintärkeitä maahanmuuttajien elämänselän trajektoreille.

Aknowledgements

Time dictates own regularities. This philosophical assumption arose in my mind many years ago, when I've experienced first integration into a foreign society and into foreign labour market. When in 2009 for the first time I collided with difficulties of integration, I realized how far I am from living and working in a foreign society. Several years passed until I found my mind changed and ready for experience of new integration. My own experience of integration forced me to look at this topic from the positions of sociologist as well. Working on this dissertation started that time, almost seven years ago, when I was a visiting researcher at the Karelian Institute at the University of Eastern Finland in 2009.

Today I want to thank my supervisors at the University of Tampere, without whom this work would hardly be conducted. Dear prof. Harri Melin, thank you for your valuable advices and multiple support, which you offered me during these years. This research work would have never been succeeded in without your valuable scientific consultations. Thank you, prof. Pertti Koistinen, who inspired me to study immigrants' integration at the labour market, who inspired me to be more courageous in my intentions and try out innovative approaches and methods. I thank also Tapio Nummi for the guidance and consultations with regard to mathematical and statistical processing the data. I endlessly grateful to you for valuable comments, advices and inspiration to new scientific discoveries.

I also thank my pre-examiners, prof. Olli Kangas, Social Insurance Institution of Finland, and Dr. Christian Brzinsky-Fay, College for Interdisciplinary Educational Research WZB in Germany, for their valuable critical remarks and comments. I am especially grateful to Dr. Christian Brzinsky-Fay for becoming my opponent.

I would like to thank also prof. Heikki Eskellinen and prof. Ilkka Liikanen at the University of Eastern Finland for the opportunity to work in their scientific community in Joensuu in 2009. This work gave me a lot of valuable thoughts and intentions for future scientific researches. I also would like to thank Pirjo Pöllänen, Olga Davydova-Minguet and Alexander Izotov for their friendly support and valuable advices.

I would like to thank Tuula Lehtinen, IT-specialist at the Centre for Economic Development, Transport and the Environment (Tampere), for providing me with statistical data from the URA-database, which was extremely valuable for my research. My sincere thanks goes also to Christopher Brennan for English language proofreading services. The language of this dissertation would have never obtained fluency and easiness without valuable work of Chris.

I am endlessly grateful to the doctoral school LabourNet, the Finnish Work and Environment Fund and the School of Social Sciences and Humanities at the University of Tampere for financial support of my work and finalizing my dissertation. I thank LabourNet doctoral students for personal support and encouraging me to new steps. My especial sincere thanks are to Satu Ojala and Li-Ying Chan.

I also would like to thank my dear friends for their support and help. My sincere thanks go to Tatjana Kodolova, Maria Dyakonova, Natalya Kolesnikova and Irina Sannikova. Our friendship helps me to overcome difficulties and frustrations even over the border. My thanks are also to colleagues from the Institute of Economics at the Karelian Research Centre of the Russian Academy of Sciences, where I worked for 11 years. Your friendly support has always been extremely valuable for my personal and professional development.

Of course, I thank my dear relatives in Russia and in Finland for their personal support. My sincere thanks are to my dear grandmother Faina, mother Irina and my son Kirill. Nothing would be possible without you. Your support is the most valuable thing ever existing.

In Tampere 15 June 2016

Oxana Krutova

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1 INTRODUCTION

Historically speaking, people have always migrated in search of a better life. With the growth of globalization, migration has become a special character as a powerful factor for development of both countries-exporters and countries-recipients of immigrant labor forces. Consequently, there is constantly a growing interest in the problems of globalization caused by the economic, technological, and informational changes in countries that reverberate around the world. The further development of this process is accompanied by the deletion of geographic borders, as well as the appearance of new markets and new labor relations. Globalization also contributes to the appearance of new markets in the sphere of “intellectual consumption” and the diminution of cultural isolation of the peoples. Therefore, globalization becomes a process of worldwide economic, political, and cultural integration, mutual rapprochement, and development of intercommunication between countries. The main consequence of this process is especially obvious for the world labor division, migration of capitals, and human and manufacturing resources all over the world.

In the modern world, ideas about globalization are as popular as the ideas of post-modernism in the 1980s. Globalization leads to irreversible structural changes; it is insuperable. Globalization of labor markets opens much more opportunities for labor migration from developing countries to developed ones. Nowadays, similar globalization processes are more visible between industrially developed countries, having high living standards, and the rest of the world; rapprochement between countries having similar socio-political, economic, and other specificity leads not only to globalization between countries but also to voluntary integration of countries into mutually beneficial communities. Thus, the construction of Euro regions contributes to effective regulation of economic cooperation between countries-partners, as well as also directly affects the character of labor markets in border regions, contributing to more dynamic labor mobility and migration of populations.

However, one hardly noticeable consequence of globalization is the specificity of integration of immigrants into the labor market. On the one hand, globalization removes differences between countries so that specialists with good skills are

highly sought after in the world. On the other hand, barriers for labor mobility as a highly skilled or poorly skilled immigrant worker still exist. Globalization not only removes international borders but also causes many new problems that did not exist prior. Until recently, the problem of mutual adaptation between different peoples, civilizations, and cultures was not considered as a potential cause of inter-ethnic conflicts, but nowadays it becomes a source for unpredictable socio-cultural collisions. Despite this, migration contributes to the integration of cultures, change in demographic structures regarding the directions of migrations, and the ideological synthesis between peoples.

For a long time, parallel to the high demand for cheap labor, many European countries failed to create coherent policies to regulate post-WWII immigration and the flow of refugees. The most powerful institution interacting with Europe's resident immigrant-origin population was associated with the concept of “the welfare state”. In many respects, the social welfare systems of European countries were aimed at regulating immigrants’ inflows differently. The impact on immigration processes after the restructuring of welfare states in Europe has had a multidimensional character. Social policies were created to consider the inequalities between the market positions of immigrants and native populations, as well as to ensure the integration of all segments of the population within society. As a response to economic crisis and restructures in Europe after a period of postwar stabilization in 1950s, European welfare states have experienced considerable renovation since the 1970s.

The notion of segmentation and marginalization of minority populations has hardened, as well as the notion that ethnicity often becomes a major reason of social exclusion of immigrants. This process could be different from country to country. However, in general, the welfare state developed through significant decentralization of social institutions and deregulation of activity in turns of developing non-commercial organizations. In many respects, the development of social institutions in European countries implied major insinuations as to increasing the role of immigrant-origin populations and their collective identities. Together, they have often encouraged “ethnic-based mobilization” (Ireland, 2004). These policies aimed to regulate increasing immigration in Europe and had multivariate dimensions that were hard to be categorized. Even subject to the term “integration,” immigration scholars and policymakers had difficulties to find a “monosemantic” meaning of this term. Often, “integration” was announced as a public policy goal and rarely implied any social or political designation. Based mostly on the assumption that “integration” implies a situation of efficient

participation of immigrants in the society, it somehow becomes a notion of cohesiveness between immigrants and their host society; it implies more or less an integrated system, consisting of different components.

Until fairly recently, immigration and asylum policy was austere, the preserve of the national state (Miles & Thränhardt, 1995). Since the mid-1980s, however, cooperation in this field among the member states of the European Union has obviously been intensified. The political provision of welfare was unconditionally associated with the internal loyalty of their citizens to the national state. In these conditions, the internal loyalty of citizens was conditioned by external closure at the borders of nation states, while national welfare states undoubtedly conceded existence of inequality as their inherent feature. On the other hand, international migration was seen as an effort to overcome the existence of inequality. These two dimensions, “loyalty” and “provision of the welfare state” also represented relations between immigrants and the national state, where immigrants could be considered as a potential problem for the national state.

During the late 1970s and in the 1980s, the Nordic countries experienced the same structural problems as other European countries. It became obvious that their policy measures, which operated efficiently before, could not resist the global economic challenges of the period after the 1970s. Especially in the case of Norway and Sweden, the urbanization process has had a rather dynamic character as conditioned by economic growths and recessions. In the 1990s, Finland and Sweden had to cope with exceptionally deep recessions, as well as the pressures brought about by closer integration into global financial markets. Parallel to global trends in population ageing, falling birth rates, and increasing immigration, Finnish and Swedish welfare systems had to create new policy directions for regulation of the social sphere. Thus, in Finland, the intensity of immigration was even lower than it was in Sweden, because Finnish asylum seeker and immigrant policy had an even more restrictive character than that of Swedish policy.

Nowadays, the successful integration of immigrants into the labor market, on the one hand, positively affects social cohesion and, on the other hand, contributes to increasing economic efficiency of the production sphere. When analyzing the measures for integration of immigrants into the labor market, variations between immigrants’ patterns and labor market demands are essential and specific for each of the Member States of the European Union. These differences turn out to be crucial when European governments elaborate on their immigration and

integration policies. Even though no one Member State practices a single meaning of the term “integration,” the common understanding of this term nevertheless implies integration as composed of different elements; as a two-way process involving both immigrants and their local community (Destination Europe, 2004; World Migration Report, 2010). In practice, however, “integration” often transforms into a one-way process, when immigrants themselves carry out obligations, responsibilities, and duties during their initial process of adaption in a society. Modern tendencies, approaches, and policies in the national arena, at times, show that what is behind the term “integration” is in fact mandatory assimilation or acculturation into a host society. Integration thus obtains the “non-territorial” border, which divides the “inside” and the “outside,” who is “in” and who is “out,” who has rights, and who has only obligations (Carrera, 2006).

The concept of integration is often defined as inclusion or incorporation of a new population into the existing social structures of the immigration country, with a consequent reduction of differences in their positions and relations (Kilton & Birkhead, 2004). In this case, “integration” implies a set of criteria as acquisition of rights and access to membership, positions, and statuses in the core institutions of the receiving society (education system, training system, labor market, citizenship, and housing, etc.). Basically, “integration” deals with the public domain of society and its actors (immigrants). Three elements are essential in this case, such as relations between the cultural aspects of the public and private domain, the degree of inclusion or exclusion of immigrants in non-cultural aspects of the public domain (legal-political and socio-economic sphere), and the role and duties of immigrants in the integration process (Measurement and Indicators of Integration, 1997).

In many respects, integration is viewed as the totality of policies and practices that allow societies to close the gap between the performance of natives and immigrants (and their descendants). Dayton-Johnson et al. in their book “Gaining from Migration: Towards a New Mobility System”, argue that the demand for labor provided by both highly and low- or semi-skilled immigrants is crucial for economic development in Europe; different types of migration call for a range of policies governing access to European labor markets (Dayton-Johnson et al., 2007). Policy innovations indicate a growing concern with the socio-cultural aspects of immigrant integration such as language skills, interethnic relations, identification with the host society, and the role of religion. These cultural aspects of integration are viewed both as important in their own right and as conditions for successful socio-economic integration, and are common and significant

indicators of ethnic and culture retention of migrants and adaptation to the host country's culture (Ersanilli & Koopmans, 2009).

Migration studies concerning professional European migrants in European cities deal with such typical integration questions as measuring their participation as economic and political actors in the city, their social impact on the host country, questions of ethnic identity, their degree of socialization into local national culture, and the persistence of ties and activities elsewhere (Favell, 2003a, 2003b). Thus, integration turns out to be a different matter for a rights-bearing immigrant than making "cultural integration" the condition for acquiring rights (Achieving Social Cohesion, 2006). Therefore, integration policy thus obtains two aspects. Cultural integration directly affects the behavior of immigrants towards the new country in particular on how these immigrants want to be integrated. However, economic integration affects the integration of immigrants through the labor market in an indirect way (Gustavsson et al., 2009).

More closely, an approach to "integration" examines the life of immigrants in a host society from the position of participation in working life. "Labor market integration" thus represents the movement of minority groups such as labor immigrants into the labor market, when members of minority groups gain full access to the opportunities, rights, and services available to the members of the mainstream. Successful integration of immigrants into the labor market becomes a consequence of their educational and professional positions (Koettl et al., 2006, Turman, 2004, and Munz, 2008). However, very often, the integration of immigrants into the labor market occurs at the lowest levels of the labor system. Even if a foreigner may possess medium to high levels of education and professional capacity, an immigrant is often relegated to carry out jobs and tasks of a lower order, suffering from a process of disqualification (Heikkilä & Pikkarainen, 2008). Less educated migrants tend to relate more to their immediate neighborhood, which in turn can encourage the creation of enclaves and marginalization of migrant communities. On the contrary, if labor immigrants are successfully integrated into labor markets, increased competition, and productivity gains could yield a net welfare gain to the total region. Successful integration is becoming even more important with respect to the higher flows of immigrants that are expected to come.

Successful inclusion in the labor market remains the most powerful catalyst for social integration of ethnic minorities. To this end, it is necessary to remove both external barriers (e.g. discrimination, lack of recognition of vocational qualification etc.) and internal barriers (e.g. mismatches between skills and labor

market requirements, lack of access to information and communication technology, gender inequality) that prevent members of ethnic minorities from accessing the labor market and successfully pursuing a professional career. This requires political and legal changes on the side of public authorities, organizational and management changes on the side of businesses, and mental changes for everybody. Moreover, the inclusion of ethnic minorities can be facilitated by effective social protection systems, which help to protect members of ethnic minorities against risks (e.g. sickness, unemployment, occupational accidents, old age etc.) and to combat poverty.

A high degree of spatial segregation along ethnic lines decreases opportunities for initiating contact between different groups of society. As a result, the learning processes of migrants, as well as of the indigenous population, turn out to be mutually conditioned. A sustainable solution to overcome the social disadvantage of being a member of an ethnic minority, whether of immigrant or non-immigrant origin, must be based on a holistic and coherent approach in favor of full integration into society (Süssmuth, 2007). A strategy for social and labor market integration of ethnic minorities has to be based on universal values, which are core values of the European Union – democracy, rule of law, human rights including the right not to be discriminated against, protection of minorities, and gender equality. It cannot be only a top-down process, but needs the active participation of members of ethnic minorities and civil society.

Integration as a general and formal concept can be defined as the formation of a new structure out of single elements, or “improving” relations within a structure and adding single elements or partial structures to an existing structure and joining these to an interconnected “whole”. Integration thus refers both to the process of connecting the elements, as well as the resulting degree of interconnectedness within the “whole.” In the context of immigration, integration refers to the inclusion of new populations into existing social structures and the quality and manners in which these new populations are connected to the existing system of socio-economic, legal, and cultural relations. Much more so, however, integration is promoted by the inclusion of immigrants in the general system of nation state integration. Integration policies thus consist of special (direct) and general (indirect) integration measures. The concept does not include the effects of “positive” or “negative” external influences, like a change in relations between the immigration and emigration countries or in the state of the economy. The complex “whole” of direct and indirect integration policies as they are related to the social order of the society and to the societal definition of the immigration

situation we suggest should be called a “national model of integration” (Effectiveness of National Integration Strategies Towards Second Generation Migrant, 2001).

Accordingly, the focus is on what “integration” means in a certain context. A lot of ambiguity can be found in the way in which integration is defined. Different socioeconomic, legal, political, and cultural dimensions of the integration process are relevant and the term “integration” is thus used in different contexts and meanings (Housing and integration of migrants in Europe, 2007). Taking into account multiple contradictory approaches to the characterization of integration of immigrants, the basic argument in analysis of labor market integration lies in an assumption that integration positively affects the economic life of immigrants. However, considering the multiplicity of indicators to characterization of labor market integration, official authorities such as Eurostat, OECD, British Council, and the Migration Policy Group only use several of them for monitoring the labor market integration of immigrants. Such a diverse amount of research on labor market integration of immigrants implies also multiplicity of approaches to classification of basic indicators of integration. Likewise, a multiplicity of qualitative or quantitative methods for analysis of a certain criteria of integration implies heterogeneity of research results and treating these results in conformity with specificity of an investigated country.

However, despite the existence of multiple researches concerning labor market integration of immigrants, one question still remains open and disputable - “what social factors potentially specify the outcome of labor market integration for immigrants?” In this research, I try to fill this gap in understanding the mechanisms, which facilitate or, on the contrary, complicate the process of labor market integration for immigrants in Finland. Despite a multiplicity of approaches to defining the term “integration,” I use perhaps its simplest specification and identify “labor market integration” as inclusion into employment, and in this circumstance set the limitation of this research. However, detailed analysis of integration based on specific quantitative methods, large databases, and original approaches to resolving methodological difficulties is undoubtedly an essential advantage of this research. At this point, I do not discuss the issue of influence of integration policies to labor market outcomes, even though this issue is implied among other things.

The integration of immigrants in a foreign country is a multidimensional phenomenon; it involves many complicated processes such as integration to economic, political, social, and cultural spheres, the acquisition of civil rights, the

recognition of qualifications, and the possibility to access new educational level and training. In this context, labor market integration represents one of the most important processes of adaptation to a foreign labor market as resulting in stable employment, good jobs, adequate wages, and social security benefits. Previous studies clearly verify that the labor market integration of foreign-born populations is often more inefficient, time consuming and socially selective than the labor market integration of the host population. Besides the characteristics of the labor markets and labor demand, the individuals' characteristics and resources, as well as the inclusiveness of labor markets and labor market institutions, play a crucial role in the integration of immigrant labor.

Depending on the criterion, which is used for characterization of labor market integration, a research obtains appropriate content and methodological validation. However, despite a diversity of approaches to this well-known phenomenon, I choose another theoretical and methodological substantiation of labor market integration processes: I utilize processes that have a time dimension and a context dimension. By "time dimension" I imply influence of "time" to outcomes of labor market integration, when "time" is considered as a period of history, as a continuity of a labor market status, as working time, etc. On the other hand, by "context dimension" I indicate the influence of a certain context for the outcomes of labor market integration, when context is measured as a period of economic development in Finland or as context of a transitional labor market or of a segmented labor market. Taken into account all the preconditions, I propose following hypothesis to be verified in the course of research.

Hypothesis 1: One can imply that a society (a system) has capabilities to integrate immigrants, as well as immigrants themselves integrate at the labor market by means of basic mechanisms as orientation, action, functionality, motivation, etc., which differently affect the outcomes of integration.

Hypothesis 2: The Finnish labor market can be seen as transitional labor market, which differently affects the outcomes of labor market integration for immigrants and are, at the same time, time-sensitive contextual mechanisms of integration.

Hypothesis 3: The Finnish labor market is a segmented labor market, which significantly affects the outcomes of the integration of immigrants. These mechanisms are also time-sensitive contextual mechanisms.

Hypothesis 4: The flexibility of the Finnish labor market as a macro factor potentially differently affects the labor market integration of immigrants at the

individual level. The notion of flexibility therefore obtains dualistic meaning as a macro-micro factor.

Verification of the above-mentioned hypotheses is a difficult task to resolve only in the frame of the present research. The multidimensionality of research is accompanied by a dimensionality of time and context, in which labor market integration occurs. However that may be, this research reveals only one side of the problem as social time- and context-dimensional mechanisms of labor market integration of immigrants in Finland. Besides this, the research also considers the significance of a long period of historical, economic, political, and social development of Finland as an important factor of restructures in the labor market.

Having introduced the topic, the content of this dissertation is organized as follows. The second chapter “Development of Finnish labor market” describes the main trends on the restructuring of the Finnish labor market, Finnish Welfare State, and employment policies from the 1960s-2000s. It also considers the role of the labor force with foreign origins in the Finnish labor market and turns to an analysis of labor market, immigration, and integration policies in Europe, as well as the integrative capacity of the Finnish labor market. In the quality of basic theoretical argumentation, the third chapter “Theoretical background” describes notions of social and system integration (Lockwood, Durkheim, Parsons, Habermas), labor market segmentation theory (Loveridge and Mok, Gordon, Bailey and Waldinger, Massey), theory of transitional labor markets (Schmid and Gazier, Koster and Fleischmann, Brzinsky-Fay, etc.), and the concept of labor market flexibility (Atkinson, Boyer, Harvey).

In many respects, I construct the logic of this research on the foundation of traditions of sociological empiricism as based on specific quantitative data contained in micro panel data, longitudinal databases, population registers, and their statistical and mathematical processing. The fourth chapter of this dissertation, “Research data and methods,” provides substantiation of research logic, data, and methods used, as well as it contains basic principles of research methodology. The chapter following presents consistent observations and the main research results for the main empirical sections. The subchapter “Trajectories of labor market integration” examines trajectories as “paths” of labor market integration that immigrants follow over time. Having turned to the specificity of integration of employment for immigrants, the subchapter “Working time flexibility” considers the significance of working time flexibility for labor market integration. The three last subchapters specifically deal with the integration of unemployed immigrants. The subchapter “The time-factor of

transitions from unemployment” observes how transitions from unemployment contribute to labor market integration. This subchapter focuses on an analysis of the time in which unemployed immigrants spend in unemployment until they realize transitions to various statuses in the labor market. The next subchapter, “Transitions from the labor market training,” is based on the same methodology; however, it considers the significance of continuity of labor market training for labor market integration. Finally, the last subchapter, “Full integration vs. reduced integration,” deals with typical trajectories of labor market integration for unemployed immigrants, as well as considers the significance of birth cohort and period effect in transitions from unemployment.

Extensive empirical results contained in the fifth chapter find substantiation in the chapter “Conclusion and discussion,” from the position of basic theoretical concepts, theoretical substantiation of processes, and analysis of time-sensitive contextual mechanisms of labor market integration. Finally, the two last sections, “References” and “Appendix,” provide a bibliography of used literature and the main statistical and descriptive information to the chapter “Analysis.”

2 DEVELOPMENT OF THE FINNISH LABOR MARKET

A country of net emigration up to the 1990s, Finland has had to reconfigure its approach to migration and inclusion in recent years. The principles put into the basis of its integration policy promoted adaptation of immigrants into the labor market and in that way “opened” the labor market for immigrants. Again, the idea of equal opportunity and access should underpin integration efforts in this sphere by tackling the disadvantages immigrant and minority groups face in entering the workforce (European Civic Citizenship, 2005; Huddleston et al., 2011; Niessen et al., 2007; Bilgili et al., 2015; Callens, 2015; Settling In: OECD Indicators of Immigrant Integration, 2012; Süßmuth, 2007; Policies on Integration and Diversity in Some OSCE Participating States, 2006; Governance, the Third Sector and New Migrants: a comparative study, 2005; Forsander, 2002; Heikkilä & Pikkarainen, 2008; Timonen, 2004; Harinen et al., 2007).

During its long period of economic restructuring, Finland has taken steps to create an integration policy for immigrants in the form of social measures taken to encourage immigrants to find an active role in Finnish society (Pehkonen, 2006). With the establishing of a committee on immigration and asylum policy in 1995, the focus of Finland’s first immigrant policy was attributed to the great economic depression of the early 1990s, which coincided with the reception of the first large groups of asylum seekers from Somalis. In the 2000s, the partly experienced and partly anticipated labor shortage in certain fields turned political attention to labor immigration, as well as the very high unemployment of certain ethnic groups, especially those with refugee backgrounds (Tuire, 2009).

In this chapter, I look at the three important macro factors, which potentially, and significantly, affected the process of labor market integration of immigrants, from the position of an analysis of historical and economic developments in Finland. The factor of long-term restructuring in Finland has admittedly affected the formulation of economic policies, immigration, and integration policies in the course of political restructures in Europe and enlargement of the European Union in 1990s. In this context, I look at the integration policies formulated in Europe and Finland during the development of the politics of the welfare state, and at the

basic political directions of integration policies applied to immigrants in Europe and, in particular, in Finland. Finally, in the concluding part of this chapter, I look at the integrative capacity of the Finnish labor market and its basic indicators from the position of a study of basic “labor market outcomes,” which immigrants have had as a consequence of realized integration policy and the integrative capacity of the Finnish labor market.

2.1 Employment- and integration policies in 1960s-2000s

Global processes transforming the world economy since the 1970s have essentially affected the development of global labor market. Technological change led to a decomposition of the working class, involving a new segmentation of the labor market along the lines of large flows of immigrant labor. Since the middle of the 1970s, the economic crisis rapidly extended from country to country, and many nation-states turned out to be exposed to the influence of global economic shocks. From the time when governments in Europe attempted to suspend immigration as a way of controlling unemployment, policymakers and politicians have joined the debate over the role of foreign workers as “shock absorbers” in industrial economies. It would appear that monocentric reliance on traditional large-scale market-driven, large-organization and central-government-initiated development processes have steadily weakened the capability of territorial communities to confront the challenges of worldwide economic restructuring by indigenous innovation and flexibility (Hollifield, 1992; Stöhr, 1990; Bommers & Geddes, 2000).

During the late 1970s and in the 1980s, the Nordic countries experienced the same problems of restructuring as many other European countries. It is evident that the policy measures, which once created wealth, did not produce effective resistance to decent global challenges (Stöhr, 1990). For a long time, European authorities failed to create and implement appropriate policy for regulation of the post-war immigrant inflows and refugee influx. In this context, usually announced as a public policy goal, integration rarely has any agreed upon social or political definition (Ireland, 2004). Since the mid-1980s, the issue of integration has obtained new intensification of cooperation in this field among the OECD member states and the member states of the Council of Europe (Miles & Thränhardt, 1995).

Parallel to developments in transnationalism and the restructuring of economic and political content of the concept of the welfare state in Europe since the 1960s, Finland also experienced the restructuring of the welfare state and a gradual transition from a regime of accumulation to the regime of decentralizing regional policies with accent to economic growth and competition. The concept of centralized state planning has developed already in the 1950s; however, only since the 1960s has the nation-state undertaken an attempt to create new regulation of economic activities in the peripheral area and creation of a balanced structure with full employment in regions. In the end, development of the Finnish model of the welfare state becomes more spatial and connected with the notions of strategy, security, a coherent nation, and societal order (Moisio & Leppänen, 2007).

In the 1960s and 1970s, unemployment became the major threat to societal order and economic growth, especially in areas, which are more vulnerable to unstable economic development. Economic recession in the 1960s thus created impulses to revise employment policy in Finland. For example, the number of participants in employment policy measures quadrupled during the two recessions in the years 1973–75 and 1977–80, when the focus of Finnish active labor market policy was shifted towards selective employment measures. Already in the 1980s, Finland became one of a few European countries having rather low unemployment rates, well-developed corporatist bargaining structures, and active labor market policies. The economic boom in Finland lasted until the 1990s. Like many European countries in the beginning of the 1990s, the national economy of Finland fell into a period of economic stagnation. In this situation, corporatist labor market institutions, which effectively existed in the years prior, proved to be ineffective as unemployment rates significantly increased from 3.5% to 18% during the years 1990-1993. The bottom of the economic depression passed by the end of 1992, however, and the government started to restore sustainable economic growth and improve the employment situation (Moisio & Leppänen, 2007; Kiander & Pehkonen, 1997; Kiander & Vartia, 1996; Hämäläinen, 1998).

The interaction between the Finnish state and its territory has shifted especially since the early 1990s. Taking into account the collapse of the Soviet Union, parallel to essential economic restructuring, the central importance of “territory” as a major feature of the nation-state obtained new dimensions and significance. Observing the transformation of Finnish state strategies over a period of forty years, one can conclude that the gradual change from equality regimes to competition regimes not only exemplifies the gradual adoption of the rules of the

global marketplace, but also potentially changes the ways in which the state territory is perceived in state strategies. Hence, the state territory is considered not only as a key resource for increasing economic growth, but also as the most important basis for societal order (Moisio & Leppänen, 2007).

Historically a country of emigration, Finland has been a rather closed society that did not attract immigrants and it was not until the early 1980s that Finland became a regular net recipient of immigrants. Until the early 1990s, Finland's immigration policies were primarily concerned with security, as well as immigration, and the asylum policy was strictly to preserve the national state. In the beginning of the 1990s, when immigration to Finland started to increase, mostly a result of the "ethnic return migration" from the former Soviet Union and significant socio-economic and political changes, such as the break-up of the Soviet Union and Finland's membership of the EU, significant changes occurred in how migration was managed in Finland (Return Migration: Policies and Practices in Europe, 2004; Effectiveness of National Integration Strategies Towards Second Generation Migrant, 2001).

Concurrently to the deep economic recession in the 1990s, the Finnish welfare system also had to respond to the challenges of an ageing population, falling birth rates, changes in family structures, and an increasing immigrant community. In attempts to maintain basic features of the system, Finnish social policy ought to consider essential economic and demographic changes in the society. In other words, restructuring was defensive and intended to carry the system over a crisis period, not to dismantle it (Timonen, 2003). In the context of essential economic and political restructuring in Finland during the 1970s-1990s, parallel to increasing immigration process, the policy of integration of immigrants into a Finnish society was mostly conditioned by retention of the welfare state from undesirable exogenous impacts, which could potentially originate from migratory inflows.

2.2 Labor market-, immigration- and integration policies in Europe

2.2.1 Legislation on integration policies in the EU and Finland

The Amsterdam Treaty represented a turning point in the European Union's commitment to work together in the fields of immigration and asylum policy. In its conclusions, adopted in Tampere in 1999, the European Council not only

reasserted its determination to make full use of the possibilities opened by the new Treaty provisions in these areas, but also gave comprehensive guidelines on the policies to be developed in a common European Union immigration and asylum policy. The Thessaloniki European Council in 2003 stressed the importance of this principle yet again, highlighting the need for a comprehensive approach taking in not only the economic and social aspects of integration, but also cultural, religious, and political dimensions (Presidency Conclusions of the Tampere European Council, 2000; Communication from the Commission to the Council, 2003; Destination Europe, 2004).

Although the specific needs of individual migrant groups must be considered, integration is ultimately aimed at granting full access to migrants to existing institutions; access to the labor market becomes crucial for social integration. The Hague Program, agreed upon by the European Council in November 2004, placed the integration of immigrants as one of the most relevant policy areas to be developed in the next years. Based on The Hague Program, the European Council adopted the Common Basic Principles for Immigrant Integration Policy, which provided a first decisive move towards the progressive establishment of a common “EU framework on integration.” This approach looks at integration in a new way as a dynamic, two-way process of mutual accommodation by all immigrants and residents of Member States. Employment is declared to be a key part of the integration process and is central to the participation of immigrants, to the contributions immigrants make to the host society, and to making such contributions are visible (Carrera, 2006). Integration policies for immigrants have been an object of attention of the Council of Europe since its very creation (see Policies for the integration of immigrants in Council of Europe member states, 2003). Initially, the Parliamentary Assembly devoted considerable attention to the issue of the integration of immigrants (Recommendation 712 (1973); Resolution 631 (1976); Recommendation 1206 (1993); Recommendation 1500 (2001); Recommendation 1596 (2003); Resolution 181 (2004)).

The Assembly also recalls the importance given to the integration of immigrants in the overall activities of the Council of Europe, namely in the Directorate for Social Cohesion, through the works of the European Committee on Migration and its Committee of Experts on Integration and Community Relations. The Assembly, therefore, reaffirms its vision of Europe as a multinational and multicultural society where immigrants are included as equal members, based on equality of rights and opportunities for equality of obligations, in the respect of the functioning of democracy, cultural diversity, and the rule of

law. Equality of rights and opportunities for equality of obligations can be achieved only through an overall integration strategy aimed at establishing an appropriate legal framework that ensures effective implementation of the law and access to legal remedies against alleged violations, involves immigrants in its elaboration and implementation, and informs the entire population on its objectives and principles (Policies for the integration of immigrants, 2003).

Integration policies have dualistic goals as they both aim to provide immigrants with the instruments to function in the society where they live, and develop their potential while preserving their cultural and ethnic identity. They should also familiarize the non-immigrant population with the rights of immigrants, their culture, traditions, and needs. As a response to increasing resettlements of immigrants and increasing social impact of immigration, most of the EU Member States have developed measures and policies to support and improve the integration of immigrants (Study on Immigration, Integration, and Social Cohesion, 2005). Finland, like other EU Member States, has over the past decade sought to formulate immigration policies that encourage the entry of labor migrants to meet the demands of its labor market, while streamlining asylum procedures to prevent unwarranted entries. A great variety of national integration policies have been developed with regard to integration objectives, scope, target groups, and actors.

Currently, Finnish integration policy is mainly based on the Act on the Integration of Immigrants and Reception of Asylum Seekers (493/1999). The Act prescribes that questions of general development, planning, control, coordination, and supervision of immigrants' integration are to be dealt with by the ministry of labor, and regulates measures promoting and supporting integration. Such measures are generally available to persons who have moved to Finland and have a municipality of residence in Finland under the Municipality of Residence Act (201/1994). In March 2003, new immigration regulations were introduced in a proposed Aliens Act (22.2.1991/378; 301/2004). This Act contains measures to detain asylum seekers in detention centers rather than police cells or local prisons, provides for new financial penalties on carriers transporting undocumented migrants, and restricts the conditions under which parents of unaccompanied asylum seeking minors would be permitted to join their children. The Act regulates that the purpose of the system of residence permits for employed persons is to support the availability of labor in a systematic, prompt, and flexible manner, with consideration for the legal protection of employers and foreign

employees and the employment opportunities for labor already in the labor market.

Other Finnish legislative acts regulate separate issues of integration of immigrants. The Act on the Promotion of Integration (1386/2010) gives immigrants the right to have basic information material about Finnish society, guidance and counseling, an initial survey, as well as a personal integration plan based on the initial survey. The Act on Labor Market Subsidy (1542/1993) prescribes that the benefit is intended to support the subsistence of the unemployed while looking for work or involved in measures taken by the employment administration. The Social Assistance Act (30.12.1997/1412) prescribes responsibilities for assistance for unemployed jobseekers. Finally, according to the Act on the Public Employment Service (30.12.2002/1295), the public employment service promotes the functioning of the labor market as the employment authority shall arrange or provide employment services, labor market training, and other services for vocational development in order to promote the employment of unemployed persons through employment subsidy.

For the purposes of the Social Welfare Act (17.9.1982/710), “social welfare” means social services, social assistance, social allowance, social loans, and related measures intended to promote and maintain the social security and functional capacity of the individual, the family, and the community. As a final point, according to the Employment Contracts Act (26.1.2001/55), the employer shall in all respects work to improve employer/employee relations and relations among the employees. The employer shall ensure that employees are able to carry out their work even when the enterprise's operations, the work to be carried out, or the work methods are changed or developed. The employer shall strive to further the employees’ opportunities to develop themselves according to their abilities so that they can advance in their careers.

2.2.2 Legislation on integration policies in the EU and Finland

Parallel to elaboration of legislative acts regulating integration of immigrants in countries of the EU, another direction of activity of European authorities lies in the estimation of effects from general integration policy to a specific labor market outcome for immigrants across countries. Various European authorities represent various models of estimation of immigrants’ integration; however, here I mention monitoring carried out by Eurostat (period 1995-2013) and the OECD (period 2001-2013). Thus, classification of immigrant integration’s indicators offered by

Eurostat implies three levels of estimation as “social inclusion”, “education,” and “employment.” The last one, in one’s turn, includes activity rates, unemployment, employment, and self-employment. Comparatively, classification “indicators on immigrant integration” offered by OECD includes an extensive list of indicators of economic and social integration, such as income distribution, housing, health, native-born offspring of immigrants’ education, labor market outcomes (the employment rate, the unemployment rate, the activity rate), and civic engagement.

By looking at the heterogeneity of approaches in the estimation of integration of immigrants in European countries, one can notice a common difference in indicators of estimation. Talking about basic indicators on the integration of immigrants, I mention two levels of comparison, which are, in my opinion, crucial when considering the differences between the native population and immigrants in Finland, and the differences between Finland and the OECD in general regarding the integration of immigrants into society and into the labor market. For example, by viewing the net incomes, one can see significant differentiation in incomes among immigrants and the native population of Finland. While the mean equalized net income for the native population of Finland has a tendency to show essential variation and growth, incomes of immigrants remain at essentially lower levels and the lowest mean net income is typical for immigrants from non-European countries.

Besides net incomes, Eurostat uses other indicators for the estimation of social inclusion, such as “at-risk-of-poverty rate” and “in-work at-risk-of-poverty rate.” Overall tendencies testify that “at-risk-of-poverty rate” for the native population of Finland remained almost three times lower than the same rate for immigrants from non-European countries. Comparatively, the “in-work at-risk-of-poverty rate” is almost three times higher for immigrants from non-European countries than the same indicator for the native population. Indeed, the lowest chance to be at risk of poverty or social exclusion exists for the native population of Finland, whereas for immigrants from non-European countries the highest risk of poverty as a share of poverty or social exclusion comes even to 42% on average. Hereby one can see the evidence of differentiation of immigrants especially from non-European countries as concerning income distribution and risk of poverty. The OECD reports similar results regarding social inclusion of immigrants in Finland. However, in Finland, the poverty rate for immigrant households is remarkably higher than the same indicator in the OECD. A significant difference in poverty

rates between the native population and immigrants is more typical for Finland than for the OECD as well.

One should remember, however, that besides indicators of social inclusion, the factor of educational attainment more often gives birth to growing specificity of integration processes for immigrants. One of the groups of indicators created by the Eurostat reflects participation in lifelong learning of populations aged 18-74 years. Principally, those immigrants in Finland from foreign countries are more active in education and training as their rate of participation and lifelong learning is higher than the same standing for the native population. On the other hand, the lowest share of young people neither in employment nor in education (15-34 years) remains among the native population of Finland, while a share of young people from foreign countries remains at the highest level in the overall distribution. However, in the overall structure of early leavers from education and training (18-24 years), the share of immigrants from foreign countries is almost two times the share of the native population. Early leaving from education and training, as a reason of employment, is peculiar only for the native population, while among immigrants this phenomenon is almost absent.

Finally, looking at the overall educational attainment levels between immigrants and the native population in Finland, one can see that a share of immigrants from foreign countries, who have primary and lower secondary education, is much bigger in comparison to the native population and immigrants from EU-countries. Comparatively, the share of immigrants from foreign countries having tertiary education is the smallest in comparison to natives and EU-immigrants having the highest level of education. Against the background of general tendencies, immigrants from European countries have objectively higher levels of education, as well as a share of immigrants with upper secondary and post-secondary education is the highest. On the other hand, a share of immigrants from EU-countries having primary and lower secondary education is essentially smaller than the overall share of immigrants from foreign countries in Finland. Typically, in comparison to immigrants, the native population of Finland has a considerably higher level of education as the share of the native population having the tertiary education approaches on average one third of the population in this group.

Compared with other indicators, integration into the labor market can be relatively well measured since sufficient information is gathered in virtually all countries through regular large-scale labor force surveys. A broad range of standard indicators is also available such as, for example, OECD indicators on

immigrant integration. The employment rate is the main indicator in this respect. Thus, taking into account the period from years 1995-2013 (Eurostat), an insignificant increase in employment rate existed for the native population of Finland within the limits of 60.1 - 69.2%. However, if increase of employment rate for the native population has had more or less a stable character, the dynamics of the employment rate for immigrants was even more essential, and the employment rate for immigrants from EU-countries in many respects even exceeded the same indicator for the native population.

The employment rate of immigrants was essentially dependent on a period when Finland experienced an especially high inflow of immigration. Both in the beginning of the 1990s and in 2000, parallel to an increase of immigration to Finland, the employment rate for immigrants from foreign countries dramatically decreased. The further stabilization of immigration inflows affected the employment rate of immigrants, as well as has had a tendency to increase the level of comparable employment rate to the native population of Finland. In comparison to the native population and immigrants from foreign countries overall, immigrants from EU-countries have had a more beneficiary position in the labor market because, since 2005, the employment rate for them essentially exceeded the rate of employment for the native population.

Based on an analysis of the period since 2000s (OECD), the difference in the employment rate between the native population of Finland and immigrants still has had a negative character; in Finland, this difference was even more essential than it is the same in the OECD. Comparatively, OECD employment rates for immigrants and the native population were not so different. If the employment rate for the native population in the OECD remained at the level of 66% to 68% during the 2000s, the same indicator for immigrants in the OECD fluctuated from 61% to 66%. Since the native-born offspring of immigrants tend to be youngest in most OECD countries, the employment rate for young immigrants in the age range of 15-24 years was slightly lower in Finland than the analogous indicator for the OECD. At the same time, the difference in employment rates for young immigrants and the native population in this group were slightly higher in the OECD than it is in Finland.

The influence of educational background to the employment rate is also an important factor for integration of immigrants. Overall, the employment rate of low-educated foreign-born population in the age group 15-64 years in Finland was similar to the same indicator in the OECD (around 53%). However, the difference with the native-born population in employment rates in the

corresponding group came to almost two times of that in Finland, and in the OECD, this difference was almost absent. Comparatively, in Finland, the employment rate of highly skilled immigrants remained at the same level with the employment rate as applied to the OECD. Typically, the employment rate for highly skilled native populations is almost eight times the same level for highly skilled immigrants as in Finland as in the OECD.

Corresponding to the employment rate, indicators of immigrant integration include one more parameter, or “the unemployment rate.” According to Eurostat, the unemployment rate for the native population of Finland gradually decreased from 17% in 1995 to 8% in 2013, whereas the unemployment rate for immigrants from foreign countries has had a more fluctuated character. The dynamics of the unemployment rate was noticeable until the 2000s, when the highest share of unemployed immigrants approached 31.4%. Later dynamics, however, had a more positive character, when the unemployment rate for immigrants from foreign countries decreased to 14.8% in 2013. Comparatively, the unemployment rate for immigrants from EU-countries was higher than the same indicator for the native population, having been, at the same time, significantly lower than the overall unemployment rate for immigrants from foreign countries. According to OECD Statistics, the unemployment rate for the native population remained almost at the same level as in Finland as in the OECD. On the other hand, the highest unemployment rate with regards to immigrants in Finland has had a tendency to decrease during the period since the beginning of the 2000s. However, in Finland, the difference on this parameter between immigrants and the native-born population was achieved more than 8 times, whereas in the OECD this difference was essentially lower.

The factor of educational attainment of immigrants, undoubtedly, affected their unemployment rate as in Finland as it did in the OECD. Basically, the unemployment rate for low educated immigrants in the age group 15-64 years in Finland almost two times exceeded the unemployment rate of highly educated immigrants. Comparatively, in the OECD, the same difference exists between low and highly educated immigrants, even though the unemployment rate for both groups is remarkably lower than the same parameter in Finland. Significantly, that difference in unemployment rate between the native population of Finland and foreign-born population was rather high and came to more than eight times. Comparatively, in the OECD, the difference between the native population and immigrants in unemployment rate is essentially lower, even though highly

educated immigrants experience unemployment more often than low educated immigrants do.

2.2.3 Monitoring of Labor Market Policies by the Migrant Policy Group (MIPEX)

In contrast to approaches by the Eurostat and the OECD, which offer a set of indicators for estimating the integration process from the positions of separate standard parameters, the MIPEX offer another approach to estimating the integration policy in countries of the MIPEX. The latter aims to provide a comprehensive tool that can be used to assess, compare, and improve integration policy across a broad range of differing environments. From Round to Round, the MIPEX includes various directions of estimation, the basic of which include education, labor market mobility (inclusion), family reunion, political participation, long-term residence, access to nationality, and anti-discrimination. By concentrating on specificity of participation of immigrants in employment, I will mention only two directions of monitoring, which are “labor market inclusion” in MIPEX Round 2004 and “labor market mobility” in MIPEX Rounds 2007 and 2010.

MIPEX I

The indicators of labor market inclusion offered by MIPEX Round 2004 included several basic directions of monitoring as “access and eligibility,” “security of employment status”, “labor market integration measures”, and “rights associated with labor” (Fig. 1). According to MIPEX-monitoring conducted in 2004, in comparison to the average level of EU-countries, Finland carried out more effective integration policy on such directions as access, eligibility, and security, yet had lower indicators than other EU-countries on the directions “...labor market integration measures and rights associated with the labor status”.

One of the indicators of monitoring “access and eligibility” estimates to what extent the eligibility requirements are developed for the employment status and how easy it is to access the labor market. With regards to Finland, different procedures exist for EEA nationals for recognition of academic and professional qualifications in comparison to third country nationals. Restrictions exist concerning the employment of third country nationals in the public sector, and other limiting conditions and restrictions for the granting of self-employed status for third country nationals, such as linguistic ability.

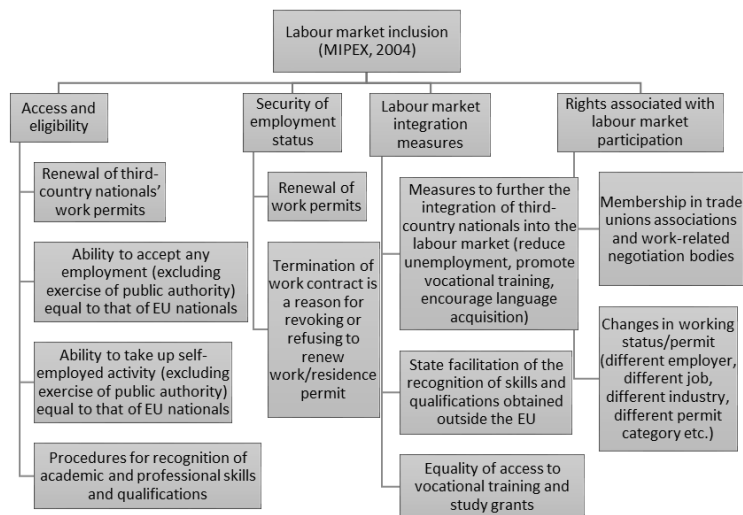


Figure 1. The indicators of labor market inclusion offered by MIPEX Round 2004

Concerning “security of employment status,” most countries have more than one work permit scheme in place and, typically, different systems have different conditions in terms of duration, whether the individual is tied to a specific employer or sector. Because of the complexity involved in each country, the monitoring focuses on what happens following admission for all permits of one year or more in terms of how easy it is to renew work permits, and the security of the status for the migrant worker after the termination of the permit. In Finland, except for seasonal permits, all work permits are in principle possible to renew. A residence permit is not necessarily revoked after the termination of a work contract. If the individual has more than three years of legal employment, other factors are considered as length of residence or worker’s social security history.

Regarding “labor market integration measures,” Member States have committed themselves to reduce significantly the gaps in rates of unemployment between non-EU and EU nationals. The first results from working groups set up within the open method of co-ordination suggest that there are significant obstacles for migrants to access learning opportunities. In this section, the monitoring focuses on whether equal access to education and vocational training exists and tests the commitment to reduce the gap in unemployment by asking what policy measures in terms of work-related integration have been introduced for migrant workers. In Finland, equal treatment in terms of education and vocational training appears only after 1-3 years of legal employment, when national targets are set for reduction of unemployment of migrants, as well as vocational training and language programs are arranged.

Relating to “rights associated with labor,” market participation rights associated with job security and access to representation through unions and other associations are crucial elements of an inclusive and open labor market. It should be noted that rights of immigrant workers could vary greatly according to their type of work permit. As with the previous indicators, the monitoring focuses on all those holding a permit of one year or more and considers the rights of third country nationals to change working status or work permit, to join and become an active member of a trade union or other professional organization. In Finland, the right to change status is only granted after 1-3 years of employment. While membership in unions and other professional associations is allowed, access is restricted for elected positions in unions.

MIPEX II and III

According to indicators on the results of Rounds in years 2007 and 2010, Finland carried out favorable integration policy, scoring fourth place overall behind Sweden, Portugal, and Canada. Based on the overall MIPEX-score in Finland and 27 MIPEX –countries as reported in 2007 and 2010, Finland has had a slight superiority in realization of integration policy. Like other countries, attracting labor migration, Finland successfully promoted migrant labor market mobility. Even though immigrants still encountered many obstacles on several key dimensions where Finland lagged behind a range of countries, its areas of “weakness” such as citizenship and long-term residence were better than what most newcomers experienced on average in Europe (Huddleston et al., 2011; Niessen et al., 2007).

In the context of efficiency of labor market integration, the policy “labor market mobility” was considered as the basic one. In particular, an analysis of this policy’s direction was based on consideration of whether legal third-country nationals have comparable workers’ rights and opportunities like EU nationals to access jobs and improve their skills. The basic indicators of the “labor market mobility” direction included “access,” “access to general support”, “targeted support” and “workers’ rights” (Fig. 2).

The first policy direction “Access” is based on estimation if legal migrant workers and their families can access and change jobs in all sectors like EU nationals. In one’s turn, immediate access to employment, access to private sector, access to public sector, immediate access to self-employment, and access to self-employment are estimated in details. In Finland, immediate access to employment is possible only for long-term residents and for limited categories of

residents on temporary work permits (excluding seasonal workers). Taking this into account, if third country nationals are able to access any employment under equal conditions as EU nationals, access to the private sector is open for all the immigrants and there are no additional restrictions than those based on type of permit mentioned earlier. On the other hand, considering if third country nationals are able to accept any public-sector employment, excluding exercise of public authority, under equal conditions as EU nationals, access to public sector activities serving the needs of the public sector is essentially restricted for immigrants.

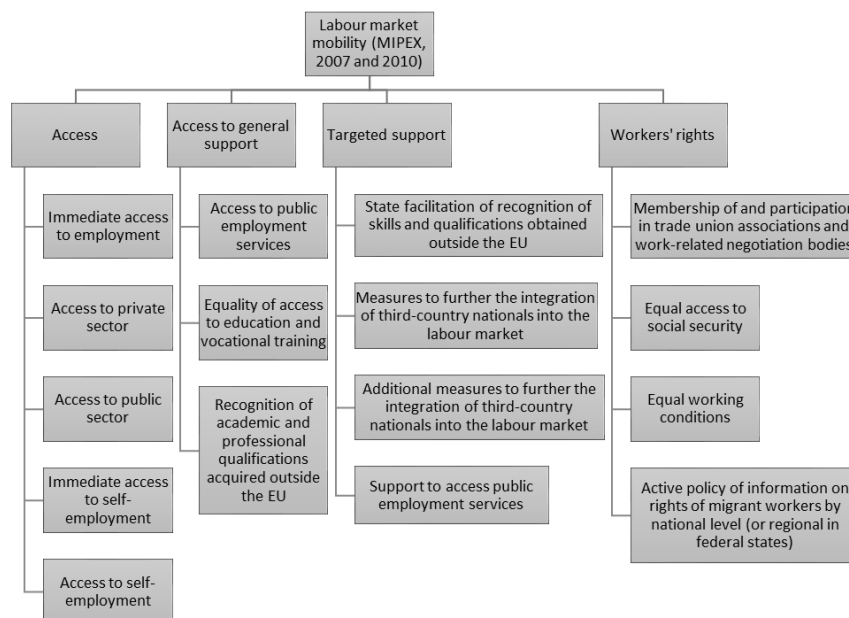


Figure 2. The indicators of labor market inclusion offered by MIPEX Rounds 2007 and 2010

Finally, allowing for what categories of third country national residents have equal access to self-employment as nationals, immediate access to self-employment is open for all the immigrants just as it is for all residents. Long-term residents, residents on temporary work permits (excluding seasonal workers), and residents on family reunion permits have immediate access to self-employment. Essentially, then, if third country nationals are able to take up self-employed activity under equal conditions as EU nationals, access to self-employment is also open for all immigrants and there are no additional restrictions to self-employment.

The second policy direction “Access to general support” estimates if legal migrant workers and their families can improve their skills and qualifications like EU nationals. In one’s turn, three positions are appraised. They are access to public employment services, equality of access to education and vocational training, and recognition of academic and professional qualifications acquired outside the EU. By considering if residents have access to placement and public employment services under equal conditions as EU nationals, access to public employment services is open for all immigrants, as well as residents from foreign countries that have equal treatment with nationals. However, equality of access to education and vocational training is essentially limited for immigrants, because only long-term residents and limited categories of residents on temporary work permits (excluding seasonal workers) have equality of access to such. Finally, if residents from foreign countries have equal recognition of qualifications, the recognition of academic and professional qualifications acquired outside the EU is also limited, as well as different procedures for the recognition of qualifications exists for EU and third country nationals.

The third policy direction, “Targeted support,” considers if legal migrants can have their specific needs addressed as workers born and trained abroad. According to the MIPEX, as it concerns state facilitation of recognition of skills and qualifications obtained outside the EU, Finland has elaborated its national guidelines on fair procedures, timelines, and fees for assessments by professional, governmental, and non-governmental organizations. This has been done in combination with the establishing of state agencies or information centers that promote the recognition of skills and qualifications. Measures to further the integration of third-country nationals into the labor market have also been expanded as national policy targets to reduce unemployment of third country nationals, to promote vocational training for third country nationals, and to improve employability through language acquisition programs. However, additional measures to further the integration of third-country nationals into the labor market are limited by national policy targets. Support to access public employment services as a right to take part in public employment services is not a part of the integration policy for newcomers, as well as required training on specific needs of migrants is not provided.

The fourth policy direction, “Workers’ rights,” takes into account if legal migrants have the same work and social security rights like EU nationals. Taking this into account, third country nationals have equal access to social security (unemployment benefits, old age pension, invalidity benefits, maternity leave,

family benefits, and social assistance). Membership and participation in trade union associations and work-related negotiation bodies is open for everybody, as well as third country nationals have got equal access with EU nationals. However, equal access to social security is restricted; third country nationals have no equal treatment in all the areas of social security policy. On the other hand, considering if third country nationals have guaranteed equal working conditions, equal working conditions exists for everybody, including third country nationals in all areas. Nevertheless, the active policy of information on rights of migrant workers is limited; employers in certain regions are not interested in migrant workers and no active policy of information exists.

2.3 Integrative capacity of the Finnish labor market

The integrative capacity of the labor market implies a certain infrastructure of the labor market in the form of a multidimensional system, which contains strategic resources, or capability, and organizational infrastructure, which might provide a foundation for the global expansion and latent linkages within the labor market. In other words, the integrative capacity turns out to provide sustainability of the labor market and a larger integration of various categories of working populations into it. The dimensions of the integrative capacity can be various: from the system of integrative, maintenance, and exclusionary transitions at the labor market (Räisänen & Schmid, 2008) to the employment quality concept (Measuring quality of employment, 2010), or to the unemployment quality concept (Sengenberger, 2011).

2.3.1 Quality of employment

From the perspective of the International Labor Organization, the quality of employment reflects mainly on security of tenure and prospects for career development. However, besides this obvious aim, quality of employment also concerns working conditions, working hours, safety and health, fair wages and returns to labor, opportunities to develop skills, balancing work and life, gender equality, job satisfaction and recognition, and social protection (Measuring quality of employment, 2010). Comparatively, the approach offered by the United Nations Economic Commission for Europe (UNECE) includes a full range of indicators describing the quality of employment, among which several indicators

such as part-time employment, overqualification, temporary employment, and self-employment are considered as primary ones. In the context of the integrative capacity of the labor market, these indicators seem to be the basic ones.

Following the logic of the ILO and the UNECE, and estimating the integrative capacity of the Finnish labor market, I take into account the widening non-standard forms of employment and tendency for over-qualification among immigrants as indicators of potentially decreasing quality of employment. The OECD statistics used for these purposes reflect the over-qualification rate as one of indicators concerning immigrant integration. In this case, “over-qualification” refers to a situation when the actual level of formal education is higher and does not correspond to requirements for possession of a job. Owing to limited language skills, inefficient professional networks, and non-recognition of a qualification, the limited transferability of human capital makes it more likely that some immigrants will take up jobs below their formal education level (Settling In: OECD Indicators of Immigrant Integration, 2012).

Regarding the integration of immigrants in Finland, the over-qualification rate of immigrants here comes to almost 30%; whereas in the OECD this indicator is a bit lower (OECD, period 2001-2013). Essentially, however, the tendency of over-qualification among immigrants in Finland as in the OECD is more than ten times greater than the same tendency among the native population of Finland or of OECD countries in general. Significantly, the tendency for over-qualification among recent immigrants is even higher both for immigrants in Finland and for immigrants in the OECD; the difference in over-qualification rate between recent immigrants and the native population is almost twenty times. Even in comparison to OECD countries, this is an exceptional case. Taking into account the economic welfare of a country, the over-qualification rate of the population born in a low-income country remains at the higher rate as in Finland as in the OECD (around 33%). Likewise, the difference in the over-qualification rate between the native population and immigrants from low-income countries is one of the highest.

However, besides the over-qualification rate, part-time employment also indirectly testifies to decreasing quality of employment. A full-time or part-time distinction in the main job is made based on estimations in all countries, where part-time is determined on the basis of whether the usual hours worked are fewer than 35; full-time is on the basis of whether the usual hours worked are 35 or more. For example, in Finland, a share of the part-time employed among the native population remained at around 12% during the period of 1995-2013, whereas the dynamics of part-time employment among immigrants from foreign

countries and especially for immigrants from European countries was more essential (Eurostat). A share of part-time employed immigrants from foreign countries approached a maximum twice – in 1997 and 2004 – after which this share gradually decreased to 17.7% (2013). A share of part-time employed immigrants from European countries has remained at relatively low levels, having achieved a minimal level in 2009 (11.6%). Comparatively, a share of temporary employees among immigrants from foreign countries was higher, approaching a maximum of around 39% in 1997-1998 (Eurostat). After 1998, however, this share gradually decreased to a minimal level of 17.8% in 2009. Significantly, a share of temporary employees among immigrants from European countries was comparatively 3-4% lower than an analogous share among immigrants from foreign countries was. Also of interest, a share of temporary employees among the native population of Finland remained almost at around 16% during the period 1995-2013 (Eurostat).

Typically that a share of self-employed persons among the native population of Finland remained almost 36 times higher than the share of self-employed immigrants from foreign countries (around 3,000 of people in 1995-1996, Eurostat). Corresponding to the overall decreasing share of self-employed people among the native population since the beginning of the 2000s, the share of self-employed immigrants from foreign countries steadily increased and approached a maximum of 14,500 of people in 2013. A share of self-employed persons with employees (employers) among the native population of Finland slightly changed during the period of 1995-2013 and came to 89,500 people in 2013. The analogous share of immigrants from foreign countries started increasing only since 2002, when it approached a maximum of 4,600 of people in 2013. Finally, a share of self-employed persons without employees (own-account workers) among the native population of Finland remained almost at the same average level of 193,500 of people during the period 1995-2013, whereas a share of self-employed immigrants from foreign countries started increasing only since 2001 and approached a maximum in 9,900 of people in 2013.

2.3.2 Quality of unemployment

If quality of employment concerns mainly full-time/part-time employment, over-qualification, temporary employment, and self-employment, quality of unemployment contains mainly indicators of long-term, structural unemployment. The statistics provided by Statistics Finland demonstrates the

existence of essential differences between the unemployed native population and unemployed immigrants in Finland. For example, until 2013, the labor force in Finland numbered 2.5 million people and the share of unemployed persons in the overall structure of the labor force came to 301,000 people. Comparatively, the labor force of the immigrant population totaled only 106,730 people, or 4.2% from the overall number of the labor force. The share of the unemployed population in the overall structure of the labor force among the immigrant population amounted 27,000 of people and the latter number totals 8.9% from the overall share of unemployed population of Finland. Comparing the proportions of labor force and unemployed population among the native population and immigrants, the unemployment rate of the native population came to 11.9%, whereas for immigrants it was 25.3% in 2013 (Calculations are based on the Statistics of Finland; database ‘Employment’, 2013 year).

The integrative capacity of the labor market also considers mutual matching of the labor demand and the labor supply as indicators allowing conclusions about providing the unemployed population with work places. The above-mentioned capacity of the Finnish labor market is characterized in the following way as the labor supply comes to an average number of 258,000 unemployed people, whereas the labor demand accounted for an average of 35,000 workplaces. However, considering the integrative capacity of the labor market as providing not only the unemployed population with workplaces and, consequently, more transitions to employment, but also providing other categories to the population that are also looking for a job, even though they are not considered as “the labor supply”. In this case, the integrative capacity is considered as a wider concept and includes the unemployed population, the employed population, and those outside the labor force. Thus, if an average number of unemployed persons who are looking for a job comes to 258,000 people, the overall average number of those looking for a job is 1.8 times higher. Consequently, if officially the labor supply is 7.5 times higher than the labor demand, the potential labor supply also unofficially exists in the form of that population, and has persons in employment, outside the labor force, and even stay on unemployment pension. In this case, the potential labor supply is even 14 times higher than that of the labor demand (Calculations are based on the Employment Service Statistics of The Ministry of Employment and the Economy in Finland for the period January 2006 – January 2015).

Measuring the quality of unemployment, one should consider that widening “chronic” forms of unemployment include structural and long-term

unemployment, the imbalance between labor demand and the labor supply, widening exclusionary transitions, and, consequently, the poorer integrative capacity of the labor market. Thus, structural unemployment is measured through development in the number of those difficult to employ, which includes the long-term unemployed, repeatedly unemployed, those becoming unemployed after participation in employment policy measures, and those repeatedly circulating between measures (Findicator.fi).

In the case of the Finnish labor market, structural unemployment on average constitutes 56% from the overall number of unemployed persons in Finland. The group “long-term unemployed” in structural unemployment represents continuously registered unemployed jobseekers for 12 months, whereas the repeatedly unemployed stay in unemployment for more than 12 months within the last 16 months, excluding the aforementioned continuously long-term unemployed (Findicator.fi). Significantly, a share of the long-term unemployed population in Finland is higher among immigrants, and dynamics of long-term unemployment has more fluctuated characterization. While long-term unemployment for the native population has had a general tendency to decrease to 20.5% in 2013 (Eurostat), the increase of long-term unemployment was fixed in 1997, when a share of long-term unemployed persons approached a level of 54.4%. However, further decline in the long-term unemployment’s rate has led to almost similar rates of long-term unemployment for the native population of Finland as for immigrants (around 23 % in 2013).

In the case of the Finnish labor market, the integrative capacity of the labor market as directed to providing the population more transitions into employment obtains specific characterization. Among the latter numbers, the average rate of long-term unemployment comes to 41.6%, and a share of repeatedly long-term unemployment to 26.1%. Typically, on average, 27.1% of unemployed persons realize a transition from employment policy measure to unemployment, and only 5% realize a transition from employment policy measure to a new measure. On the other hand, taking into account completed unemployment periods and realized transitions from unemployment to other statuses, only 5.4% of unemployed persons are employed in the general labor market, whereas 6.6% are hired on part-time employment (reduced working week). However, on average, 37.6% of the unemployed population is job-placed itself. Furthermore, the integrative capacity of the labor market becomes apparent in the form of transitions from unemployment to statuses, not implying employment as, for example, participation to employment policy measures, labor market training, or to

economic inactivity. In this case, the integrative capacity is realized in participation of the unemployed population in subsidized employment measures or labor market training. For example, on average, 9.5% are employed through employment services, while 6.9% of unemployed people start in labor market training (Calculated based on the statistics of the Centre for Economic Development, Transport, and the Environment (ELY-Centre)).

Taking into account also the dimension of the integrative capacity of the labor market as a mechanism of realized exclusionary transitions or transitions to economic inactivity, it is typical that, on average, 7 % of the unemployed move out from the labor market; around 17% complete unemployment periods for unknown reasons. Explaining the possible reasons for completion of unemployment on unknown reasons, one can turn to some historical-economical evidences of changing unemployment in Finland. Hypothetically, a reason for this is that the possible job placement of unemployed people is reported only to institutions that pay unemployment benefits, but not to Employment Services, where unemployed people were registered as “unemployed.” Unemployed people can be still in the register as “completed an unemployment period on an unknown reason,” because the register does not contain information about activity, which an unemployed person finds without assistance from an Employment Service. Hypothetically, the biggest share of unemployed people find a job in the general labor market; however, another category of unemployed people admittedly has long-term leave or retires (Laukkanen, 2012; Työllistämistukien työllisyysvaikutukset, 2005; Terävä et al., 2011; Hämäläinen et al., 2009; Alatalo, 2013).

2.3.3 Quality of subsidized employment

The main research question that appears after considering processes for “the hard-to-employ” unemployed is how to estimate the effect of subsidized employment measures on final job placement for this category of the work force. Even though among “the hard-to-employ” unemployed a rate of participation in employment policy measures is rather high, the allocation of unemployed people after completion of an employment policy measure is rather complicated and depends on many external factors. Poor indicators of disposal of the unemployed after subsidized employment measures are conditioned by complicated structural characterization of unemployment and, as a result, complicate the influence of employment policy measures to various “problem” groups in the structure of

unemployment (Terävä et al., 2011; Nio & Sardar, 2011; Hämäläinen et al., 2009; Jolkkonen & Kurvinen, 2012).

Looking at the tendencies for job placement for unemployed people in Finland during an earlier period, it becomes apparent that economic cycles mainly predetermined the dynamics of job placement. In 1988 and 1990, unemployed persons who completed LM training and participated in subsidized employment measures found a job faster than those unemployed persons who were outside the labor market for a long time. In 1992, in a time of an especially high rate of unemployment, when a number of unemployed participating in measures increased to almost two times the number of those participating in 1990, the situation changed and the job placement of unemployed people after subsidized employment measures was worse than job placement for those unemployed who were previously economically inactive (Holm & Tuomala, 1998).

Modification of the overall economic situation in Finland in a short-term also predetermined an overall change of dynamics in the participation of unemployed in employment policy measures. In the context of dynamics of the overall economic situation in Finland in the beginning of the 1990s, a factor of financial support for unemployed people became significant for predetermining processes of job placement among the unemployed. Without bias, participation in employment policy measures decreased risks of recurrent unemployment from 7-11%; however, high unemployment benefits increased risks of recurrent unemployment and negatively influenced participation of the unemployed in employment policy measures (Holm & Tuomala, 1998; Hämäläinen, 1997).

Therefore, besides specificity of an employment policy measure and financial support for the unemployed, the third factor as specificity of subjects offering job places in the course of the subsidized employment measures significantly changed overall situation of job placement. One of the significant factors explaining the overall dynamics of job placement among the unemployed is participation in employment policy measures depending on the form of property of enterprises. General tendencies show that job placement in the public sector, as a rule, did not imply long-term employment, whereas job placement in the private sector increased the probability of prolonged job placement and employment. In 11% of cases, the unemployed were not counted in the register of Employment Services because of job placement in the private sector, whereas in the overwhelming majority of cases the unemployed did not appear in the register because of the classification of a small, personally owned enterprise

created at the expense of subsidizing public program (Työllistämistukien työllisyysvaikutukset, 2005; Nio & Sardar, 2011; Alatalo & Torvi, 2009).

On the other hand, analyzing the tendencies after participation in a subsidized employment measure, one can conclude that in Finland for the period of the 2000s, as in many other countries, around 40% of the unemployed participating in measures have been in unemployment status during three months after a measure has been completed. One of the most important factors of this situation is a high labor demand that also significantly influenced duration of unemployment and probability of transition from an employment policy measure to employment. However, one should consider that official indicators do not allow for concluding the influence of labor market policy as such because some kind of influence can be estimated by means of an empirical research. For example, according to various estimations, a subsidized employment measure is intended mainly for long-term unemployment and what is more important that such a measure in the public sector does not influence final job placement. On the contrary, in the private sector influence from subsidized employment measures are more positive, however, they fluctuate depending on what stage of unemployment an unemployed person is directed to measures and what time-period is used for estimating an effect from a measure. The effect from a subsidized employment measure such as job placement of the unemployed is, without bias, highly dependent on the time of entrance into a measure that is within the first three months of unemployment; with time this effect becomes weaker (Alatalo & Torvi, 2009; Räisänen & Sardar, 2014).

An analysis of the situation offered by the Ministry of Employment and the Economy represents only one point of view on the problem, because an official indicator of influence from a measure is the number of unemployed people who remain in the same status during three months after a measure is completed. This indicator does not allow for concluding about further possibilities of influence of a measure on job placement of unemployed people. Comparatively, the National Audit Office suggests that another, more descriptive, and systematically observed indicator must replace existing indicators of estimation. Without bias, according to the results of various researches, it is obvious that participation in subsidized employment measures only a temporary resolve of a problem, which is not even directed to permanent resolving of job placement for unemployed people. However, if the aim is to support job placement of people in a weak labor market position, one has to accept even the negative sides of such employment. Only a small share of the unemployed who participate in such kind of measures remained

in the previous status during the short period, whereas the probability of participation in these measures decreases with time, especially for “long-term” unemployed people (Työllistämistukien työllisyysvaikutukset, 2005).

2.3.4 Quality of employment policy measures

In the active reform of labor market support for long-term unemployed, local authorities are required to offer intensified activation measures after an unemployment spell of 500 days for at least 12 months during the following 24 months (OECD Economic Surveys: Finland, 2006). Those becoming unemployed after a measure are persons whose unemployment began after the end of a labor policy measure and, correspondingly, those transferring from measure to measure are persons who begin another measure after the conclusion of the previous labor policy measure. The same person can only be included in one group of those difficult to employ at a time, because these groups are mutually exclusive and such information constitutes cross-sectional information for the last working day of each month (Findicator.fi).

One can estimate the quality of employment policy measures by means of the indicator “the activation rate,” which includes a proportion of the unemployed population, participation in labor market measures to the sum of unemployed population and population, and participation in labor market measures. Overall tendency signifies that up to September 2015, the activation rate in Finland amounted to 26%. Considering the overall number of unemployed persons in Finland to this period (337,404 unemployed job seekers), a share of those, who participate in employment policy measures, came to 35%. Also, a share of those participating in labor market training amounted to 7.3%, whereas a more significant share of unemployed participate in subsidized employment at a level of 10.3% (Calculations are based on the Employment Service Statistics of The Ministry of Employment and the Economy, September 2015).

Time becomes one of the most important factors, explaining the outcomes of integration of the unemployed. According to estimations by the Ministry of Employment and the Economy, as well as the Centre for Economic Development, Transport, and the Environment, the overwhelming majority of salary-based measures continue 6-12 months or more than 1.5 years, whereas on the other hand, measures, which do not base on labor relations continue for 0-6 months (Terävä et al., 2011, p.45). According to estimations by the National Audit Office, recurrent participation in a measure is typical for unemployed people. A majority

of employment policy measures concern unemployed people, who have already participated in them earlier or participate recurrently later. Even though recurrent participation in a measure is emblematic, official estimations of influence from a measure concern predominantly only the first participation. Consequently, it is impossible to estimate the full influence from participation in all measures, as well as the fact that each measure can have influence at the national level as well as at regional labor market level, and can be considered from a position of influence upon participating or not participating in a measure by unemployed people.

Even though a measure would improve opportunities for job placement among unemployed people, the overall influence on the employment sphere can be imperceptible. Often, transitional statements can be critical for future job placement because an unemployed person absent from any measure does not receive the full-value of efficient help needed for faster job placement. In the present system of employment support, an unemployed person spends too much time on waiting for further activities as a part of employment services. If a salary-based measure does not lead to job placement, a passive period of employment support ensues that, in one's turn, decreases chances for faster job placement (Pitkääikaistyöttömien työllistyminen, 2011).

When estimating general tendencies, more than 40% of all employment policy measures lasted less than three months. For example, 60% of such measures as traineeship and preparatory LM training, after which further allocation of unemployed people is weaker than with regards to other measures, lasted less than three months. At the same time, subsidized employment measures, as a rule, are longer (6-12 months). Periods of participation in subsidized employment, which last at least 6 months, increase opportunities for job placement in 15% of cases, whereas shorter periods of subsidized employment lead to employment in only in 8% of cases. These statistical facts are rather important in comparison to this point, that almost half of unemployed people in Finland only end an unemployment period after two years (Nio & Sardar, 2011, p.6; Työllistämistukien työllisyysvaikutukset, 2005; Peltola, 2005; Tuomala, 1998).

Furthermore, if looking only at the tendencies of completion of unemployment during first three months, during 3-12 months and more than 12 months, one can conclude that a time factor predetermines "an outcome" of unemployment. Particularly during first three months of staying in unemployment, job placement is more effective for completion of an unemployment period, and job placement comes to almost 70%. Another dynamic concerns periods of unemployment,

which come to an end during 3-12 months and a share of the unemployed who have found a job decreases to almost 30%. However, among unemployed people who stay in this status for more than 1 year, the share of those who have found a job decreases to 14% (Laukkanen, 2012, p.12).

Consequently, there is an objective tendency to testify that a probability of job placement decreases in proportion to a period of staying in unemployment. Thereafter, a share of those who stopped looking for a job, as well as a share of moving out from the labor market to a category of economic inactivity proportionally increases. Concerning unemployment lasting less than three months the policy of employment remains the same, yet regarding long-term unemployment the policy of regulation became less and less appreciable as employment policy measures and LM training programs are given more rarely. As practice shows, the longer unemployment lasts and more episodes of unemployment an unemployed person has, consequently, there is less probability to be employed. If a cumulative period of staying in employment policy measures comes to 3-6 months, a probability to be employed comes to 50%, and what is more important, if overall duration of participation in measures comes to 6-12 months, a probability of job placement decreases to almost 37%. With time, a probability of job placement decreases significantly (Terävä et al., 2011; Pitkäaikaistyöttömien työllistyminen, 2011; Aho, 2008).

2.3.5 Quality of the labor market training

Labor market training remains one of the most important indicators of the integrative capacity of the labor market. Based on the Employment Service Statistics of The Ministry of Employment and the Economy, which considers available numbers of population in labor market training, until December 2014, 67,816 people were in labor market training and at the same time employed. On the other hand, the share of the unemployed population, which was in labor market training, was essentially smaller (49,174 people). Considering these reasons according to which labor market training periods end, one should take into account the numbers of completed as interrupted periods. Significantly, that among 56,879 people who have been at the same time employed and who ended labor market training in December 2014, 42,696 people completed LM training while another share of people interrupted their LM training mainly to start another LM training or because of health problems. Among the unemployed population, these proportions were smaller: 40,556 people ended labor market

training periods, while 32,346 people completed LM training. Among the reasons for interruption of LM training, personal reasons dominated. Essentially, the interruption of labor market training because of job-placement matching new or another qualification occurred in 2.5% of cases for employed person and in 3.3% of cases for unemployed persons.

The overall tendencies show that after completion of LM training, more than half of unemployed persons remain in the same status of unemployment, whereas only a fourth finds a job in the general labor market. The probability of staying in the previous status of unemployment in a case of interrupted training is even higher, while a probability to be employed in the labor market is comparatively lower. Analyzing further tendencies and transitions between statuses after completion of LM training, it becomes apparent that further training more often turns out to be a logical continuation of the adaptation process in the labor market. According to estimations, 34% of the overall number of unemployed people participating in LM training start a course of employment, whereas 17.5% of unemployed people move to subsidized employment measure and only 15% of unemployed persons find a job independently (Tuomala, 2002, p.18). In the overall context of LM training, the preparatory training forms only a small part of it. Its primary aim is not necessarily direct job placement but improvement of opportunities for job placement. Therefore, preparatory LM training implies partly further participation in vocational retraining. Consequently, an influence of preparatory LM training upon the open labor market is lower than analogous influence of vocational retraining (Asplund, 2009, p.17).

Conclusions

Development of the Finnish labor market has been affected by external and internal factors. The appearance of immigrants in Finland in the middle of the 1940s stipulated the development of a new approach to regulation of immigration and integration policy, occurring during a time of global economic restructures and new policy formations of the “welfare state.” So far, the role of immigrants in the labor market in Finland remains one of the most disputable issues. While the overall share of foreign labor force amounts to around 4%, as well as a share of foreign unemployment to around 9%, the quality of labor force among the native population of Finland and among immigrants radically differs. In comparison to the unemployment rate among the native population, the unemployment of immigrants has more dynamic, fluctuating, and long-term characteristics. In this connection, it is typical that a situation of unemployment

is similar for all immigrants despite citizenship; differentiation on this indicator between the native population and immigrants remains one of the highest in Europe and increases even compared to the average level in OECD countries.

In many respects, the foreign labor force is more marginalized, considering, for example, a correlation between rates of employment, unemployment, and economic inactivity; youth and recent immigrants are also more at risk of marginalization. A tendency for marginalization of employment develops especially deeply among immigrants; however, in this case, a factor of European citizenship becomes the most important one as explaining less marginalization and even more beneficial position at the labor market than the native population has. In principle, in Finland, the employment rate of the native population considerably increases the analogous indicator as comparable to an average rate in OECD countries as for the native population as for immigrants. Differentiation on the employment rate between the native population of Finland and immigrants is also much higher than the analogous indicator in the OECD countries. Substantially, youth and recent immigrants are also more marginalized in the labor market than on average in the OECD countries. Additionally, immigrants are more liable to a risk of part-time and temporary employment, whereas, on the contrary, participation in self-employment remains a prerogative mostly for the native population of Finland.

Hence, a tendency of marginalization for immigrants concerns their social well-being. While a risk of social marginalization and of growth of poverty rate is especially high for immigrants, the factor of country of origin turns out to be an influential one as concerning increasing social marginalization. In this case, an essential condition for inclusion of immigrants into the social and labor life in Finland is a factor of citizenship, classified as “the citizenship of the European Union” or “the citizenship of a third country.” Fundamentally, EU-nationals are less liable to a risk of social marginalization than non-EU-nationals. The role of Finland as concerning social marginalization of immigrants, and as comparable to the average rate of OECD countries, has more distinguishing characteristics; in Finland, differentiation between immigrants and the native population on a level of social marginalization develops strongly.

However, if among immigrants exists a more dynamic tendency to participate in education and training than among the native population, a risk of drastic marginalization occurs as interrupted education and training and transition to economic inactivity is also rather high among immigrants, especially among non-EU-nationals. It is typical, however, that the overall level of educational

attainment among immigrants is essentially lower than it is among the native population, while, nevertheless, the educational attainment of EU-nationals is comparatively higher than it is of non-EU-nationals. Potentially, the availability of higher educational attainment predetermines a situation of “softened” marginalization and position that is more privileged at the labor market under a condition of availability of citizenship in the European Union.

The fact that Finland has a position that is more beneficial among the OECD countries on indicators of labor market development is accompanied by a more effective policy of immigrant integration in comparison to the average level in the 27 MIPEX countries. Finland has achieved an especially high MIPEX index as concerning policy directions “access to the labor market” and “targeted support.” However, concerning limitations of access to the labor market, they still exist as conditioned by the time of entrance to the labor market. Immediate access to employment and access to the public sector by virtue of the immigration legislation and the entry permit regime for immigrants is restricted. Secondly, there are limitations to access to the general support for immigrants as conditioned by different conditions to education and training and recognition of academic and professional qualifications acquired outside the EU. Thirdly, concerning “targeted support,” restrictions to providing additional measures to further the integration of third-country nationals into the labor market exist, whereas support to access to public employment services is even absent. Finally, there are also limitations of workers’ rights as concerning equal access to social security and active policy of providing information on rights to migrant workers.

The integrative capacity of the labor market obtains a special role as contributing to specificity of labor integration of immigrants. On the one hand, a substantial circumstance is that a share of structural unemployment amounts more than 50% from the overall number of unemployed in Finland, whereas in a share of structural unemployment a share of long-term and repeatedly long-term unemployment aggregates almost 68%. The overall activation rate comes to almost 28%. On the other hand, the difference between the labor demand and the labor supply is more than 7 times greater. Taking into account all of those looking for a job in Finland, this difference becomes even more than 14 times. Finally, considering mostly long-term characteristics of unemployment, a share of job-placement to standard or reduced working regime after an unemployment period ends constitutes around 11%. It is typical, however, that more than 37% of unemployed persons find a job themselves. However, it is also typical that marginalization in the labor market or potentially exclusionary transitions to

economic inactivity occurs in more than 7% of cases, whereas almost 17% of unemployment periods end on unknown reasons.

The significance of educational attainment and training in the integrative capacity of the labor market is especially urgent as concerning participation of the unemployed in labor market training, and a tendency for over-qualification among immigrants. On the one hand, a high rate of completed labor market training periods potentially, but not always, predetermines job-placement for unemployed persons in the labor market. It is typical, that in 3% of cases, labor market training periods are interrupted because of job-placement to standard or reduced employment. On the other hand, a tendency for over-qualification among immigrants is especially urgent in Finland than it is in other OECD countries on average, and differentiation between the native population and immigrants on this issue is also much higher in Finland. This considered, recent immigrants, as well as immigrants from low-income countries are at risk of over-qualification and downward mobility in consequence of over-qualification.

3 THEORETICAL BACKGROUND

3.1 Social and system integration: the theoretical discourse

The frame of questions associated with social and system integration is traditionally one of key issues in sociology. Considering a society as a system, each of the specific scientific disciplines studies its own sub-system. As is such, social theory pretends to study the system as a complete examination of the social system. The systematization of society into separate functional elements implies that individuals incorporate inside a society into groups not based on patrimonial interactions but according to character of their social activity. Sociology thus considers the societal community integrated into all the sub-systems of the society.

The basis of concept of structuration lies in analysis of the basic terms such as “structure,” “system,” and “the duality of structure.” Anthony Giddens distinguishes differences in understanding of the term “structure” by functionalists and other social analysts. “Both structuralism and functionalism strongly emphasize the pre-eminence of the social whole over its individual parts (i.e. its constituent actors, human subjects)”, Giddens writes. From the position of social analysts, “the structure” is the dualism between subject and social object. “Structure here appears as external to human action, as a source of constraint on the free initiative of the independently constituted subject, structure is characteristically thought of not as a pattering of presences but as an intersection of presence and absence; underlying codes have to be inferred from surface manifestations” (Giddens, 1984, p.16). At first sight, two conceptions are different, however, they allow one to see different cores of two main terms “the system” (the first term) and “the structure” (the second term).

An approach offered by Talcott Parsons is analogous to the two above-mentioned ones since Parsons considers “the system” from the positions of criteria “action” and “situation.” In particular, he argues that, “...a concrete action system (in this case, boundary-maintaining type of system) is an integrated structure of action elements in relation to a situation” (Parsons, 1951, p.36). However, in Parsons’ theory, combination of the terms “system” and “structure”

obtains key significance. "Since a social system is a system of processes of interaction between actors, it is the structure of the relations between the actors as involved in the interactive process, which is essentially the structure of the social system," he argues (Parsons, 1951, p.25). Admittedly, Parsons combines "the system" and "the structure" as two mutually complemented terms. Does this unification of different terms mean existence of hierarchy between them, does "the system" have a lower level in the hierarchy than "the structure" or not?

According to Anthony Giddens, "the structure" in traditions of structuralism is usually ambiguous over whether structures refer to a matrix of admissible transformations within a set of rules governing the matrix. In contrast, "the system," from the position of social analysts, refers to structuring properties that allow the binding of time-space in social systems, the properties, which make it possible for discernibly similar social practices to exist across varying spans of time and space, and which lend them systemic form (Giddens, 1984, p.17; Giddens, 1979, p.199). Giddens defines more effectively interacting structural properties, entrained into the reproduction of social communities, as "the structural principles." He describes practices, which have continued "time-space" inside social communities, as "the institute". Comparatively, Talcott Parsons determines "the institute" as, "...a concept, which states that many separate situations have features in common, in terms of principles of abstraction or order, and in which, actors exhibit the same or closely similar actions" (Parsons & Shils, 1951, p.40). Two different interpretations of the term "institute" lead to two interpretations at the level of macro analysis (Giddens) and at the level of microanalysis (Parsons). However, the second interpretation of the term "institute" is closer to the interpretation of social integration by Giddens as based on the "action" of subjects, their roles, and statuses.

For Giddens, "the structure" represents rules and resources, or sets of transformation relations, organized as properties of social systems. For an individual, "the system" is based on reproduced relations between actors or collectivities, organized as regular social practices. Finally, "structuration" combines two approaches and implies conditions governing the continuity or transmutation of structures, and therefore the reproduction of social systems (Giddens, 1984, p.25). Giddens elucidates that a special feature of "structure" is an absence of subject whereas "the system," in contrast, implies cooperation between subjects and communities of subjects. Consequently, is it possible to assume that "the structure" and "the system" represent two interacting

formations; the integration of subjects occurs at the level of the structure and at the level of system simultaneously.

In this case, according to Talcott Parsons and Edward Shils, it is necessary to consider two fundamental processes as “allocation” and “integration” for maintenance of a system’s equilibrium. “By allocation we mean processes, which maintain a distribution of the components or parts of the system, which is compatible with the maintenance of a given state of equilibrium. By integration, we mean the processes, by which relations to the environment are mediated in such a way that the distinctive internal properties and boundaries of the system as an entity are maintained in the face of variability in the external situation” (Parsons & Shils, 1951, p.108). Consequently, the system’s equilibrium is maintained at a level of small groups (inside a system) and at a level of communities by means of mutual regulation between internal and external mechanisms of the working system (mechanisms of socialization and social control in the interpretation of Parsons and Shils) (Parsons & Shils, 1951, p.227). The two levels of systems differ from each other and do not underestimate the effects of each other. Like in the case of social solidarity (Durkheim), integration occurs as at the level of “structure” and at the level of “system” simultaneously. Consequently, admittedly, social solidarity does not require direct communication between subjects of a society, because at the macro level, both solidarity and integration occur automatically according to laws of equilibrium between the structure and the system.

Depending on the argument about element of “systemness” as the main element of processes of integration among individuals, one can formulate certain hypotheses about the interdependence between social and system integration. “In functionalism, interdependence is conceived as a homeostatic process akin to mechanisms of self-regulation operating within an organism,” Giddens explains (1984, p.27). In this case, the importance of biological functions such as preservation and maintenance of permanency of an internal environment is obvious (similar to an initial idea about “the function” introduced by Emile Durkheim). “The distinction between homeostatic causal loops and reflexive self-regulation in system reproduction must be complemented by one further, and final, one: that between social and system integration” (Giddens, 1984, p.28).

Consequently, “integration” by Giddens involves the, “...reciprocity of practices (of autonomy and dependence) between actors or collectivities” (1984, p.28). It is important to emphasize, Giddens writes, that as employed here at any rate, integration is not synonymous with “cohesion,” and certainly not with

“consensus” (Giddens, 1979, p.76). This approach to identification of the term “integration” is correlative with the Parsons’ approach that defines “integration” as “solidarity” if it is constructed on the principle of institutionalization, or as “loyalty,” if institutionalization is absent or insufficient (Parsons, 1951, p.77). Consequently, institutionalization as a totality of rules becomes a key criterion of integration and, “...the institution should be considered to be a higher order unit of social structure than the role, and indeed it is made up of a plurality of interdependent role-patterns or components of them,” Talcott Parsons confirms (1951, p.39).

In one turn, Anthony Giddens explains that social integration means systemness at the level of face-to-face interaction whereas system integration refers to connections with those who are physically absent in time or space (1979, pp.76-77). The mechanisms of system integration certainly presuppose those of social integration, but such mechanisms are also distinct in some key respects from those involved in relations of co-presence. From the position of Margaret Archer, “...instead of a research program devoted to precisely that goal by exploring the interplay between ‘social’ and ‘system’ integration, the ‘duality of structure’ merely presents a ‘sensitization device’ and never a corpus of propositions” (Archer, 1996, p.691). In fact, the differentiation of types of integration by Giddens is based on the principle of presence or absence of actors of integration (“presence-availability” as interpreted by Giddens). In addition, he proves earlier the introduced hypothesis about the hierarchy of structure and system from the position of mutual compliments of social and system integration. “The systemness of social integration is fundamental to the systemness of society as a whole,” Giddens argues (Giddens, 1979, p.77). However, is this gradation on types of integration sufficient for analysis?

In Giddens’ theory, social and system integration represent two ranks of sociological analysis at macro and micro levels. Consequently, social integration, which implies interaction between subjects at the level of interpersonal communication, represents a micro level of analysis whereas system integration based on virtual interaction of subjects in space and time represents a macro level of analysis. However, Giddens rejects obvious assumptions and argues that, “...these two are not infrequently set off against one another, with the implication that we have to choose between them, regarding one as in some way more fundamental than the other” (Giddens, 1984, p.139). However, one can assume that the priority of a certain level of sociological analysis is a significant factor for building hierarchy between social and system integration. In fact, the theory

of structuration of Giddens is based on equal participation of structure and system, as well as system and social integration in “the duality of structure” model.

Giddens substantiates that differentiation between micro and macro levels of analysis is inexpedient from the position of an, “...unhappy division of labor, which tends to come into being between them.” He explains that from the position of micro sociology, the subject is, “...free agent who can safely be left to theoretical standpoints such as those of symbolic interactionism or ethnomethodology to elucidate” (Giddens, 1984, p.139). On the other hand, macro sociology implies analysis of structural constraints, which limit free activity of agents and such “division of labor” leads to multiple-valued interpretations of the same processes from two sides of analysis. Is equal interaction between structure and system, as well as system and social integration, which is the main principle of the Giddens’ structuration theory, possible then? Alternatively, should one prefer one certain direction of sociological analysis?

Hence, once again, one should turn to the Parsons theory about the social system. From the position of Talcott Parsons, society as an independent social system represents an especial type, which contains all the essential preconditions for self-regulation. Parsons determines the territorial structure of a society, a system of functional formation and integrative structures controlling activity in society and regulating conflicts and competition, as a precondition for self-regulation (Parsons & Shils, 1951, p.26). He argues that every society consists of bearers of institutional roles executed by individuals and small communities. “A role is a sector of the total orientation system of an individual actor, which is organized about expectations in relation to a particular interaction context, that is integrated with a particular set of value-standards, which govern interaction with one or more alters in the appropriate complementary roles”, Parsons explains (1951, p.39).

Thus, roles are considered as integrative mechanisms of a society. In particular, Parsons reveals, “...internal integrative mechanisms created by the allocation of functions into one overall system” and, “...external integrative mechanisms as the adjustment of the system as a whole to threatened (or actual) conflicts between it and the external environment” (Parsons & Shils, 1951, p.133). According to Parsons’ opinion, the absence of integrative roles leads to an appearance of conflict and frustration in a society. “Even societies ridden with anomie (for example, extreme class conflict to the point of civil war) still possess within themselves considerable zones of solidarity,” Parsons writes (Parsons & Shils, 1951, p.204). In this case, his conception confirms the earlier developed

concepts about anomic divisions of labor by Emile Durkheim. However, if for Durkheim the main mechanism of solidarity is a function, Parsons, based on the micro approach to analysis, determines that the roles and actions of an individual's existence regulate the integration inside a society and absence of which leads to disintegration. "It must be recognized that no social system is ever completely integrated just as none is ever completely disintegrated," Parsons argues (Parsons & Shils, 1951, p.26).

Consequently, following the argumentation of Parsons, one can assume that full integration, as well as full disintegration, is impossible. For Durkheim, absence of social solidarity is conditioned by temporary influence of external conditions whereas for Parsons, integration and disintegration exist independently from external conditions as mutually complementing each other (Parsons, 1951, p.39). In the case in question, the assumption of Giddens about mutual supplement between structure and system looks logical whereas characters of predominance between structure and system can vary in a society. Does this phenomenon have influence upon unequal characteristics of social and system integration then?

The idea that norms constitute the structure of a social system is disproved by two contradictory tendencies, David Lockwood argues. In particular, the first tendency talks about how that normative regulation operating through mechanisms of socialization is rather ritual and morally unifies effects of deviance and punishment. The second tendency is that normative regulation is a basis for social order, if not social solidarity (Lockwood, 1992, p.11). These two tendencies of integrative and systematic nature of normative substantiation of actions and interests are distinctive features of "the normative functionalism." However, importance of the normative regulation from the positions of functionalists is another. In comparison to Durkheim, who accentuated borders between ordering the nature of shared values and beliefs and the random egoistic interests of unsocialized individuals, the concept of normative functionalists is normative and systematic. "The defining property of normative functionalism is its assumption that normative factors are the sole, systemic determinants of the interests of actors," Lockwood argues (Lockwood, 1992, p.13).

Depending on the two above-mentioned arguments, David Lockwood combines two "points of bifurcation" and formulates an approach to analysis of "the division of labor" term. According to his opinion, the economic materialism of Karl Marx represents an especial type of sociological materialism, which has never been considered only from the position of sociology as the structural-

functionalist approach by Talcott Parsons, for example. Thus, a combination between two approaches gives an opportunity to formulate an approach to the term “division of labor,” which radically differs from Durkheim’s approach. “The division of labor may be generalized into a category that stands for the factual disposition and organization of socially effective means, and need not be equated simply with the division of functions, powers, and interests associated with productive means,” Lockwood argues (1956, p.139). If Durkheim limited the term “function” as a basis for the division of labor, Lockwood extends this term. He defines as a criterion for division of labor, “...the substratum of social action as factual disposition of means in the situation of action which structures differential and produced interests of a non-normative kind” (Lockwood, 1956, p.136). What are the non-normative regulators of the division of labor then, and are substratum in fact a non-normative regulator appearing as a consequence of conflict?

Lockwood argues that every social situation implies normative order, which is a key element in the theory of Talcott Parsons, and factual order or “substratum.” Both regulators, according to Lockwood, are peculiar to individuals; however, they are a part of the exterior and constraining social world. Simultaneously, the existence of normative order does not imply that individuals will act according to this order whereas existence of factual order does not imply certain types of behavior. “The gap between the elements of ‘givenness’ in the situation and individual or group action is one that is to be bridged only by the sociological appreciation of the way in which motives are structured, normatively and factually” (Lockwood, 1956, p.140). Consequently, one can assume that motives of action are formed depending on aspiration of subjects for order or conflict. “Order and conflict are states of the social system, and to talk of the determinants of order should therefore be to talk of the determinants of conflict,” Lockwood explains.

Comparatively, Lockwood reflects upon a problem of correlation between social and system integration from the positions of critics of normative functionalism and explains that such a differentiation is rather artificial. While a problem of social integration focuses on orderly or conflict interrelations between actors, a problem of system integration focuses on orderly or conflict interrelations between parts of a social system (Lockwood, 1976, p.371). The interrelation between two kinds of integration is explained, from Lockwood’s position, by the existence of institutional regulators. Consequently, the only source of social disorder arising from system disorder is that which takes the form

of role of conflict stemming from incompatible institutional patterns (Lockwood, 1992, p.400). The incompatibility of institutions, thus, leads to a statement of deviance and mismatch of interests of actors and “parts” of a social system.

Therefore, as Margaret Archer explains, the concept of research of social-system integration by Lockwood could broadly be termed as “analytical dualism” (Archer, 1996, p.680). In the course of analytical dualism, the division between “parts” and “actors” is necessary with the aim to research their interplay, whereas analytical basis allows for studying and explaining their mutual development and accentuates attention on the differences between them. “We can talk about ‘system integration’ conditioning ‘social integration’, which necessarily confronts the former, and similarly we can speak of systemic elaboration being posterior to a particular sequence of social interaction,” Archer clarifies (1996, p.694). Thus, analytical dualism represents a new explanatory framework where specific temporal sequences of structural conditioning lead to social interaction and structural elaboration in the full range of substantive areas, which constitute society and its transformations (Archer, 1996, pp.697-698).

The theory of normative functionalism explains that institutional bases are the only clearly definite and systematically distinguishable components of the social system, between which conflict relations and tenseness do not appear. While social systems differ on institutional coloring, there is no probability for growth of tenseness that, in this case, contradicts to Marx’s theory. However, according to conflict theory, the only possible resource for tenseness and following change of a social system is a “lack of fit” between its institutional core and material substructure (Lockwood, 1992, p.407). Following argumentation of David Lockwood and Karl Marx, several questions appears as to whether a lack of coincidence between parts of a social system exist in the institutional structure or not, whether institutional uniformity between parts of a social system is possible or not, and whether a conflict arises at the basis of functional incompatibility between institutional order and material base is primordial or not. Lockwood explains that dominating or key institutional orders can vary from one type of society to another, whereas identification of these institutional orders is one of the primary and main ways for determination of how a society has changed (Lockwood, 1992, p.408).

However, certain problems exist when such concepts as “dominating institutional order” and “material base” are applied to social systems. In this case, it is important to know to what type of subsystems or corporative groups the concept is applied. A system of productivity is then considered from the positions

of “domination” of political or economic systems, while a degree of institutional differentiation of economic and political structures varies essentially. As a rule, normative functionalists ignore inclination for social change appearing from functional incompatibility between institutional order and a material base because of their concentration on moral aspects of social integration. At the same time, representatives of conflict theory, who concentrate on weaknesses of normative functionalism theory with regards to social integration, do not consider social change as problematic to system integration.

An alternative approach offered by Margaret Archer is more radical. Based on the critics of David Lockwood’s theory about mechanisms of correlation between “agency” and “structure,” Archer substantiates that the structuration approach implies inseparable coherence between these two terms. Consequently, in contrast to a clear division to social and system integration offered by David Lockwood, Archer’s concept combines the two terms into a whole as “the Elisionist approach.” “Because ‘structure’ is inseparable from ‘agency’, there is no sense in which it can be either emergent or autonomous or pre-existent or causally influential,” Archer explains (1996, p.688). In this case, the approach offered by Archer is in many respects similar to the approach by Giddens, who substantiated the practicability of duality of structure in a social system. However, Giddens’s approach does not allow for observing what is going on beneath it. For Archer, the question is actually broader still, namely what conceivable kinds of properties can pertain to social systems, which exert any causal effects whatsoever in conjunction with people, but exerting an independent influence upon them (Archer, 1996, p.684). Comparatively, Lockwood, who advocated the explanatory methodology, did not consider the ontological problem as differentiation of system properties from people and did not emphasize causal powers to them. From the position of Lockwood, “...causation is always the joint and equal responsibility of structure and agency and nothing is ever more attributable to one rather than the other, at any given point in time” (Archer, 1996, p.693).

What reason is the main acting factor of social and system integration then? One of the theories of social-system integration offered by Jürgen Habermas, and based on Durkheim’s argumentation, explains this matter. From the position of critical analysis of his theory, Habermas expresses an opinion that the theory has obvious disadvantages as an analysis of social and system integration. “Durkheim does not want to explain organic solidarity in terms of a systemic integration of society uncoupled from the value orientations of individual actors, in terms, that

is, of a norm-free regulative mechanism, an exchange of information, which takes place increasingly from one place to another through supply and demand”, Habermas argues (1987, p.115). Indeed, from the position of Durkheim, normatively regulated social solidarity is a prototype of social integration, whereas an issue of system integration remains outside the analysis. Consequently, if division of labor does not produce solidarity, it happens because relationships between subjects are not regulated and are in a state of anomie. However, if anomic division of labor is not structured by normative rules, the most important thing is how to arrange a new division of labor and organic solidarity then. Durkheim cannot resolve this paradox.

Jürgen Habermas develops the idea of Durkheim from other positions, ones of empirical understanding of between stages of system differentiation and forms of social integration. According to his approach, social integration refers to an “internalist” perspective that focuses on actors’ or participants’ views and strategies, and, on the way, their orientations are coordinated. System integration, on the other hand, refers to an “externalist” perspective that focuses on the point of view of an observer who sees social practices from the outside, from the point of view of the system and its maintenance requirements (Habermas, 1987, p.117; Mouzelis, 1992, p.268; Mouzelis, 1997, p.114). The main distinctive feature of the Habermas theory is that he analyses “action” of actors and their orientations as the main motivational power of social integration achieved through consensus, whereas system integration implies the environment that is external from the activity of actors. From the position of an observer who is not included in the process of interaction between actors, “society” represents a system of actions, whereas lack or absence of action has functional importance for maintenance of activity of a system (Habermas, 1987, p.117).

Habermas clearly distinguishes that social integration directly combines with normatively secured or communicatively achieved consensus, whereas system integration is associated with non-normative regulation of individual decisions that extend beyond the actors’ consciousness and are not subjectively coordinated. If understanding of integration comes only to social integration, then the emphasis of Habermas to a communicative basis in the course of the concept of “life-world” is obvious; reproduction of society then represents the maintenance of symbolic structures, a “life-world.” On the other hand, if the understanding of integration in a society comes to system integration, Habermas emphasizes, “...the self-regulation of a system” as a main regulator of integration (Habermas, 1987, p.151). This limitation reduces socio-scientific analysis to the

level of maintenance and interpretation of a system, independent of the activity of actors.

Hence, questions arise as to how it is possible that one part of society is engaged in the process of interaction by means of action. If their integration has a normative character, whereas another part of society, which is not engaged into this process, is full of “outsiders” and other, non-normative regulators regulate their integration, what non-normative regulators exist then? Does the given theory imply that the unification of actors occurs at every communicative, normatively regulated basis independent of content, character, and activity of actors? Nicos Mouzelis argues that the concept of “life-world” (Habermas), which is a basis for “social integration,” in phenomenological oriented researches never entails exclusively achieved normatively or communicatively consensus between actors (Habermas, 1987, p.117; Mouzelis, 1992, p.273). Mouzelis explains that social integration would occur similarly in all groups of society independent of a normative role and a status of individuals.

Jürgen Habermas does not illustrate the importance of status and role for possible exclusion of a group from the process of social integration. In contrast, he explains that class struggles are considered to be pertaining to social integration; they point to conflictual relationships between actors rather than to functional incompatibilities between institutional subsystems as “adaptation” and “goal-achievement” (Mouzelis, 1992, p.276). For example, class conflict causes contradictions because of means of economic production existing in the frame of the institutional sub-system “adaptation” (in this case, Habermas follows the scheme AGIL offered by Parsons). It essentially affects its system integration or non-integration as well. If to turn to Durkheim, who emphasized influence of these non-normative regulators as a basis for anomic division of labor, a mechanism of class struggle represents a non-normative regulator of integration. Consequently, Habermas assumes the influence of both regulators (normative and non-normative) in the process of social integration.

Nicos Mouzelis explains that Habermas does not undertake any attempts to combine macro-institutes and their compatibilities/incompatibilities with macro-actors and their conflicting strategies. However, based on the theory of Parsons (the four basic sub-systems of the functionalism as adaptation, goal-achievement, integration, and latency), Habermas implies that “life-world” has two sub-systems as “integration” and “latency” whereas “system” includes two subsystems such as “adaptation” and “goal-achievement” (Mouzelis, 1992, p.283). There is a certain tension between the two concepts of “life-world” and “system” as

consequence of the concentration of Habermas toward a micro level of sociological analysis. Both Jürgen Habermas and Talcott Parsons do not give attention to macro levels of research; they do not consider the activity of macro groups in society. Consequently, they cannot explain how institutional incompatibilities lead to or do not lead to overall social transformation. Thus, the tension between “life-world” and “system,” as well as between mechanisms of social and system integration, does not allow for explaining neither dynamics of social stability of a society nor social change. As far as Habermas does not show how this prevalence (adaptation and goal-achievement over integration and latency) is linked to specific macro-actors and their struggles, the analysis made by Habermas moves entirely along teleological functionalist lines (Mouzelis, 1992, p.284).

3.2 The theory of transitional labor markets

The approach to analysis of the transitional labor markets initiated by Günther Schmid and Peter Auer in the middle of the 1990s included analytical and political proposals directed to understanding and reforming labor market policy. It was directed also toward the improvement of functions of the labor market by means of increasing opportunity to integration and adaptation of populations to changing market conditions (Schmid & Gazier, 2002, pp.2-3). One of the first interpretations of the transitional labor market approach accentuated the global interaction of transitions in the labor market and as an active mechanism of labor market policy, including social and economic measures of regulation. In this context, the idea of “transitional markets” was an addendum to the term “internal labor market” where “market” meant a socio-organized process of allocation of labor resources and remuneration.

The idea that strategies of enterprises were primary factors in the advancements of labor careers (the labor demand, the dualistic approach, or labor market segmentation) remained a central idea in early understandings of the idea of a transitional labor market as emphasizing participation of public policy in the issues of employment trajectories (Gazier & Gautie, 2011, p.5). In many countries, this approach was a tool for researchers and policy-makers as an advanced and perspective “sensitizing concept” for scientific research and elaboration of labor market programs, as based on recognition of non-standard, non-linear career, and life-courses of individuals (Muffels et al., 2002, p.2).

On the other hand, an approach offered by Ferry Koster and Maria Fleischmann (2012) proposed an element of dynamics as the main “mover” of transitional labor markets. In contrast to the macro-approach offered by Schmid and Auer, Koster and Fleischmann focused on different “parts” of the labor market and analyzed dynamics from a position of the combination of different parts, using an overall concept “the transitional labor market” as a theoretical basis (Koster & Fleischmann, 2012, p.3; Gazier & Gautie, 2011, p.1; Räisänen & Schmid, 2008, pp.8-9). Numerous case-studies focused on an exact period, exact kind of “transition” at the labor market, and individual characteristics of workers (that is micro level transitions, e.g. individual employment transitions), whereas all potential transitions an individual could perform during their whole working life remained outside the research frame (macro level indicators of labor market dynamics).

In this case, “dynamics” as a key element of the concept is limited by certain periods as defined by researchers according to research aims. The term “transition” implies the usage of longitudinal data in order to define at least two statuses inside individual labor careers, to define “transition” as a change of status (Brzinsky-Fay, 2007, p.7). On the other hand, the term “transition” implies career’s advancement, providing access to “better” work places, or, in contrast, “transition” leads to unsatisfactory conditions of employment, recession in career, impasse at the labor market, and social exclusion (Gazier & Gautie, 2011, p.2). It is obvious that besides ascertaining a fact of transition, situations in which a “transition” occurs and factors of individual motivation to employment are especially important. Consequently, it is not enough just to ascertain a transition as consisting of a “beginning” and “end” during a short period for characterizing dynamics of transitional labor markets.

The term “transitional labor market” can be of importance only in a current state of the labor market. It means that for a majority of a population, working life becomes a prolonged sequence of short periods of employment and unemployment as consisting of multiple transitions. Consequently, a change of status obtains a prolonged character as lasting during a longer period or even during the entire working life. In this context, the term “transitional labor market” enlarges in a time dimension that implies lifetime employment and focuses on the life course of an individual (Räisänen & Schmid, 2008, p.32; Muffels et al., 2002, p.7). In this sense, transitional labor markets foresee the end of hired labor, individual freedom from relations with enterprises, and initiating a new form of self-employment. Therefore, “the self” does not imply a personality independent

from all, but implies an inter-dependent personality, in which psychological identity results from social integration, from individual relations with other individuals (Schmid & Gazier, 2002, p.6).

Considering various nuances, the theory of transitional labor markets is characterized as a meta-theory, because it combines different approaches and separate scientific concepts (Brzinsky-Fay, 2007, p.12). In comparison to any other theory, the theory of transitional labor markets represents a rather general concept for researching processes and implies a certain methodological set of research tools. However, representation of the theory only as a concept or a simple set of various research approaches runs the risk of losing its main idea of the theory-concept as “transitions in the frames of individual life course” (Muffels et al., 2002). There is a risk to imply as “the theory” that everything concerns changes at the labor market without understanding of importance in the context of the life course of an individual. This issue requires also detailed elaboration of suitable methodological tools as exploratory and inferential methods. Consequently, operationalization of empirical analysis of transitions in the labor market must consider a suitable, theoretically developed definition of the concept “transition” whereas the term “transition” is different from other terms such as “status change” and “the life course (trajectory) concept” (Brzinsky-Fay, 2007, p.8).

For example, in comparison to theory of life transitions in psychology, “transitional labor markets” are institutional responses to critical events in the labor market, which appear owing to the influence of various shocks. A reaction to influence of shocks is one of the main regulators of transitional labor markets. In particular, “shock situations” appear from external resources of the labor market as spontaneous changes in labor demand or technological changes. At the same time, shock situations occur owing to internal changes in the labor market as an increase or decrease of a number of population, or restructure of work places, and changes in preferences of employers (Schmid, 1998).

On the other hand, transitional labor markets represent social institutions, not just markets of commodities. Consequently, labor markets require effective and social important institutions of adjustment. The capability of labor markets to adjust to internal and external shock situations depends on a level of flexibility of regulators of labor markets. Overall, the higher the necessity to adjust and longer time needed for adaptation to a new situation, the less flexible the labor market is. In the situation of “unclaimed” labor, the actions of a population not having labor activity is directed to another side; education, training, or “bridges” to other

kinds of activity are created in the labor market. These “socially constructed buffers” are necessary as an element of transitional labor markets, as they provide for functional equivalents and social well-being, for example, through traditional family networks and households.

In contrast to traditional theories, which accentuate attention to life course stages in order to elaborate universal characteristics of a personal identity (for example, a psychology), life event theories focus on episodic or occasional incidents, which occur in the life of people. Thus, studying behavior of transitions between the statuses of individuals, their adaptation to situations with usage of longitudinal data or cohorts with the aim of studying the same events represents a reliable research strategy (Schmid, 1998, pp.6-7). The life course approach provides a sociological base for researching consistent prolonged processes as containing individual transitions, and considers institutional context as one of the most important determinants of individual life courses.

The factor of “de-standardization” as based on individualization losing power of social relations and norms, as based on increasing demand for flexibility in the labor market is especially important in the case of the life course approach (Brzinsky-Fay, 2007, p.13; Gazier & Gautie, 2011, p.5). “Transitions” in the labor market often end by “social exclusion,” which does not necessarily imply decreasing chances for employment or increasing unemployment. A personal reaction of individuals to this situation as, “...discouragingly withdrawing from the labor market” is especially important because the increasing probability of this reaction in many respects increases duration of unemployment. Consequently, the deeper the reaction and longer and stringer effect to this situation are, the deeper the influence to personal identification of individuals and their consciousness are. The given effect develops especially strongly if individuals do not have other social roles. Then, social exclusion in the labor market often leads to marginalization and exclusion in other dimensions such as cultural life, economic well-being, and politics (Schmid, 1998, pp.8-10).

Successful adaptation to critical changes depends on the influence of several factors as a way of adjustment to changes, supporting environment, and individual characteristics. With respect to perception of changes, uncertainty in expected continuance of critical changes has an important role for mobilization of available individual resources. Feeling that critical change will never end can paralyze activity and integration to new conditions, and can deprive an individual of potential opportunities to improve life conditions. In this situation, the internal supporting environment can be decisive for successful adjustment to

circumstances. This is especially important for adaptation of an individual by loss of job, as well as requires special programs as measures of providing institutional support (Ibid).

Despite arguments to advocacy of transitional labor market theory as explaining the adaptation of individuals to changing conditions of the labor market, however, there are contra-arguments with regards to this theory. The concept of transitional labor markets has a specific character because it represents a meta-theory combining different separate theories, approaches to analysis, and criteria of measurement. It does not explain “ideal” variants of behavior in the labor market and does not provide an understanding of if employment is, more or less, well compensated or, in contrast, unstable. Moreover, the concept does not explain “ideal” variants of transitions in the labor market because every case is individual.

One of the contra-arguments clarifies the limitations of the “transition” oriented approach. In particular, the overstated importance of mobility does not always mean more productive and effective activity. It is rather difficult to conclude whether mobility is a positive indicator of “transitions” or not. Considering the importance of gender in the measurement of “transitions,” mobility obtains a twofold character. For example, women execute 60% of transitions whereas men execute only 40% of transitions. It is possible to explain this fact as the dominating mobility of women probably depends on childcare or part-time employment. This is just a possible interpretation of the fact; however, the excessive mobility of women is not necessarily an indicator of career development, but a way of active adjustment to conditions of the labor market and life conditions (Gazier & Gautie, 2011, pp.15-16). On the other hand, international comparative analysis of transitions between various working time regimes emphasizes that mobility of working time facilitates integration in the labor market for several groups of populations only (for example, women after maternity leaves). However, it hardly helps to improve employability over one’s working life or weaken tendencies to social exclusion as associating with precarious employment relationships (Schmid & Schömann, 2003, p.18).

Another contra-argument assumes that transitional labor markets are institutions of risk-management. They expand a sphere of social policy by means of stimulating people to risky transitions among various kinds of employment (for example, part-time and full employment, hired job, self-employment, etc.). According to a principle of solidarity in risk sharing, rights and obligations are balanced; in particular, the Europeanization of labor markets requires spatial

widening of the principle of social inclusion. In other words, an expansion of risk-sharing communities lies beyond ethnic, regional, and national boundaries (Räsänen & Schmid, 2008, pp.7-8). Thus, the concept of transitional labor markets provides institutionalization of the “employment bridges”, which help to facilitate transitions between various kinds of employment as changing during the whole life, and to do so in a way that employability is supported and socially protected (Schmid & Schömann, 2003, pp.2-3).

The third contra-argument is based on the postulation that empirical researches on studying transitions in the labor market lack a normative dimension (Brzinsky-Fay, 2007, p.8). While concentrating on overall models of transitions between statuses in the labor market, researchers lose sight of the difference between models among various groups of the population, when the effects of the same transitions for various categories of populations are different. Not counting the conceptualization of “transitions” in fact, some researches aim at conceptualizing the risks of transitions. Distinguishing between “risk” (negative nuance) and “opportunity” (positive nuance), the overall term “probability” is the only possible term describing transitions as “favorable” and “unfavorable” and implying a normative dimension (Brzinsky-Fay, 2007, p.9; Gazier & Gautie, 2011, p.9; Räsänen & Schmid, 2008, p.24).

From a normative point of view, the aim of functioning in the labor market is that labor markets must be flexible in order to respond to the needs of workers and adapt their career and employment to life conditions. On the other hand, the model of transitional labor markets focuses on factual transitions and movements of workers in the labor market. Thus, a necessary level of flexibility of workers in the labor market becomes obvious. From the given position, the application of the theory is possible by means of a certain analytical tool. Then social scientists consider and use the theory predominantly as a research tool for studying dynamics of labor markets, implying rather static indicators than normative ones (Koster & Fleischmann, 2012, pp.2-3).

Finally, the last contra-argument supposes that the concept of transitional labor markets (combining micro and macro levels of research), does not have well elaborated methodological tools, and consequently, remains insufficiently developed (Brzinsky-Fay, 2007, p.15). The spectrum of methodological tools, which researchers use for analysis of transitional labor markets, is diverse enough, and includes qualitative and quantitative methods for case studies and comparative studies. However, the overall disadvantage of a majority of researches is that they fixate on only one transition in the labor market (for

example, “employment-unemployment”), disclaiming the long-term character of the basic concept of “transition” (Brzinsky-Fay, 2007, p.7).

Therefore, while the main starting point of “the transitional labor markets concept” is studying transitive statuses, it becomes more and more obvious that the aim of research is deeper, larger, and more complicated; a researcher must study various combinations of transitions and stable statements in the career of an individual. In this context, the concept “functional equivalents” describes the fact that different combinations of different independent variables can have the same effects for different groups of a population (Brzinsky-Fay, 2011, p.15). In particular, researchers aim at analysis of functional equivalents to external flexibility in the labor market (for example, by means of various schemes of leaves, social care, or education) or internal schemes of rotation in job places as substitutes to full-time employment (Gazier & Gautie, 2011, p.17).

Overall, measuring “transitions” implies comprehension of a process within a specific period. Continuance of a period depends on research questions and available empirical data (Brzinsky-Fay, 2011, p.12). The classic analysis of transitions in the labor market focuses only on the transition, the only change in status, for example, between employment and unemployment, which lasts during a certain point of time. There are not many attempts to analyze longitudinal data and to look at transitions as periods or sequences of transitions consisting of more than one transition. Whereas cross-sectional data is suitable for calculating aggregate measures, longitudinal data is appropriate for individual measurements (Berger et al., 1993, p.49). Further, the term “transition” accentuates not only on the dynamic character of career development, but also on career stability as availability of “stable” job places. Thus, “transition” is a certain sequence in a career, which leads to change from one stable position in the labor market to another one. Consequently, all that concerns career development becomes “a transition,” even despite the presence or absence of employment. In other words, in order to be “a transition,” a sequence or change must lead to a certain result (Gazier & Gautie, 2011, p.2).

At the individual level, a basic indicator of “transition” is a first shift to employment, which not always has importance. In this case, the question appears as to how to define whether employment is important or not, and what is an indicator of importance or insignificant job? In order to avoid this problem, researchers try to reveal more significant change-transitions in the labor market by means of using other concepts such as “first significant job,” which lasts at least six months, or “first job after leaving school for the last time.” Some

researchers substantiate the exclusion of a very short period of work as unstable employment, as a work of “second importance.” However, time is not the only indicator that allows for characterizing work as employment of a second range (Brzinsky-Fay, 2011, p.13). Subject to the nature and influence of employment upon future labor activity, periods of transition, including more than one episode of employment, differ from periods implying long-term employment. Consequently, there are objective reasons to analyze the increasing instability of processes in the labor market (Berger et al., 1993). As this process takes place in every country, different effects of institutional organizations of transition in the labor market are subject to complexity and time by means of application of longitudinal indicators to longitudinal information (Brzinsky-Fay, 2011, p.14).

Overall, three models generally describe transitions in the labor market. Integrative transitions (first type) imply the inclusion of individuals not having employment transform into labor activity. For one's turn, maintenance transitions (second type) represent transitions in the context of present employment as a way of maintenance of employment and employability. Finally, exclusionary transitions (third type) represent discontinuations in periods of employment, unemployment, or single transitions as “employment-unemployment” and vice versa, “employment to economically inactive population (outside the labor force)”. The current dynamics of transitions imply the appearance of new forms of segmentation in the labor market, and segregation when many individuals remain in exclusionary transitions, especially at low-paid job places or in precarious non-standard employment relationships (Muffels et al., 2002, p.5; Räsänen & Schmid, 2008, pp.8-9; Schmid & Schömann, 2003, pp.5-6).

Consequently, in view of various variants of research in the sphere of transitional labor markets, it is obvious that there are several typical approaches to identification of “transitions” in the labor market. The concept of transitional labor markets emphasizes multiple measurements of processes of social integration and exclusion. Among the diversity of approaches to identifying “transitions,” the final selection of classification of transitions depends on many factors. In particular, some researchers focus on specific transitions (for example, from unemployment to employment, from full employment to part-time employment) whereas other researchers analyze a wider spectrum of transitions (Ashton & Sung, 1992; Schmid 1998, pp.8-10; Räsänen & Schmid, 2008, p.11; Koster & Fleischmann, 2012, pp.3-5; Brzinsky-Fay, 2007; Schmid & Schömann, 2003, p.19).

For a majority of the able to work population, transitions in the labor market are a natural phenomenon. However, for some categories of people, an absence of transitions (or “non-transitions”) is customarily typical. A question of a researcher as whether to analyze “non-transitions” or not depends on the aim of research (Koster & Fleishman, 2012, p.3), If a research task implies analysis of an overall dynamic in the labor market, then all the variants of transitions considering “absence of transitions” are included into analysis (Muffels et al., 2002), If researchers are interested in a specific kind of transition and try to formulate a detailed description of a transition, they are ignoring a category of “non-transition” as less informative.

The dynamics of transitional labor markets is the main motivational power for its development. Dynamics are more often understood as “transitions” between statements in the labor market subject to concrete periods and individual features of the workforce, which are, in fact, individual employment transitions. However, ambivalence toward “transitions” is obvious, because it implies not only career development or providing access to better work places, but also “transition” to unsatisfactory conditions of employment, downturns in career, blocked statements in the labor market, and social exclusion. Factors of a situation in which a “transition” occurs, as well as factors of individual motivation to employment, are also important (Koster & Fleischmann, 2012, p.3; Gazier & Gautie, 2011, pp.1-2; Räisänen & Schmid, 2008, pp.6-9; Muffels et al., 2002, p.2; Ashton & Sung, 1992; Schmid, 1998, pp.8-10; Bzhinsky-Fay, 2007; Schmid & Schömann, 2003, p.19).

As far as the model of transitional labor market focuses on actual transitions and movements of the workforce, it is especially beneficial for social scientists as a research tool for studying dynamics of labor markets, implying rather static quantitative indicators of labor markets, instead of normative ones. One of the most significant disadvantages of a majority of researches in the sphere of transitional labor markets is that they fixate on only one transition (for example, ‘employment-unemployment’), denying at the same time a long-term character of the basic category of “transition.” The duration of a transition is not determined explicitly but can be a very short status change or a prolonged process that involves many status changes until a destination is reached (Brzinsky-Fay, 2011, p.12; Brzinsky-Fay, 2007, pp.7-9; Gazier & Gautie, 2011, pp.5-9; Räisänen & Schmid, 2008, p.24; Berger et al., 1993, p.49; Schmid & Schömann, 2003, p.18; Koster & Fleischmann, 2012, pp.2-3).

The concept of transitional labor markets provides institutionalization of “employment bridges.” Such a mechanism orients to lightening transitions between various employment relationships as changing during the entire life and providing socially protected employability. The term “transition” accentuates not only the dynamic character of career advancement, but also career stability as availability of “stable” work places. Thus, “transition” represents a certain sequence in career, which leads to changing from one stable position in the labor market to another one. Consequently, everything, relating to career advancement, becomes a “transition” despite existence or absence of employment (Schmid & Schömann, 2003, pp.2-3; Räisänen & Schmid, 2008, pp.7-11; Gazier & Gautie, 2011, p.2).

Transitions between statuses are strongly conditioned but complex due to personal socio-economic and demographic characteristics, as well as the specificity of a territory and its economic welfare. The weakest position of an immigrant as it concerns education and professional qualification becomes the strongest factor to withdrawal from employment in the social sphere and unemployment. In the situation of occupational and educational disqualification, time is of supreme importance as a decisive factor in the process of integration. There are also conditions that predetermine the marginalization of immigrants, like being outside the labor force. Specific features of an overall economic situation and the personal features of immigrants, predetermine their leaving the labor market and existence in a special niche known as “social security’s dependent” (Hansen & Lofstrom, 2001, pp.12-13; Bevelander, 2001, pp.550-551; Blume et al., 2009; Akresh, 2008, pp.452-453; Chiswick & Lee, 2005, pp.348-349; Raijman & Semyonov, 1995, pp.390-391; Powers & Seltzer, 1998, pp.37-41; Powers et al., 1998, pp.1026-1033; Stier & Levanon, 2003, pp.88-89; Koster & Fleischmann, 2012, p.10; Pollock et al., 2002, pp.101-103; Fuller, 2011).

3.3 The theory of labor market segmentation

Looking at the history of labor segmentation theory, the main motive to segmentation lies in the necessity to control the labor process. Thus, David Gordon, Richard Edwards, and Michael Reich accentuated attention that in the 1920s-1930s, large American corporations initiated segmentation as a tool for exploring new mechanisms for more effective and reliable labor control (Gordon et al., 1982, pp.15-16). Later, gradually, labor market segmentation initiated

stricter market division into primary and secondary sectors. Simultaneously, strict professional divisions into primary and secondary jobs appeared; there was a gradual division into “independent” work that became increasingly differentiated from “subordinate” work that appeared inside the primary sector (Gordon et al., 1982, p.165). Thus, labor markets obtained dualistic characters based on occupation as a criteria of belonging to this or that working, social, or economic class. Jobs in the primary sector are characterized by employment stability and promotion from within (an “internal” labor market), while jobs in the secondary sector involve low job stability, insufficient training, and poor promotion opportunities (Atkinson, 1991, p.1685).

Specified labor market segmentation entails creating occupational labor markets for immigrants. According to Loveridge and Mok, “...occupational labor markets spring from a similarity in demand for skills or services, hence giving rise to general level of expertise or experience, which is useful in specific work contexts” (Loveridge & Mok, 1980, p.376). Furthermore, Loveridge and Mok come to the conclusion that occupational labor markets, differing in long-term stability form and membership, are an example of a wider socio-economic significance in the statuses, hierarchy, and authority inside a society, and institutional basis for creating specific work environment (Loveridge & Mok, 1980, p.377). Then, the questions appear as to whether the given circumstance means that labor activity’s specificity is predetermined beforehand for immigrants depending on their occupational belonging, and whether the given circumstance means that occupation predetermines their economic status beforehand too.

To answer these questions, I turn to Douglas Massey who proved interdependence between racial segregation and poverty. More precisely, he accentuated attention on the interdependence between financial status that immigrants have and their geographical dislocations. In particular, he argued that if immigrants live in a segregated place, if they are isolated from the native population, the concentration of poverty among them appears automatically, forming a specific social and economic status for this isolated group (Massey, 1990, p.342). Loveridge and Mok who implied that, according to local labor market theory, competition between employers predetermines the payment level for each labor category within a given area support the given assumption (Loveridge & Mok, 1980, p.379). In the peripheral sector, occupational opportunity structures are more restricted with a consequential dampening in task and wage variations (Beck et al., 1978, p.707). Moreover, geographically, and

socially, labor markets have strong local boundaries. In the situation of locality and closed social, economic, even political borders for immigrants, further concentration of poverty ensues, appearing in underclass communities. Segmented labor market theorists have argued that earnings are closely tied to workers' productivity in the primary sector but not in the secondary sector. Furthermore, the primary sector is said to be characterized by a wage premium, even during an economic crisis when involuntary unemployment and forced mobility among qualified personnel to low-wage secondary sector jobs appears (Boston, 1990, p.99).

Thus, another question appears as to whether immigrants are able to realize mobility with the aim to improve their professional and financial status being in social and geographical locality – is such possible? Thomas Bailey and Roger Waldinger suppose that immigrants can move from their own sector to a “non-immigrant” one and learn more advanced skills on the job. However, such happens not often, because ties and information flows between the two sectors are not sufficiently strong enough to make movement out from the immigrant enclave a common mobility path (Bailey & Waldinger, 1991, p.443). Loveridge and Mok assume that, “...mobility up the occupational hierarchy is usually of a short-range variety and inter-generational in form” (Loveridge & Mok, 1980, p.378). They note that occupational segmentation has stable distributions in career chances and that potential opportunities differ at different levels in a society. One of these borders is located in the communication level between labor sellers and labor buyers, such as between employees and employers. In many cases, closeness in communication depends on industrial belonging and management styles that are applicable in an enterprise. To explain this mechanism, it is necessary to ascribe to industrial labor markets theory. An industrial market for labor exists where similar skills are required for working on particular technologies used in specific production. Some industries have traditionally offered poor wages and bad terms of employment, as well as working conditions inferior to employment elsewhere (Loveridge & Mok, 1980, p.383). More often than not, old primary industries or enterprises based on labor-intensive methods are typical examples of this; hotels, restaurants, and other similar employers offer poor wages and bad terms of employment for those immigrants who are the main labor force in these areas.

Inside these industries, in particular, internal labor markets exist as a description of the structural processes by which companies, and other employing bodies, allocate labor and distribute rewards. All the jobs within an establishment

or a firm, viewed as a relatively homogeneous whole, are considered as an internal labor market (Althausser, 1989, p.144). The “distribution” process depends on the internal structure in an organization that is dependent on the work positions within the firm. Practically, the rules’ structure that is carried out by means of communication in organization predetermines, which occupations are “closed” for communication or which occupations provide routes for movement inside an enterprise, for example, “seniority ladders” and “job clusters” (Loveridge & Mok, 1980, p.387). An internal labor market is conceptually anchored in administrative rules governing hiring, promotion, layoffs, and the pricing for labor (Althausser, 1989, p.145). As Thomas Boston argues, the primary sector demands general and specific labor, in contrast to the “raw labor” that is simple, menial, repetitive, and interchangeable labor demanded in the secondary sector (Boston, 1990, pp.101-102).

The labor market segmentation theory explains the mechanism concerning the initial, predetermined market division into segments, groups, and classes. Occupational hierarchy is considered as an important factor in worker motivation because people work for not only having a labor income but also accumulating and supporting social status (Massey et al., 1993, pp.441-442). For example, low-qualified residents who do not wish to possess low-paid occupations at the bottom of the occupation hierarchy, stimulate intensification of labor demand on these positions among immigrants. Meanwhile, high-qualified residents and qualified immigrants possess profitable occupational positions at the top of an occupational hierarchy, whereas residents with lower educational levels move out to lower occupational positions, migrate to global cities, or rely on social insurance programs (Massey et al., 1993, p.447).

An important aspect is that, depending on available and realizable social capital, an immigrant group can be located in a subordinated socio-economic statement by virtue of insufficient opportunities for further advancement. In contrast, some groups can be deprived of opportunities for cultural assimilation or recognition while they are successfully integrated socially and economically (Faist, 1998, p.13). This situation segmentation is often linked with cultural segmentation when essential dichotomy between cultural expression of ethnicity and identity between public and private domain exists (Faist, 1998, p.32). In this case, social rights that immigrants are given become formal recognition as authenticity concerning immigrants’ ethnicity in the foreign state. However, formal equality in rights is not sufficient to be effective because rights must be

supported by actual existing freedoms (Faist, 2007, pp.9-10). In this case, the question appears as to whether immigrants have their freedom and equal rights.

Segregation occurs at various geographical levels, inside a local community or the national levels. For example, Rinus Penninx, Jeannette Schoorl and Carlo van Praag appeal to class division in society and explain the mechanism of ethno-cultural position as a basis for segmentation in society. According to their opinion, the ethno-cultural position implies a social position that a minority has in the social structure. The labor, income, social security, education, and housing can be considered as indicators of social position (Penninx et al., 1993, pp.104-105). Inside receiving communities, immigrants are often recruited to occupational positions that traditionally “belong” to immigrants, whereas the native population occupies these positions unwillingly. This stimulates labor demand among immigrants at the labor market inside this occupational niche. Thus, migration changes social definitions of labor, creating the formation of stigmatizing labor. As Douglas Massey argues, stigmatization occurs as a result of migration’s existence, not as a characteristic peculiar to immigrant labor (Massey et al., 1993, p.453).

Penninx et al. consider that importance of social position is obvious, because an immigrants’ status in society and place in the social stratification depend on whether an immigrant has a job or not, what their income or employment status is, and what employment rate they has. An individual position in the social stratification has crucial importance in the public domain and the economic system. Education has crucial importance as well because it predetermines the income rate, chances, and individual opportunities in the labor market (Penninx et al., 1993, pp.104-105). Therefore, educational level has an influence upon individual opportunities in other public activity spheres. Homogeneity and permanent low social position among immigrants and their families can lead to negative perceptions of them from the dominant societal groups and the society overall; a worsening situation of stigmatization among immigrant groups is possible as well. Among immigrants, such situations can lead to an increased ethnic identity and gradual separation from life in a receiving society. As it is argued, one of the negative effects of segregation is blockage of integration and social mobility in a new society (Penninx et al., 1993, pp.107-109).

Based on the labor market segmentation theories, labor immigrants can be classified into several working classes of intellectual labor and workers. Intellectual migrants are segmented into several separate classes as well. Thus, creative workers are considered as the main actors who possess the availability to

be a linking chain and interpret various cultural aspects. This type of worker can be characterized as a “creative entrepreneur” and independent adviser who can produce symbolic product and values (Lange & Schröder, 2011, pp.62-63). Therefore, intellectual scientific laborers are the type of workers inside a labor market’s segment producing high level, service based work in computer technologies. These scientists mainly take on middle positions between scientific industry and the services sphere and often work in the technological innovations arena, being integrated into the process of non-standardizing thinking (Lange & Schröder, 2011, p.63). Another peculiarity is that these workers are integrated with specialized and highly-professionalized intra-corporative networks. These networks are not only well-organized in enterprises themselves, but in the broad sense are predetermined in advance (Lange & Schröder, 2011, p.64).

Labor segmentation, labor segregation, educational level, and social capital are strongly associated with influence of social inequality, which, in turn, is a factor affecting integration into the labor market. In this case, it is necessary to emphasize that relations inside “primary” closed communities in which individuals are socialized, are formed owing to closeness in class and ethnic belonging. Thus, people from the same ethnic group or social class constitute the “ethclass.” Despite this, the ethclass members simultaneously share various kinds of self-identification; “historical identification” that creates ethnic belonging and “participation identification” that produces similar behavior (Amelina, 2010, pp.10-11).

One more possible variant, when social inequalities have negative influence upon the life of immigrants, is the formation of the so-called domestic underclass. This variant is possible if immigrants are positioning themselves as belonging to the ethnic minority and share residence with subordinated similar local communities. According to the locality theory, developed by Nina Glick Schiller and Ayse Çaglar, the immigrants’ deviation from assimilation with the dominant culture increases the probability of their dislocation in the marginal position (Glick Schiller & Çaglar, 2008, p.20). The theoretical approaches to segmented assimilation explain social inequality because of the migratory process and indicate how unprivileged positions that immigrants have led to worsened cases of assimilation (Amelina, 2010, pp.11-14).

One more attribute peculiar to the segmented labor market is the special labor regime, which is created for a low-skilled labor market segment with the aim of controlling production. Short-term labor contracts are considered as a new work regime for immigrants with various educational levels. The expansion of the labor

market in the European Union occurs side by side with developing labor integration that concentrates on the advantages of a circulating labor force. Thus, short-term labor contracts become a form for control over the entire European labor market (Glick Schiller, 2009, p.15). Depersonalizations of the labor process highlights a category of unqualified workers despite many such workers have rather high educational backgrounds. Migration of these high-educated workers in the category “unskilled worker” is extremely beneficial for European nation-states, however, relatively, the situation of these workers leads to a decrease in labor incomes, unemployment; for the global economy, this situation leads to intensification of the world economic crisis. Thus, it is obvious that labor market segmentation is narrowly associated with segregation as separation of socially significant groups in the public sphere so that separated groups are irregularly concentrated in separate geographical territories in comparison to other population groups (Massey et al., 2009, pp.74-75).

There are two distinct labor markets, one of which is stable and another one fragmented. There is also a separation of the labor market into two different level results in hierarchical stratification existing within society. The segmentation of the labor force arouses even more employment instability in the situation of changing economic dynamics. Highly educated workers, as hypothetically having more employment stability and a higher probability to be advanced within the internal labor market, in “good” economic times are more capable to select those segments of labor market where employment stability is better. Comparatively, during down turns of economy, their employment stability and security is better as well (Soininen, 2015).

Multiple researches on labor market segmentation of immigrants verify that this phenomenon develops owing to different origins. One of the basic, initial grounds for segmentation in the labor market lies in the notion of legality/illegality of immigration. On this basis, segmentation turns out to derive from one of the legislative “barriers”, which legalize some groups of immigrants in particular ways and illegalize other groups by means of a rigidly operating mechanism of immigration control. In Britain, evidences of labor market segmentation confirm that segmentation develops in a specific way for some occupations as more “desirable” for employers. Therefore, immigration control with regard to “privileged” occupations is less rigid and creates so called “institutionalized uncertainty” for recruitment of immigrants with specific occupations. On the other hand, immigration restrictions and enforcement are not only unable to reduce the segregation of immigrant workers, but instead stimulate

the development of segmentation and produce new grounds for this phenomenon. This situation is known in Canada and the USA, when policies enacted by local, provincial governments established an uneven set of labor market regulations for acceptance of immigrants (Anderson, 2010 in Britain; Hiebert, 1999 in Canada; Rodriguez, 2004 in USA).

Harald Bauder, in Canada (2005), found unfamiliarity with cultural practices associated with habitus and rules as an important employment barrier for newcomers, and as highly contingent on place of origin and immigrant class. Martin Kahanec and Anzelika Zaiceva (2008) come to similar conclusions when talk about the deprivation of citizenship of ethnic immigrants, who become an especially vulnerable group in the labor market in a host country. These tendencies are typical for many European countries, as for example Germany where ethnical discrimination still remains one of the powerful factors influencing the recruitment process (Kaas & Manger, 2011), or for Italy where the labor market is characterized by territorial segmentation, significant undeclared employment, and a concentration of unemployment among immigrants (Reyneri, 2004). The Austrian labor market also remains ethnically conditioned and segmented. The dynamics of the sub-stratification of lower classes in the Austrian labor force is at the same time the cause for the further inflow of foreign workers and the explanation of increasing “flexibility” in terms of working conditions for immigrants (Fassmann, 1997). Comparatively, in Sweden, a country with a long tradition of homogeneity built on a common culture, the integration policy for a long time aimed to preserve ethnic identity and attain equality with the Swedish-born population in order to provide immigrants with equal participation in different kinds of labor relations (Murdie & Borgegard, 1998).

In many respects, the specificity of labor market segmentation is conditioned by the history of immigration to a country. For example, in multinational countries with a long history of immigration, migrant labor is increasingly differentiated parallel to the existence of significant mechanisms of duality in the labor market. On the one hand, the labor market consists of highly skilled migrants, who represent a growing section of global mobility and the most mobile demographic (so called “intellectual migrants”). On the other hand, it includes migrants who are directed into the secondary labor market, the one increasingly associated with “irregular” and humanitarian immigrants, in spite of the fact that many in the latter two categories possess higher education. This practice operates in the recruitment of some immigrants to “good” jobs, as well as some to “bad”

ones, or to “good” sectors, as well as to “bad” sectors (Colic-Peisker & Tilbury, 2006 in Australia; Hiebert, 1999 and Krahn et al., 2000 in Canada; Portes & Stepick, 1985, Pedace, 2000, Rodriguez, 2004 and Hudson, 2007 in USA; Constant & Massey, 2005 in Germany; Veiga, 1998 in Spain; Fassmann, 1997 in Austria; Reyneri, 2004 in Italia; Fan, 2002 in China; Mori, 1994 in Japan; Behtoui, 2004 in Sweden; Schrover et al., 2007 in the Netherlands).

Researches on labor market segmentation as concerning immigrants’ participation are rather varied. One research direction undoubtedly concerns the effects of labor market segmentation on the wages and employment of immigrants. Multiple researches confirm that immigration negatively affects wages of less-skilled and earlier arriving immigrants; however, even considering the lower wages of immigrants, they slightly affect labor market positions of the native population. Many labor economists explain this fact in the way that economies admittedly are able to absorb many new laborers without worsening the labor market position of residents. Immigration thus exerts influence in two ways as the “direct effect”, which refers to the change in wages taking place for given employment levels of natives and old immigrants, and the “indirect effect”, which refers to the change in wages due to changes in those employment levels (Liesbet Okkerse, 2008 in Australia; Green, 1996, Borjas et al., 1997, Pedace, 2000 in USA; Pischke & Velling, 1997, D’Amuri et al., 2009 in Germany; DeFreitas, 1988, Veiga, 1998, Carrasco et al., 2008 in Spain; Cohen-Goldner & Paserman, 2004 in Israel; Behtoui, 2004 in Sweden).

On the other hand, as Raluca Buzdugan and Shiva Halli in Canada (2009) and Amelie Constant and Douglas Massey in Germany (2005) confirm, the human capital predictors (i.e., education, occupation, work experience, and official languages proficiency) become statistically significant and strong predictors of earnings for immigrants. Education turns out to be one of the major grounds for segmentation of immigrants in the labor market. The devaluation of foreign education and credentials and the demand of work experience are viewed by institutional administrators as major barriers to labor market integration among immigrants. Due to this circumstance, immigrants suffer from occupational downgrading, are forced to switch careers, and experience loss of social status. Such a situation is often conditioned by specificity of immigration policies and labor market regulations, which give rise to pre-entry discrimination as concerning educational qualifications and places of education of immigrants (Colic-Peisker & Tilbury, 2006 in Australia; Mata & Pendakur, 1999, Krahn et

al., 2000, Bauder, 2003, Anisef et al., 2003, Buzdugan & Halli, 2009 in Canada; Kogan, 2007, Kogan, 2004a, Kogan, 2004b in Germany; Veiga, 1998 in Spain).

3.4 Changing policy frames: from flexibility to flexicurity

The history of a capitalist society attests that deep contradictions exist between material developments of productive forces, which it drives, and social relations, in frame of which this development occurs. By looking at history over the last centuries, this contradiction between material growth of productive forces and social relations in production shows one's worth as such. Initially, this contradiction exists between global development of productive forces in capitalism and the system of national states. Furthermore, this contradiction between growth of productive forces and social relations of capitalist production is based on private property to means of production and the system of hired labor. As it has proved, these contradictions forced a crisis of capitalism, which developed in the early 1970s at the end of an epoch of post-war boom, and in those measures, which have been undertaken to overcome this crisis. The end of the post-war boom has led to a great drop in profits in many capitalist countries in the world. Further, the drop in profits led to a recession in the 1970s, after which a period of stagflation (high inflation combined with high unemployment) followed.

Shortly after the end of the World War II, and recovery of economic and political stability, a subsequent boom was conditioned by Keynesian measures of economic incentives, based on the regulation of flows of global capital and on the adaptation of measures to control the consumer market. However, already to the end of the 1960s, the profit rate started decreasing. This tendency has been temporarily overcome by means of the Fordism system of production exported from the USA. However, the effect from usage of this technological factor turned out to be a diminishing one. All these great processes in economic structure, started in the mid-1960s, have led to serious political restructures as well. Serious disadvantages of the Fordism system as a system of production, and as a way of economic management or regulation, have forced the development of alternative ways of economic (de)regulation. Owing to increasing complexity and quality of production, permanent innovation, and the increasing rate of qualifications of workers, methods of Fordism have turned out to be in a critical situation. New flexible systems of post-Fordism have appeared and called for standards of the

multi-functionality and skills of workers, a combination of functions of physical and intellectual labor, decentralization in mechanisms of decision-making, development of multipurpose technologies, which help to adapt to changing conditions, and the development of partnership between participants of the labor process.

To the present time, the term “post-Fordism” is used for explaining the changing nature of capitalism and for theoretical explanations of these changes (as, for example, the theory of flexible specialization). Despite their apparent similarities, flexible specialization and post-Fordism represent sharply different theoretical approaches to the analysis of industrial change. While post-Fordism sees productive systems as integrated, and coherent totalities and industrial change as a mechanical outcome of impersonal processes, flexible specialization identifies complex and variable connections among technology, institutions, and politics, emphasizing contingency and the scope for strategic choice. “Flexible specialization” theory typically stresses extra organizational influences as the major sources of workplace change and places much greater emphasis on the nature of inter-firm relations, as well as the governance structures that develop within particular industrial locales. A central role in the process of flexibilization undoubtedly belongs to institutions, which unite the legal and social spheres, since they generate the rules of the game and the conventions determining collective and individual behavior (Pollert, 1991; Hollingsworth & Boyer, 1997; Vallas, 1999; Lehweß-Litzmann, 2014; Sabel, 1982; Gilbert et al., 1992; Aglietta, 1987; Boyer, 1988).

Such post-Fordist theory posited the existence of a broad historical shift in the organization of work. Owing to changed economic conditions, firms could no longer rely on Fordist views of jobs and organizations, and must instead invoke new conceptions of labor, new patterns of organizational structure, and new relations with suppliers and subcontractors. At the level of job redesign, the theory led to expect that as firms grow more exposed to new economic conditions (product and market flux, global competition, rapid technological change), they must replace routinized forms of production with autonomous “high trust” models, thereby blurring the traditional division between mental and manual labor (Atkinson, 1984; Vallas, 1999; Reilly, 2001; Wallace, 2003).

Since the mid-1960s, changes in the system of wage/labor relations, the economic crisis, and the conduct of economic policy have been closely interrelated. On the other hand, whether because of internal factors or because of imbalances caused by the worldwide crisis, the slow-down of growth destabilized

industrial relations and, at times, made the central principles of the Fordist system of wage/labor relations seem like “rigid dogmas.” On the other hand, these varied and complex changes in the system of wage/labor relations have also had an effect on the determinants of economic activity. Nevertheless, while a strategy of trying to increase competitiveness might make sense from the point of view of each nation considered individually, it has obvious limitations when applied generally. Intensification of international competition has repercussions on each country’s economic policy, enforcing more restrictive fiscal and monetary policies, and encouraging companies and government to look for ways of bypassing existing legislation, and stimulating a search for other more flexible ways of organizing labor, wages, and employment (Boyer, 1988, p.191).

Thus, how do labor market institutions adjust to exogenously determined technology and individual preferences? How are technology and individual preferences affected by the structure of labor markets? The first strain of post-Fordist theory expects that new process technologies and heightened levels of competition will compel bureaucratically organized firms to overturn the traditional division between mental and manual labor, and to embrace new ways of designing workers’ tasks. At a broader level, firms are expected to adopt organizational forms that base authority less on formal rank or credentials than on dialogue and “consensual legitimacy.” The emerging work regime then essentially differs from Fordism; rather, it represents its new modification and foresees an increasing alignment of interests among firms, managers, and the workers they employ (Grantham & MacKinnon, 2003, p.4; Vallas, 1999, pp.71-72; Sabel, 1982, pp.34-37).

The outcome of workplace change is therefore multifarious; since employers face increasingly volatile product markets, they begin to refrain from investing in fixed-purpose capital equipment, and instead rely more heavily on the skills and initiative of skilled hourly employees, whose knowledge becomes critical to the success of diversified production strategies. Organizational structures begin to shift as well, placing ever-greater emphasis upon decentralized production units that can more rapidly respond to the flux and uncertainty of market trends. Finally, the boundaries among competing firms begin to blur, as collaborative networks take root in the new industrial districts. The displacement of mass production by flexible specialization as the dominant technological paradigm of the late twentieth century becomes obvious (Vallas, 1999, p.73; Brewster et al., 1997, p.135).

Overall, taken globally, movement occurs from “organized” process, regulated by monopolistic capitalism, to “disorganized” form, characterized by greater competitiveness between firms and smaller national regulation of the economy. These economic and political transformations are considered as parallel fragmentations of modern societies. More generally, the period from 1965 to 1973 was one in which the inability of Fordism and Keynesianism to contain the inherent contradictions of capitalism became more and more apparent. The process was accompanied by rigidity of long-term and large-scale fixed capitalism investments in mass production systems and rigidities in labor markets, labor allocation, and in labor contracts (especially in the so-called “monopoly” sector) as well. Any attempt to overcome these rigidities ran into the seemingly immovable force of the strike waves and labor disruptions of the period 1968-72 (Aglietta, 1987; Harvey, 1989, p.142; Pollert, 1991, p.9).

If during the 1960s, economic policy discussions were focused on the comparative efficiency of budgetary and monetary mechanisms in keeping developed economies close to full employment without inflation, in the mid-1980s, the scenario was radically altered. Traditional methods of economic management were still being used, but in a restrictive way, in order to reduce inflation even at the cost of a huge, long-term increase in unemployment. The more fundamental objective was to foster structural change so that sustained growth could be regained. According to government priorities, this task was entrusted to either the market, to deregulation and the combating of “rigidity”, or to economic planning, an expansion of the public sector, and the welfare state. Since the early 1980s, many governments have identified problems of labor relations as bearing the major responsibility for stagnation during the crisis, with the result that firms and governments have come to question and sometimes substantially revise their policies (Boyer, 1988, p.3).

New approach to regulation of social relations takes various forms, as well as the configuration of structural (or institutional) forms of relations, which span the social and economic spheres is specified in a new way. The principal idea of each of these restructures lies in both defining the place of individuals and groups in a society and producing principles of adjustments, and hence new elements of regularity in economic order. Therefore, “the regulation” signifies the dynamic process by which production and social demand adapt and occurs when economic adjustments encounter a given configuration of institutional forms. In a system, dominated by the logic of the market and by capitalist relations, the success of regulation is gauged by its ability to guide and channel the process of capital

accumulation, and to contain the imbalances that this tends constantly to generate (Boyer, 1988, pp.8-9).

Conditioned by new policy of regulation, the epoch of post-Fordism implied the appearance and development of a regime of “flexible accumulation” as marked by a direct confrontation with the rigidities of Fordism. Flexible accumulation implied “flexibility” mostly with respect to labor processes, labor markets, products, and patterns of consumption. It was characterized by the emergence of entirely new sectors of production, new ways of providing financial services, new markets, and, above all, greatly intensified rates of commercial, technological, and organizational innovation. These enhanced powers of flexibility and mobility have allowed employers to exert stronger pressures of labor control on a work force. Organized labor was undercut by the reconstruction of foci of flexible accumulation in regions lacking previous industrial relations, and by the importation back into the older centers of the regressive norms and practices established in these new areas (Harvey, 1989, p.147).

Since the 1960s, the labor market has undergone a radical restructuring. Faced with strong market volatility, heightened competition, and narrowing profit margins, employers have taken advantage of weakened union power and the pools of surplus (unemployed or underemployed) laborers to push for much more flexible work regimes and labor contracts; the very purpose of such flexibility has been to satisfy the often highly specific needs of each firm. The word “flexibility” was, in fact, too often used without being precisely defined. Even for regular employers, systems such as “nine-day fortnights”, or work schedules that average a fourth-hour week over the year but oblige the employee to work much longer at periods of peak demand, and compensate with shorter hours at periods of slack, are becoming much more common. Nevertheless, the apparent move away from regular employment towards increasing reliance upon part-time, temporary, or sub-contracted work arrangements has been even more important (Harvey, 1989, p.150; Boyer, 1988, p.212; Lehweß-Litzmann, 2014, p.6).

Since the early 1980s, the concept of flexibility has occupied an increasingly central place in social scientific and managerial thinking about work as analysts have come to view traditionally bureaucratic patterns of workplace hierarchy as obsolete. There seemed to be little consensus on the reasons that underlie this putative shift with theorists variously stressing the rise of global competition, changing patterns of consumer tastes, and the demands of new information technologies. Relatively constant, however, was the belief that contemporary capitalism is undergoing a redefinition of markets, technologies, and industrial

hierarchies, leading toward the displacement of mass production. Furtherance of the flexibility debate was based on the proliferation of multiple variants of flexibility theory, for example the regulation of school, the Atkinson model of the “flexible firm,” arguments about post-Fordist society, and so on (Pollert, 1991; Vallas, 1999, pp.68-69; Meulders & Wilkin, 1991; Brewster et al., 1997).

New modes of regulation create new processes of global flexibilization. Likewise, new economic conditions prompt firms to decentralize the structure of their operations and to embrace consensual forms of decision making in lieu of the traditional rule by command. The European continental countries themselves try to deregulate, to allow greater flexibility of labor use, and to reduce payroll on-costs, in order to stimulate better economic performance and more employment. The business community urges governments to reduce the welfare bill and to deregulate. The European Commission supports the removal of “artificial barriers” to job creation. Various forms of flexibility appear as a response to the globalized labor market¹.

In fact, flexible policies aim at improving the capacity of the labor market to adapt to its macro-economic environment. The increasing interest, which these policies arouse, must be considered in relation to the growing internationalization of the world economy that has strengthened the external constraints upon economic policies by increasing the importance of international variables in internal decision-making. On the other hand, the scope and frequency of external shocks, which have influenced the world economy, very differently affect flexibility policies at the national or local level. Broadly speaking, a more rapid adjustment of the equilibrium of the labor market to the conditions of the economic environment, which greater flexibility would bring about, improves the economic performance of labor markets. However, any deviation from the principles of flexibility prolongs the period of instability and results in a failure to adapt currency markets to the actual economic conditions of various national entities (Meulders & Wilkin, 1991, pp.21-24).

¹ See Atkinson, 1984; Reilly, 2001; Akyeampong, 1993; Allan et al., 1998; Anttila, 2005; Babies and Bosses, 2007; Böckerman, 2006; Boosting Jobs, 2006; Boulin et al., 2006; Brewster et al., 1997; Combining Family, 2007; European Commission, 2007; Fudge, 2011; Galinsky, 2011; Gender Equality in Education, Employment and Entrepreneurship: Final Report to the MCM, 2012; Gilbert et al., 1992; Global Index, 2012; Golsch, 2003; Goudswaard & De Nanteuil, 2000; Haataja & Kauhanen, 2010; Haataja et al., 2011; Hegewisch, 2009; Leighton & Gregory, 2011; Meulders & Wilkin, 1991; OECD Employment Outlook, 1998; Plantenga & Remery, 2009; Reed, 2010; Reilly, 2001; Vallas, 1999; Wallace, 2003; When Work Works: Making Work “Work”, 2012; Working time flexibility in European companies, 2007; Workplace Flexibility in the 21st Century: Meeting the Needs of the Changing Workforce, 2012; Zeytinoglu, 2005)

Comparatively, the main difference between the present situation and the period of Fordism is not the existence of flexibility itself, but the forms and conditions under which it occurs. During Fordism, there was less contractual variety, and a change of an employer often led to a better job without going through significant unemployment. Changes were thus often voluntary and freedom (or the lack thereof) was an important aspect, which was hidden behind superficially static figures of labor market flexibility. As it becomes known, it is also an important to mention the dimension of inequality. In current post-Fordism contexts, there are workers who do not reach stable employment during their whole lives, and those workers who do reach this state tend not to stay there as long as before. Flexible employment is thus becoming more frequent at both ends of the working life (Lehweß-Litzmann, 2014, pp.6-7).

An appreciation of the effectiveness of a policy of flexibility also depends on the way in which this political choice is used within the general strategy to management of economic policy. In this case, flexibility considered as the reference point for determining the prospective of economic development is reinforced by supportive measures designed to improve its effectiveness. The principal measures envisaged fall within the framework of income policies (instruments of direct control and public finances) and the policy of regulation of demand (instruments of monetary policy and public finances). On the other hand, flexibility is considered as a supportive policy reinforcing the effectiveness of measures taken with regard to other types of policy instruments. In this case, actions to make the labor market more flexible only benefit from the status of a measure taken and often have only a transitory character (Meulders & Wilkin, 1991, p.26).

From the perspective of the welfare state, flexible employment helps reduce unemployment and inactivity, and thus diminish welfare spending. There are good economic and political arguments to pursue a regulatory flexibility-and-security strategy. "Since the apogee of the neo-liberal cognitive framework in the 1980s and 1990s, it has become clear to most decision-makers that today's flexible capitalism requires a kind of labor, which cannot be offered without some social protection and other forms of support" (Lehweß-Litzmann, 2014, p.9). The new condition is due to a shift in the relationship between efficiency and security, rooted in increasingly flexible production processes. It is assumed that the degree of control, which employers can exercise over workers, shrinks as soon as the production process gets more complex and sophisticated.

Using the core idea of the regulation theory, it would thus be necessary to find a new form of regulation, which fits with the contemporary mode of production. On the political side, more flexibility without security would meet the opposition of trade unions. In this context, flexicurity could be considered as a new cognitive framework succeeding flexibility. It integrates elements of flexibility, but also adds insights, which have crystallized during the broad societal debate on it. Flexicurity ventures a reform of the institutional system, which puts the interaction between firms and households on a new basis. The European Commission, principal promoter of flexicurity in Europe, signals that it intends to stick to the flexicurity agenda, but that it is also willing to re-examine and improve flexicurity before the background of the lessons learned, and to adapt it to the new post-crisis circumstances (Lehweß-Litzmann, 2014, p.10).

As a reform approach to European employment systems, flexicurity has been presented as improving the performance of the labor market in matching the needs of both employers and workers. It has been argued that flexicurity is neither a fully developed concept nor a mere discourse. Flexicurity becomes a European notion, not only in its aims, but also in the way it develops in the political process. European actors, especially the European Commission, have raised flexicurity to the top of the agenda, mindful of the specifically European institutional circumstances. Only an approach, which garners the consent of some key actors (the different national governments in power, trade unions, etc.), and which fits to a vast heterogeneity of institutional and economic situations in the Member States has a chance. Flexicurity, planning to coordinate labor market and social policy, reaches into the domain of social protection, still largely at the discretion of national actors (Lehweß-Litzmann, 2014, p.68; Bekker, 2012; Boyer, 1988, p.263).

Flexicurity is considered as a European policy agenda, which seeks to increase both flexibility and security in the labor market. According to the European Commission, "...flexicurity represents a combination of flexibility and security in working arrangements" (European Commission, 2007, p.7). This concept is a response to the needs European labor markets are facing. On the one hand, the European Union has to come to terms with changes in the world economy; while technological developments are becoming ever more rapid, Europe wants to strengthen its economy and create jobs, as it has to be in the forefront of these developments. This is a continuous process, affecting employers and workers alike. While jobs change more quickly than before, the ability to adapt and readiness for change are becoming more and more important.

On the other hand, the EU needs to reinforce the European social models, which are committed to social protection, social cohesion, and solidarity. Workers need sufficient security to plan their lives and careers with support to make it through all these changes and stay in employment. They need opportunities to master new skills and help move from one job to another. They need protection against bad working conditions. They need good social protection in case a new job is not easily at hand or when employment is no longer a realistic option. Therefore, flexicurity represents an attempt to unite these two fundamental needs. It promotes a combination of flexible labor markets and adequate security. Flexicurity can also help provide an answer to the EU's dilemma on how to maintain and improve competitiveness whilst reinforcing the European social model (European Commission, 2007, p.7).

Today's labor market shows a clear division between well-protected and less protected workers. Many countries have tried to make their labor markets more flexible by creating various sorts of contracts with less protection. Flexicurity addresses this problem, for example by limiting the use of consecutive fixed-term contracts and by ensuring transitions into open-ended contracts. It aims at ensuring that EU citizens can enjoy a high level of employment security and the possibility to easily find a job at every stage of active life and have a good prospect for career development in a quickly changing economic environment.

4 RESEARCH QUESTIONS, DATA AND METHODS

4.1 Research logic and questions

Based on the structural-functional and system approaches, I understand “integration” into a system as a process of development, associating with the unification of various parts and elements into a whole system. During the course of integration processes, a volume and intensity of interrelations and interdependences between elements in a system increase. Likewise, new levels of subordinations appear and change. Often understood as a specific result of the integration process or as a statement of ranked functioning between parts of the whole, “integration” implies a process of transformation of dispersed elements into a concentrated, visible, connected with deceleration of internal movement statement. The development of a system always represents varying processes of integration and disintegration, as well as a risk of disintegration to some extent for all elements of a system.

A realistic evaluation of the processes of integration into “the structure-system” focuses both on outcomes, which are produced after “integration” into a system, and on mechanisms and conditions, by which these outcomes are produced. One should consider also, that outcomes obtained as a result of “integration” differ from others across different contexts. Consequently, a realistic evaluation considers different contextual mechanisms, which affect outcomes from “integration” into a system. As a result, three basic areas are considered. A “mechanism” implies a measure, which may lead to a particular outcome in a given context. A “context” entails conditions needed for a measure to trigger mechanisms to produce particular outcomes patterns). An “outcome pattern” points toward practical effects produced by causal mechanisms being triggered in a given context.

Based on above-mentioned principles, the logic of this research is proposed to combine five stages (Fig. 3). The first stage includes an analysis of general trajectories as “paths” of labor market integration that immigrants follow over time when living in Finland (subchapter 5.1). Hypothetically, immigrants follow different trajectories of integration as leading to employment and, consequently,

realized integration, or other statuses, implying the predominance of exclusionary positions in the labor market (unemployment or economic inactivity). Integration into the labor market is different for two different groups of immigrants (employed and unemployed), follows different models of labor behavior for immigrants, and implies different mechanisms of adaptation and further integration in the labor market in Finland as well.

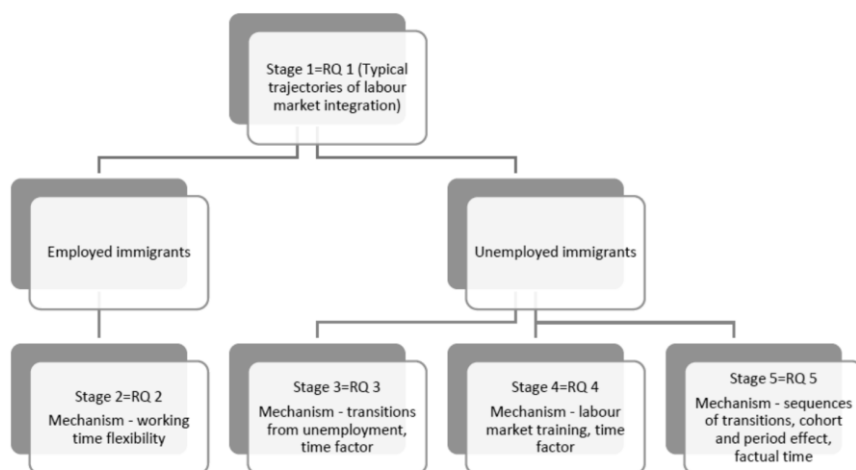


Figure 3. The logic of research as combining five research stages

Following the hypothesis about different trajectories of labor market integration for those who are employed and those who come back to unemployment as an intermediate status between other labor market statuses, the second stage of analysis examines the significance of working time flexibility for labor market integration of employed immigrants in Finland (subchapter 5.2). Hypothetically, working type flexibility appears to be a measure of adjustability inside internal labor markets. On one hand, motivation and orientation to different aspects of work such as working type, profession, and education or working conditions, makes sense in choosing a model of working type flexibility. On the other hand, the occupational and industrial segments of the labor market predetermine specific working type flexibility as well.

In contrast to the integration of employed immigrants inside internal labor markets, the integration of unemployed immigrants implies different mechanisms of labor behavior and integration in external labor markets. Following the hypothesis about the special character of adaptation and integration behavior among the unemployed, the third part of the analysis examines how transitions

from unemployment contribute to the labor market integration of unemployed immigrants in Finland (subchapter 5.3). Hypothetically, continuity of unemployment differs depending on type of transition and status, to which this transition leads. The factor of time obtains special significance in the case of unemployment as a factor, predetermining faster integration or long-term exclusionary positions in the labor market. On the other hand, however, motivation, orientation, and the actions of immigrants themselves potentially predetermine specificity of transitions from unemployment.

Extending the analysis on the behavior of unemployed immigrants, the fourth stage of analysis examines the issue concerning significance of continuity of labor market training for labor market integration of unemployed immigrants in Finland (subchapter 5.4). Hypothetically, labor market training as an institution of training and retraining of unemployed persons contributes to faster integration of the unemployed and especially immigrants. These immigrants, who have completed labor market training, potentially realize more transitions from unemployment to employment, even though their frequency of recurrence of labor market training periods can be rather high. The factor of time, potentially predetermining a shorter or longer participation in labor market training, affects the results of integration of immigrants as well. However, a mechanism of segmentation and marginalization within the labor market does not make sense with regards to frequency and continuity of labor market training periods.

Finally, the fifth and last stage of analysis examines the typical trajectories of labor market integration for unemployed immigrants in Finland. Starting from an analysis of general trajectories of labor market integration at the first research stage, the fifth stage comes back to investigate the trajectories of labor behavior as transitions from unemployment to other statuses (subchapter 5.5). Hypothetically, cohort and period effects contribute to different trajectories of labor behavior from unemployment. The time is of special importance as it implies factual background. The thesis about the influence of specificity of employment systems in different periods of economic development in Finland upon labor market integration acquires new consideration in the fifth part of analysis. Potentially, mechanisms of flexibilization and deregulation of processes of job placement for unemployed immigrants, and flexibilization of integration policy, in Finland differ from period to period as well.

This basic question, the answer to which I try to discover in the course of this research, brings about specific research logic and theoretical considerations of social processes of labor market integration. Thus, one of the key strengths of a

“realistic evaluation” approach lies in the ability to apply research results across different contexts. Besides the consideration of factual processes and empirical material, based on which the research is constructed, each research question implies the theoretical substantiation of empirical results as based on the specific components, allowing for an explanation of mechanisms of labor market integration conformably for each particular research question (Table 1).

Table 1. Theories and specification of their components to research questions

Theories and concepts	Transitional labor markets	Social and system integration (specification of direction)	Labor market flexibility and flexicurity	Labor market segmentation
Research question				
What trajectories, as “paths” of labor market integration that immigrants follow over the time, are typical for their careers in Finland?	Institutionalization of TLM, risks and outcomes of transitions	Functionalism	The flexibility-security nexus	Stigmatization, pre-entry discrimination, dual labor market
What significance does working time flexibility have for the labor market integration of employed immigrants in Finland?	-	Action, orientation, motivation	Labor market flexibility, “decent work”, working time flexibility	Occupational and industrial segments of labor market, dual labor market
How do transitions from unemployment contribute to labor market integration of unemployed immigrants in Finland?	Institutionalization of TLM, risks and outcomes of transitions	Action, descriptive and dynamic analysis, normativism, time-space relations	-	Factors underlying supply curve and elasticity of supply, stigmatization, marginalization
What significance does continuity of labor market training have for labor market integration of unemployed immigrants in Finland?	Institutionalization of TLM, risks and outcomes of transitions	Action, descriptive and dynamic analysis, normativism, time-space relations	-	Factors underlying supply curve and elasticity of supply, stigmatization, marginalization
What are typical trajectories of labor market integration for unemployed immigrants in Finland?	Institutionalization of TLM, risks and outcomes of transitions	Functionalism, descriptive and dynamic analysis	-	Stigmatization, marginalization,

Taking into account different theoretical perspectives and explanations of labor market integration processes from the specific “components” of each of the theories, the research requires very specific data, which allows for consideration

of contexts, a mechanism, and an outcome as a whole. Considering the special integrative capacity of the Finnish labor market, the specific influence of integration policy upon different categories of immigrants in Finland, and the influence of “time-factor” upon integration of immigrants with different labor market statuses, the research logic implies specific theoretical and empirical approaches as well. Making an allowance for the specific research questions and theoretical approaches to an explanation of the processes of labor market integration, the criteria for choosing the databases for analysis lies in an estimation of “the time-factor”. Consequently, longitudinal databases are mainly used for estimating long-term periods of labor market transitions. A time-sensitive approach to an analysis of labor market integration includes several particular approaches, which should be mentioned here (Fig. 4).

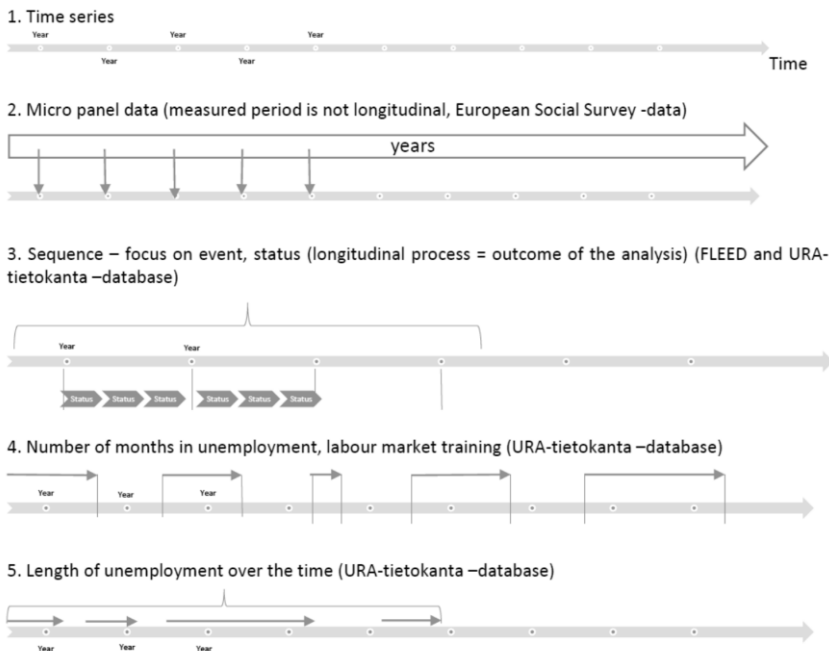


Figure 4. Time-sensitive approach to analysis of labor market integration based on real-time data

The first approach is based on an analysis of time series data. Time series data contains statistical information about the meaning of certain parameters of an investigated process, which is collected during various time-periods. Comparatively, micro panel data are micro samplings analyzed in time that consists of observations of the same variables, which are realized in consistent periods of time (the second case in Fig. 4). Time series are distinctive from micro

panel data because during the analysis, interdependence between variables and a “time”-factor is analyzed, not only the statistical multiplicity of observations and samplings. The third approach is based on an analysis of sequences. The temporal nature of labor market integration reveals importance of time and its different aspects during the life course of individuals as, for example, periods of staying in various labor market statuses and transitions between statuses. In the fourth case, unemployment periods are analyzed as separate events, without consideration of significance of “time”-factor as in the case of the first approach (time series). Finally, the fifth approach is mostly oriented to the life-course approach because besides typical trajectories of transitions from unemployment, it is shaped by cohort and period effects, and by institutional settings.

In this research, I propose five dimensions of time. In the first case, “time” is analyzed as factual time of integration; a concrete period 2000-2010 years is used. In the second case, “time” is considered from the positions of significance of working time, when employment at enterprises includes a combination of contracted and normal hours. In the third case, “time” is examined as factual periods of unemployment as events, occurring “out of time periods”. In this case, the data are “interval-censored”; the beginning of the first unemployment period (in 1952) and ending of the last unemployment period (in 2014) are known. The same approach has been undertaken in the case of significance of labor market training periods in the process of labor market integration of immigrants. The same “interval-censored” approach has been used, when the time of the first labor market training period (in 1992) and the last period (in 2014) are known. Finally, in the case of the sequences of transitions from unemployment, “time” has been considered as a macro factor; the overall length of unemployment periods and significance of cohort and period effects has been revealed based on the same “interval-censored” approach (period 1952-2014 years).

4.2 Data

Based on the assumption that all the processes and phenomenon are interrelated and mutually conditional, the process of labor market integration can be hypothetically explained by the existence of multiple deterministic mechanisms. In the course of this research, I sought to find an answer to the question, “what mechanisms potentially specify different processes of labor market integration for immigrants in Finland?” Considering the special integrative capacity of the

Finnish labor market and the specific influence of integration policy upon different categories of immigrants during different periods of social and economic development in Finland, I propose an approach based on time-structured models.

In the case of the first research question, I verify the significance of the time-factor in the overall chain of transitions during the first 10 years of labor market integration in Finland (see subchapter 5.1). When censoring occurs, the survival time is not known precisely. In one form of right censoring, the event does not occur before the end of the observation period, and all it is known is that survival time exceeds the time between immigrants becoming at risk and the end of the observation period. Another form of right censoring occurs when the subject stops being at risk of the event under investigation before the end of the observation period; for instance, he may experience a competing event, such as death, other than the one under investigation, or may drop out of the study all together. It is usually assumed that censoring is non-informative in the sense that the survival times for competing events are conditionally independent of the survival time of interest, given the covariates (also known as independent censoring). In “current status” data, each subject is right-censored (Rabe-Hesketh & Skrondal, 2012b, p.745).

Statistics Finland has created linked employer-employee data (the Finnish Longitudinal Employer-Employee Data or “FLEED”) for research use. The FLEED sample data is a 1/3 random sample of persons aged 15 to 70 year old living in Finland between 1988 and 2010. The sample participants have been followed over time, so there is data on each person for all the years during which the person has been alive, aged between 15 and 70 and residing in Finland. The FLEED sample data includes data on the person’s basic characteristics, family, living, employment relationships, periods of unemployment, income, and education. Hence, FLEED contains such information about labor relations and employment as periods of employment (in months), periods of unemployment (in months), a number of unemployment periods, their continuance, and the main activity inside the labor force (education, employment, etc.)².

With the aim of carrying out research, only those immigrants who have registered in the Register Office after receiving a first residence permit in Finland in 2000, whose nationality is another than “A citizen of Finland” and whose native language is other than Finnish or Swedish, have been chosen from the FLEED sample data. Also, their labor activity during the period from 2000 to 2010 and

² See description of the FLEED sample data at:
http://stat.fi/tup/mikroaineistot/me_kuvaus_henkilo_en.pdf.

“sequences” during the period of integration, which began after entering Finland and symbolically ended after 10 years later, were followed. As the items used for the sequence analysis, such statuses as “apprenticeship”, “employment”, “unemployment”, “economic inactivity” and “pension” are considered.

On the contrary, in the case of the second research question, the significance of time is verified based on working time and the correlation between contracted and normal hours (see subchapter 5.2). In this part, I focus on multilevel models for panel data. In longitudinal data, subjects are observed at several occasions or time points. Most commonly, longitudinal data are collected prospectively by following a group of subjects over time. Other types of data that resemble longitudinal data include time series data, where one unit is followed over time (usually at many occasions), as well as duration or survival data. In panel studies, all subjects are typically followed up upon at the same occasions (called “panel waves”) leading to balanced or fixed-occasion data, although there may be missing data on some occasions for a subject. Usually, the occasions are also equally spaced with constant time intervals between them (Rabe-Hesketh & Skrondal, 2012a, p.227).

For this research, the data was gathered from multiple sources of the European Social Survey during the period from 2002 to 2010. The European Social Survey (ESS) is an academically driven multi-country survey, which has been administered in over 30 countries to date. Its three aims are, firstly, to monitor and interpret changing public attitudes and values within Europe and to investigate how they interact with Europe's changing institutions, secondly, to advance and consolidate improved methods of cross-national survey measurement in Europe and beyond, and thirdly, to develop a series of European social indicators, including attitudinal indicators³. A sample of immigrants was chosen based on the expected difficulty of obtaining results on such a specific research problem. Immigrants were selected based on their homogeneity and employment status in Finland.

The third and fourth research question imply the use of a time-censoring approach, when the time of events is considered as an important factor of transition from unemployment or time of labor market training is estimated depending on completed and interrupted labor market training periods. Finally, the fifth research question implies the significance of the time-factor in the chain

³ See description of the European Social Survey data at:

https://www.europeansocialsurvey.org/docs/round6/survey/ESS6_data_documentation_report_e02_1.pdf.

of unemployment periods. However, besides an overall estimation of significance of the time-factor, the notion of belonging to a birth cohort or period effect of unemployment is verified separately for the last three research questions. In this case, time obtains a new dimension in the research as a macro-factor or macro-mechanism of labor market integration (see subchapters 5.3, 5.4, and 5.5). When analyzing the time of an event, perhaps the most important consideration is the origin of the time scale, the point in time when the clock starts ticking and the subject becomes at risk of experiencing the event. The origin may differ from the start of observation, depending on the research design. I use the term “analysis time” for the time scale that takes the value 0 at the origin. In observational studies, such as epidemiological cohort studies, analysis time will often be age. For this reason, there is often delayed entry, where subjects have already been at risk before they enter the study. When the entry time is later than the origin, we have delayed entry. In some studies, several time scales may be relevant, for instance, both the age (time since birth) and the time from onset of exposure to a risk factor. In this case, one time scale is chosen as analysis time and the other time scales can be used as time-varying covariates. Each subject becomes at risk within the observation period and experiences the event within the observation periods, so the survival time is known (Rabe-Hesketh & Skrondal, 2012b, pp.743-745).

The URA-database is the employment services’ system provided by the Ministry of Employment and Economy in Finland. This system provides information about labor force and entrepreneurship services in Finland. The URA-database is formed from three registers - the customers’ register, employers’ register, and services’ register. The database also contains information about the employment seeking population as codes of employment (employment, unemployment, economic inactivity, etc.) and their changes in beginning and ending of unemployment, as well as apprenticeship periods. There is no pre-arranged and ready for analysis data set in the URA-database. The Ministry aggregates information for every single case by means of selecting the data according to specific research aims. The usage of registers is available based on the decision of the Ministry’s administration. The database is formed from the URA-register based on the necessities of authorities in work force issues. The URA-database is all encompassing, because contains information about all unemployed people, who have been registered with employment services in Finland. Therefore, all information concerning programs of adaptation for Finland’s unemployed population is also available in the URA-database.

Based on the research aims, only immigrants who have been registered in the URA–database as “unemployed population”, and, consequently, obtained a right to participate in programs of adaptation for unemployed persons initiated by the Government of Finland, have been chosen for the present research. The data contains immigrants who integrated into employment during the years. An analysis of integration processes for unemployed immigrants is supposed to be based on the following basic data concerning customers: personal data, beginning and ending of employment periods, the employment situation, work histories, educational degrees, and adult education in the course of labor force policy measures, or necessity in additional apprenticeship. The research database also contains information about measures for job-placement of customers as offers for job or apprenticeship and retraining.

The observation period, which has been taken as the basis for research in the form of duration analysis, implies careful description of results conforming to a period of first unemployment experienced by immigrants (the so-called “entrance cohort”). Due to this specific observation period, the study implies an explanation of results from the position of the cohort analysis that is necessary in the case of extensive longitudinal databases. A factor of belonging to an entrance cohort shows one’s worth as the most ponderable factor of influence upon intensity of transitions between unemployment. Other statuses as representative of later entrance cohorts potentially have more chances for more transitions than representatives of earlier cohorts have. However, one can explain this circumstance in that, because the observation period includes the years 1952-2014, periods of unemployment can be registered in the database in two ways. The first way is based on the registration of the overall unemployment period, when the beginning of a first period and the end of a last period are known. For example, earlier entrance cohorts can be registered in this way (cohorts “1952-1961”, “1962-1971”, “1972-1981”). The second way is based on the principle that for later entrance cohorts, every period of unemployment is fixed separately (that is more believable). For example, the cohorts “1982-1991”, “1992-2001”, “2002-2014” can be registered in this way. In this case, either unemployment periods, registered in the URA–database, are real in facts, or these registrations are admittedly composed by two ways.

4.3 Methods

4.3.1 Data grouping methods: cluster and factor analyses

Cluster analysis techniques are concerned with exploring data sets to assess whether or not they can be summarized meaningfully in terms of a relatively small number of groups or clusters of objects or individuals which resemble each other and which are different in some respects from individuals in other clusters. Of central importance in attempting to identify clusters of observations which may be present in data is gaining knowledge of how “close” individuals are to each other, or how far apart they are. Two individuals are “close” when their dissimilarity or distance is small or their similarity large. Cluster analysis is the generic name for a wide variety of procedures that can be used to create a classification. These procedures empirically form “clusters” or groups of highly similar entities. More specifically, a clustering method is a multivariate statistical procedure that starts with a data set containing information about a sample of entities and attempts to reorganize these entities into relatively homogeneous groups. Most of the varied uses of cluster analysis can be subsumed under four principal goals as development of a typology or classification, investigation of useful conceptual schemes for grouping entities, hypothesis generation through data exploration, and hypothesis testing, or the attempt to determine if types defined through other procedures are in fact present in a data set (Aldenderfer & Blashfield, 1984; Everitt et al., 2011; Lorr, 1983).

In a hierarchical classification, the data are not partitioned into a particular number of classes or clusters at a single step. Instead, the classification consists of a series of partitions, which may run from a single cluster containing all individuals, to n clusters each containing a single individual. Hierarchical clustering techniques may be subdivided into agglomerative methods, which proceed by a series of successive fusions of the n individuals into groups, and divisive methods, which separate the n individuals successively into finer groupings. Both types of hierarchical clustering can be viewed as attempting to find the optimal step, in some defined sense, at each stage in the progressive subdivision or synthesis of the data, and each operates on a proximity matrix of some kind. Since all agglomerative hierarchical techniques ultimately reduce the data to a single cluster containing all the individuals, and the divisive techniques will finally split the entire set of data into n groups each containing a single individual, the investigator wishing to have a solution with an “optimal” number

of clusters will need to decide when to stop (Everitt et al., 2011; Helmuth, 1980; Lorr, 1983; Aldenderfer & Blashfield, 1984; Jambu, 1983).

Given that the number of groups is not known, the problems of cluster analysis are threefold: to choose a measure of inter-object similarity, to select a method for forming subgroups once the indices of similarity or dissimilarity have been obtained, and then to decide on the number of subgroups present in the data or to construct a hierarchical arrangement. Basic problems in cluster analysis concern the selection of distance, selection of algorithm, the number of clusters to be formed, and the choice of variables, especially their scaling. The importance of using theory to guide the choice of variables should not be underestimated. The temptation to succumb to a naive empiricism in the use of cluster analysis is very strong, since the technique is ostensibly designed to produce “objective” groupings of entities (Lorr, 1983; Helmuth, 1980; Aldenderfer & Blashfield, 1984).

Derived from cluster analysis, factor analysis is a statistical procedure in wide use in the behavioral and social sciences. It is designed to isolate and identify the main sources of individual variation in data. These sources, called factors (or latent variables), are best conceived as dimensions of individual difference. More specifically, the method is used to reduce the number of variables to a parsimonious set, to generate hypotheses regarding the number and kinds of dimensions present, and to test or confirm some hypothesized factor structure (Lorr, 1983; Field, 2013). In a factor analysis, interest centers mainly on the common factors, which are interpreted with reference to observed, counted, or measured variables. Factor analysis assumes that the observed variables are linear combinations of some underlying (hypothetical or unobservable) factors. Some of these factors are assumed to be common for two or more variables and some are assumed to be unique to each variable. The unique factors are then (at least in exploratory factor analysis) assumed to be orthogonal to each other. Hence, the unique factors do not contribute to the covariation between variables. In other words, only common factors (which are assumed much smaller in number than the number of observed variables) contribute to the covariation among the observed variables (Kim & Mueller, 1978; Horst, 1965; Cureton & D’Agostino, 1983).

Historically, most of the earlier expository treatments of factor analysis identified the common factor model by a principal axis factoring procedure, which uses the decomposition strategies of principal components analysis as applied to the adjusted correlation matrix whose diagonal elements (of 1) are

replaced by corresponding estimates of communalities. Commonly used estimates of communalities are the squared multiple correlations of each variable with the remainder of the variables in the set or the highest absolute correlations in a row of a correlation matrix. After inserting these communality estimates in the main diagonal of the correlation matrix, factors are extracted in the manner of principal component analysis. That is, factor solutions are found by applying the same eigenvalue equation to the adjusted correlation matrix as it has done in the principal component analysis (Kim & Mueller, 1978; Horst, 1965; Field, 2013).

The initial factoring step usually determines the minimum number of factors that can adequately account for observed correlations, and in the process, determines the communalities of each variable. The next step in factor analysis involves finding simpler and more easily interpretable factors through rotations, while keeping the number of factors and communalities of each variable fixed. The consequences of making these arbitrary impositions are the following. The factorial complexity of variables is likely to be greater than one. Regardless of the underlying true model, variables will have substantial loadings on more than one factor except for the first factor. The remaining factors are bipolar: some variables have positive loadings on a factor while others have negative loadings (Kim & Mueller, 1978; Field, 2013; Cureton & D'Agostino, 1983; Horst, 1965).

4.3.2 Event history analysis

Event history analysis is concerned with the patterns and correlations of the occurrences of events. By definition, an occurrence of an event assumes a preceding time interval that represents its non-occurrence. More specifically, a certain time or duration of non-occurrence must exist in order for an occurrence to be recognized as an “event”, which is defined by specifying a group of ends for duration intervals and consists of some qualitative change that occurs at a specific point in time. An event history typically involves the statistical examination of longitudinal data collected as a set of observations. While a wide variety of statistical models may be constructed for event history data, at the most basic level, all event history models have some common features. The dependent variable measures the duration of time that units will spend in a state before experiencing some event (Yamaguchi, 1991; Allison, 1984; Box-Steffensmeier & Jones, 2004).

In conceptualizing the duration of the non-occurrence of a given event, another important relevant concept is “the risk”. Generally, one can divide a period that

represents the non-occurrence of a given event into two parts: the period at risk and the period not at risk for the event to occur. Given the distinction between the risk and non-risk periods, event history analysis can be defined either as the analysis of the duration for the non-occurrence of an event during the risk period or as the analysis of rates of the occurrence of the event during the risk period. The rate, when attached to a particular moment in time, is often referred to as a hazard rate or transition rate. The term “hazard” comes from biostatistics, where the typical event is death, while the term “transition rate” is more often used in sociology, where many analyses have been made of transitions between discrete states, such as occupational and employment statuses (Yamaguchi, 1991; Box-Steffensmeier & Jones, 2004; Wu, 2003).

One of the most important issues when carrying out an event history analysis is an issue of censoring. Censoring occurs whenever an observation’s full event history is unobserved. In this sense, censored observations are akin to missing data, insofar as the portion of the history that is censored is, in fact, missing. Right censoring is commonly observed in event history data sets and researchers typically encounter right censoring because the time frame of a study or observation plan concludes prior to the completion or termination of survival times. In contrast to right censoring, some observations in an event history data set may be truncated. Left-truncation emerges in event history data sets when history prior to the first observation point is unobserved. However, when it is known that the event occurred within a time interval, but not precisely when it occurred, we say that the time is interval-censored. Interval censoring is also sometimes referred to as grouping, resulting in grouped-time survival data if censoring limits are the same for all subjects (Box-Steffensmeier & Jones, 2004; Hamilton, 2013; Rabe-Hesketh & Skrondal, 2012b).

In labor market research, event history analysis has been applied to the study of unemployment. These studies start from the idea that in analyzing unemployment, cross-sections of unemployed, or the number of entrants into unemployment in a given period, are only partially informative and may even be misleading. Such indicators do not permit differentiation between short- and long-term unemployment, and time-dependent covariates may not be included in the analysis. In unemployment studies, successive phases of unemployment which a worker experiences represent the “duration” variable that is included in event history analysis. Periods of unemployment might be terminated due to various reasons, for example, by having a new occupation, joining a governmental job-program, re-education, re-training, retirement, or the recognition of an

employment disability. Such different end states may be formulated and examined as “competing risks”, or “multiple state models” (Blossfeld, 1989).

4.3.3 Sequence analysis

The first sociologist who started to use the sequence analysis method in the beginning of the 1980s was Andrew Abbott (Abbott & Forrest, 1986, Abbott, 1995, Abbott & Tsay, 2000). Abbott used sequence analysis as a qualitative method in the context of historical and narrative sociology. Due to limited opportunities in the usage of computers at that time, the analysis was limited to several cases with short sequences. Since the beginning of 1990s, parallel to the growth of technological innovations, research started focusing on individual sequences as class careers (Halpin & Chan, 1998; Kogan, 2004a; Kogan, 2007) and life-course trajectories (Aisenbrey & Fasang, 2010; Pollock, 2007; Halpin, 2010; Martin et al., 2008). Systems implementation of the sequence analysis method into various statistical packages (for example, the Stata) allowed researches to assimilate the method more actively and to use it in various sciences (e.g. Brzinsky-Fay et al., 2006; Brzinsky-Fay, 2007; Brzinsky-Fay, 2011). Developing interest in sequence analysis method has also contributed to active discussion about opportunities and limitations of the method.

The given research is based on elaborations in which sequence analysis was the main method for processing the data (Fuller, 2011, p.24; Kogan, 2004a, p.424; Kogan, 2007, p.495; Pollock et al., 2002, pp.93-94; Halpin & Chan, 1998, pp.112-114; Brzinsky-Fay, 2007, p.410). I used the works of Gabadinho, Ritschard, Muller, and Studer on the analysis and visualization of statistical sequences as the main methodological base for carrying out the sequence analysis (Gabadinho et al., 2011). The statistical program TraMineR, as a package for mining and visualizing sequences of categorical data describing life courses in “R”, puts together most of the features proposed separately by other software for sequential data and offers many original tools for managing, analyzing, and rendering categorical sequences (Gabadinho et al., 2011, pp.3-4).

On the other hand, for the theoretical model based on the empirical information, we used several elaborations carried out by various scientists in the sphere of transitional employment statements with usage of sequence analysis. For example, Halpin and Chan study and analyze career histories as sequences in historical change in social mobility during the working life periods in Ireland and Britain (Halpin & Chan, 1998). Fuller investigates and analyzes immigrants’

employment trajectories and outcomes in their first years of settlement in Canada (Fuller, 2011). Kogan studies immigrants' employment careers in West Germany and the United Kingdom (Kogan, 2004a; Kogan, 2007). Pollock, Antcliff, and Ralphs analyze employment histories and careers as sequences in Britain (Pollock et al., 2002). Finally, Brzinsky-Fay, in his research, uses sequence analysis as the main method of analysis of the "transitions" between the educational system and first employment during the first five years after graduating a school (Brzinsky-Fay, 2007).

The main task of sequence analysis is the comparison of sequences. A "sequence" is defined as an ordered list of elements in which every element can be a certain status (for example, an employment status), a physical object, or an event. The sequence analysis method is a holistic method because it considers every sequence as a whole, as a conceptual totality (Gabadinho et al., 2011, pp.1-2). Positions of elements are fixed and are ordered according to periods or according to another, more or less, natural order (Brzinsky-Fay et al., 2006, p.435). Further characteristics are made based on simple descriptive statistics with usage of specific characteristics of the whole sequence, for example, such as continuance of sequence, a number of changes inside a sequence, or a number of various elements in a sequence (Brzinsky-Fay, 2011, p.29). Some overall descriptive features of sequences must be formulated in order to decrease the enormous information contained even in relatively short sequences (Brzinsky-Fay et al., 2006, p.438).

The "optimal matching" method (OMA) is a more often applied method for comparison of sequences. The OMA method can be used in order to define "typical" and "atypical" career paths, as well as this method allows testing whether actual career paths follow theoretically developed models. This approach can be useful when comparing empirical data and theoretically "ideal" paths (Pollock et al., 2002, p.94). OMA defines the distance between two sequences as a number of operations, which it takes to transform one sequence into the other. More specifically, the technique allows the operations "substitution", "insertion", or "deletion" (Brzinsky-Fay, 2011, p.29). After similarities or differences between sequences are fixed, the overall resulting distance matrix as an input for a cluster analysis or multidimensional scaling is considered. Therefore, cluster analysis is the second stage of sequence analysis (Brzinsky-Fay, 2011; Abbott & Forrest, 1986; Abbott, 1995; Abbott & Tsay, 2000; Aisenbrey & Fasang, 2010; Fasang & Futing, 2013; Gauthier et al., 2010; King, 2013; Pollock, 2007; Halpin, 2010; Martin et al., 2008; Biemann, 2011; Wu, 2000).

The main advantage of the OMA method is that it measures distance between sequences rather than distance between events. The sequence data generated can be analyzed with optimal matching. As in any such application, the first task is to create insertion, deletion, and substitution costs. Distances between sequences can be calculated in two ways. Firstly, sequences are compared with a specific reference sequence. Secondly, they are compared with each other as a pair (Abbott & Forrest, 1986; Abbott, 1995; Abbott & Tsay, 2000; Aisenbrey & Fasang, 2010; Fasang & Futing, 2013; Gauthier et al., 2010; King, 2013; Pollock, 2007; Halpin, 2010; Martin et al., 2008; Biemann, 2011; Wu, 2000).

One of the disadvantages the method has is its one-dimensionality of categories and elements, which aggregate a sequence. The analysis of parallel or multiple sequences (for example, employment careers) was a serious obstacle for using this method. Later, however, scientists in the sphere of life-course research tried to resolve this problem (Pollock, 2007). However, every researcher offering an innovative method has constantly collided with problems as how to unite a new method with traditional methodological equipment and what is the potential, a new method has. Moreover, every time a new method becomes more popular in usage, new questions about theoretical substantiation of an innovative method appear (Brzinsky-Fay, 2011, p.30).

As long as researches use range information about events for the OMA method, they mainly reject a continuous character of the data. However, it is possible to maintain continuous information when using the OMA method parallel to sequential data in real time. For historians and social scientists, the most problematic disadvantage of the method is an ambivalence of the data used. Much sociological data is monadic, that is, every case is defined by the only value on a given variable. At the same time, distance data, which can be used for optimal matching techniques, is dyadic, because values are defined for a pair of cases (Abbott & Forrest, 1986, p.489). Thus, optimal matching offers an effective way of finding a veritable typology of sequences and of revealing reasons why various countries differ on the same typology.

4.4 Basic principles to research methodology

The issues of research methodology and ethical principles to applied methodological approaches are very important when considering such a phenomenon as the labor integration of immigrants in Finland. As the object of

research (immigrants) obliges careful attention when considering issues of ethics and discrimination in the labor market, the research methodology obliges usage of corresponding methods, approaches, and research ethics. Many aspects of scientific activity involve a large spectrum of topics to be considered. In this chapter, the problem of research methods, ethics of their usage, and issues concerning the combination of quantitative methods will be discussed.

According to the ethical principles of research in the social sciences, "...research is not always repeatable, but the scientific community should have the possibility, if necessary, to verify research findings from the data analyzed in a study. Openness is a key characteristic of science and also a precondition for testing the validity of scientific information, critically evaluating information, and advancing science" (Ethical principles, 2009). The basic ethic principles of carrying out a research are concerned with verification of results, validity, reliability, and openness; a principle of honesty at every stage of research obtains supreme importance for the research community as well.

On the other hand, the rules of the British Sociological Association prescribe that, "...while recognizing that training and skill are necessary to the conduct of social research, members should themselves recognize the boundaries of their professional competence. ... They should not accept work of a kind that they are not qualified to carry out. ... Members should satisfy themselves that the research they undertake is worthwhile and that the techniques proposed are appropriate" (Statement of Ethical Practice, 2002). Researchers consider that an ethical analysis of research with humans must reflect not only on how research is conducted but also on what research topics are pursued, what questions are investigated, and what questions are neglected (Sherwin, cited in Nespor & Groenke, 2009, p.996).

A role as researcher in the course of research is quite complicated because one should consider many ethical principles as a whole – from the first to the last research stage; every researcher indicates their own place by means of methods, which are used, and concept of arguments for verification of hypotheses. Therefore, the overall structure of scientific argumentation arises from the initial research hypotheses, which are tested by studying their observable logical consequences. The study of scientific argumentation involves the logic of both the discovery and justification of hypotheses. If this model is used for an explanation of social processes, arguments are divided into several groups that are independent in their own way, and at the same time allow for making overall conclusions about social phenomena.

Scientific verification more often includes an analysis of inductive and deductive arguments. Thus, induction starts from particular statements and generalizes into an overall scientific conclusion. As David Hall and Irene Hall write, "...induction appears solid because it is grounded in 'facts', and is therefore 'empiricist'. ... Inductive reasoning based on observed facts results in theory which, however, can never be totally proved, because of the possible existence of observations running counter to the theory which have not yet been made" (Hall & Hall, 1996, pp.33-34). In contrast, deduction starts from the overall theory and explains particular statements as parts of the overall theory. According to the same authors, "...deductive process takes place so that theoretical notions or hypotheses guide the observations that are made. ... The strategy of 'falsification' means that hypotheses should be generated which the researcher seeks to disprove" (Ibid). Therefore, a researcher verifies hypotheses on the basis of initial theoretical considerations and assumptions whereas partial scientific conclusions are considered as true or false, as supporting or disproving initial hypotheses.

Depending on research tools and empirical results, premises and conclusions, a researcher estimates whether hypotheses are truthful or not. In case the hypotheses have not been verified empirically and theoretically, a researcher should again carefully rethink further the scientific process. By rethinking a new hypothesis, a researcher also commits to reconsidering the research methods. According to scientific principles, if after collecting the evidence a hypothesis cannot be disproved, then it can be provisionally and temporarily accepted. In contrast, if the hypothesis fails, another hypothesis has to be produced and tested (Hall & Hall, 1996, p.34). Verification of hypotheses can be done by means of validity, reliability, and evaluation of research. The validity principle can be one of the tools allowing estimating, "...the extent to which a test, questionnaire or other operationalization is really measuring what the researcher intends to measure" (Hall & Hall, 1996, p.43). Validity is often associated with the operationalization of concepts, which is more commonly associated with quantitative and experimental forms of research (Mason, 1996, p.24).

Further, the reliability principle allows estimating, "...the extent to which a test would give consistent results if applied by different researchers more than once to the same people under standard conditions" (Hall & Hall, 1996, p.44). Such "goodness of fit" or logical staged linking can be referred to as "consistency" (Holloway & Todres, 2003, p.347). In this case, criteria of reliability differ from whether this is a qualitative or quantitative research. Research in the quantitative tradition often relies upon standardization of research "instruments" or "tools",

and upon cross-checking the data yielded by such standardized instruments – and by different sets of instruments which are designed to “measure” the same thing – in order to check reliability (Mason, 1996, p.24). Finally, “...evaluation research is a form of applied research in which the information has direct relevance to subsequent decisions about improvements to, or the continuation of, a particular action program” (Hall & Hall, 1996, p.46). Mason uses the term “generalizability” which involves, “...the extent to which you can make some form of wider claim on the basis of your research and analysis, rather than simply stating that your analysis is entirely idiosyncratic and particular” (Mason, 1996, p.24).

Overall, ethical aspects of carrying out research always concern issues about integration of research questions, methodologies, and methods. Depending on the character of these issues, a researcher chooses possible ways of integration as technical, ontological, or epistemological. When a researcher decides how to integrate questions, methodologies, and methods technically, he (she) must respond to a question as, “...whether they take a similar or complementary form in a technical or organizational sense, so that they can be straightforwardly aggregated or grouped together, or made comparable in some way” (Mason, 1996, p.26). An epistemological approach is concerned with questions about the sense of what counts as knowledge and as evidence. In this case, a researcher must respond to a question about whether different methods or forms of data emanate from the same epistemology, or at least from complementary epistemologies, or whether they based on similar, complementary, or comparable assumptions about what can legitimately constitute knowledge or evidence. On the other hand, an epistemological approach allows for explanation of social processes by making generalizations. In this case, a researcher must respond to a question about whether different data sources and methods usefully contribute to some kind of coherent explanation of an intellectual puzzle or whether these can be brought together meaningfully in a unified explanation.

5 ANALYSIS

5.1 Trajectories of labor market integration

Labor market integration is a time-consuming process. One can argue that a single access to employment cannot be considered as successful labor market integration because the positions of immigrants in the labor market are rather unstable and unclear. Therefore, it is assumed that in moving from status to status in the labor market (for example, between employment and unemployment, economic inactivity and apprenticeship, etc.), immigrants go through specific trajectories of labor market integration. Taking into account all these premises, a certain approach to understanding the labor market integration phenomenon from the position of a transitional labor market concept, which, in one's turn, considers "transitions" from a holistic perspective, is proposed. In this subchapter, I focus on characterization and summarization of longitudinal characteristics of individual trajectories as one of the mechanisms contributing to labor market integration of immigrants. Using information about individuals' main activity statuses based on the Finnish Longitudinal Employer-Employee Data (FLEED), and by means of sequence analysis, I follow the labor market transitions of immigrants during the years 2000–2010.

5.1.1 Changing dynamics of statuses in integration trajectories

Considering the labor integration process as a certain long-term dynamic development, immigrants supposedly go through specific trajectories of "adaptation" and have their own "path" of integration, which they follow through the time. The changing dynamics of statuses is hypothetically reflected in changing sequences during the period of initial integration. Thus, by looking at the initial statuses in the beginning of the period (year 2000), one can see from what statuses immigrants start careers ("employment", "unemployment", "apprenticeship" or "economic inactivity") (Fig. 5, left). In contrast, by considering the labor market statuses at the end of the period (year 2010), one can

see to what status immigrants come to after the period of initial labor integration (Fig. 5, right).

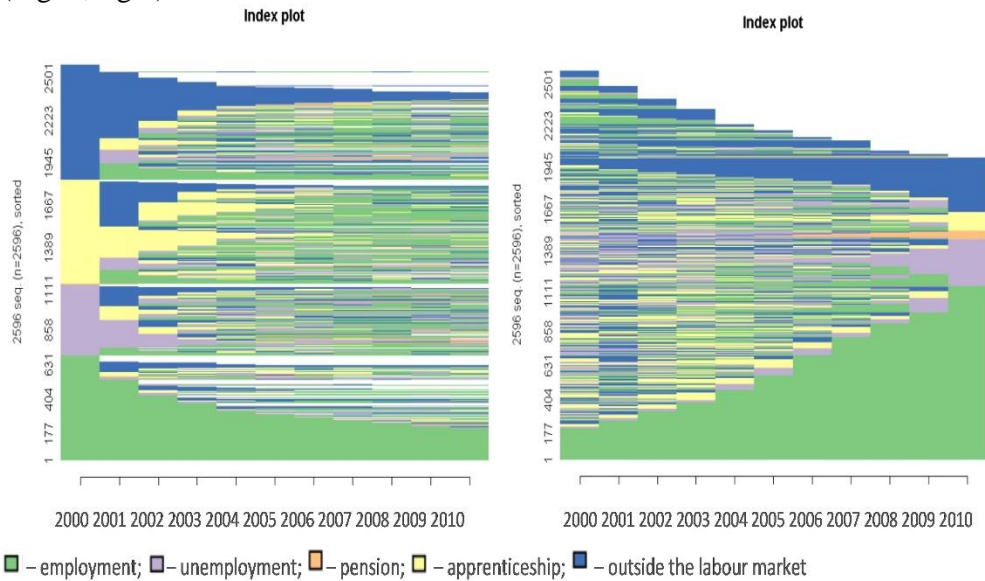


Figure 5. Full-sequence index plots representing sequences of labor market statuses as sorted by year 2000 (right) and by year 2010 (left) (FLEED, $n=2596$)

Following the changing situation in the labor market, despite contradictions and complexities of integration, job-placement for immigrants has an increasing and stabilized character. Employment has improved with time since the share of employed immigrants increased from 26.5% in 2000 to 44.7% in 2010. On the other hand, transitions to unemployment and economic inactivity became less and less frequent, from 18% to 12% for unemployment and from 29.2% to 13.9% for economic inactivity. One should note, however, that a tendency of withdrawal of immigrants from the country steadily increased as well; for the years 2000–2010, the number of observed immigrants decreased on 22.5%. Following the process of integration among all immigrants, all the trajectories of labor behavior are taken into account, as among those immigrants who stayed in the country, and among those who move out from Finland. In case of the present research, it is especially important to define what labor statements have led to withdrawals from the labor markets and even moving out from the country, as well as what factors and mechanisms have potentially affected re-immigration.

Besides simple verification of proportions of immigrants with changeable statuses during the years 2000-2010, the categorical sequence data more specifically shows those state sequences, where the position of each successive

state receives a meaningful interpretation in terms of statuses in the labor market. In particular, the transition rates for sequence objects provide information about the most frequent state changes observed in the data together with an assessment of the stability of each state (Gabadinho et al., 2011, p.17). Thus, since relatively high instability of transitions exists (see values in italics 0.84, 0.44, 0.89, 0.45, 0.67), the statuses “unemployment” and “apprenticeship” are the most unstable with a probability of 0.56 (for unemployment) and 0.55 (for apprenticeship) to leave the state at each position t . The highest transition rates exist between statuses “unemployment – employment” (0.22) and between statuses “apprenticeship – employment” (0.23). In particular, the statuses “employment”, “pension”, and “outside the labor market” are relatively stable ones, because transition rates for these statuses are 0.84, 0.89, and 0.67, respectively. This means that transitions between these and other statuses are less intensive in comparison to transitions between “apprenticeship” and “unemployment” (Table 2).

Table 2. Transition rates used for the sequence object (FLEED, $N=2596$, period 2000-2010)

	[->employment]	[->unemployment]	[->pension]	[->apprenticeship]	[->outside the LM]
[employment ->]	<i>0.84</i>	0.07	0.00	0.04	0.05
[unemployment ->]	0.22	<i>0.44</i>	0.01	0.15	0.18
[pension ->]	0.01	0.01	<i>0.89</i>	0.03	0.06
[apprenticeship ->]	0.23	0.16	0.00	<i>0.45</i>	0.16
[outside the LM ->]	0.10	0.11	0.01	0.11	<i>0.67</i>

Comparatively, the analysis of transition rates with regards to each year of the observation period allowed for conclusions about certain important tendencies occurring already during the first years of labor market integration. Thus, already during that time, immigrants with a higher probability left the statuses “unemployment” and “apprenticeship” and moved to a category “outside the labor market” (0.28 – unemployment; 0.44 – apprenticeship). Another tendency showed that, during the second and the third years of integration, immigrants carried out more transitions from “unemployment” to “apprenticeship” (0.25 in 2001), or from “apprenticeship” to “employment” (0.18 in 2001). Only since the fourth year (2003), immigrants have realized more intensive transitions, such as “unemployment – employment” (0.23) or “apprenticeship – employment” (0.22) (Fig. 1 in Appendix 8.1).

Finally, by looking at the substitution-cost matrix, which is used when computing distances between sequences through optimal matching, one can see

the dynamics of statuses. In accordance with what was observed in the transition rate matrix, the lowest costs exist for changing from “apprenticeship” or “outside the labor market” into “unemployment”. The last circumstance, once again, confirms that transitions including the statuses “unemployment” and “apprenticeship”, or “economic inactivity”, were the most intensive ones (Table 3).

Table 3. Substitution-cost matrix used for the sequence analysis (indel cost=1, substitution cost=2, FLEED, N=2596, period 2000-2010)

Indel cost =1	employment->	unemployment->	pension->	apprenticeship->	outside the LM->
employment->	0.00	1.71	1.98	1.72	1.85
unemployment->	1.71	0.00	1.98	1.69	1.70
pension->	1.98	1.98	0.00	1.97	1.93
apprenticeship->	1.72	1.69	1.97	0.00	1.72
outside the LM->	1.85	1.70	1.93	1.72	0.00

Considering integration as a process during which an immigrant goes through a certain chain of transitions (changes of statuses) leading to a final statement in the labor market, their final status is conditionally considered as the most important one, or as conditional evidence of completed integration. Consequently, allowing for this assumption, chains of sequences are analyzed as fixed at the end of the observation period. Nevertheless, comparison of sequences as analyzed by the beginning and the end of the observation process allows for revealing a tendency of overall dynamics of labor behavior during the whole period of initial integration. Therefore, one should consider initial labor statuses as well. Following the above-mentioned assumptions, the sequence analysis revealed basic integration trajectories.

Taking into account a general tendency, the results of the sequence analysis show that during the 10 year period, three groups of immigrants have obtained relatively stable employment: “Quick integration” (19.1%), “Delayed integration from unemployment and inactivity” (15.9%) and “Delayed integration from apprenticeship” (7%). On the other hand, the analysis revealed those groups of immigrants for whom economic inactivity (“Entering” – 7.6%; “Exclusion” – 8%) or unemployment (“Circulating” – 13%) were dominant statuses in the labor market. A significant share of immigrants rather frequently left the labor market or moved out of the country (“Withdrawal” – 12.4%; “Dropout” – 11.1%), while for certain groups of immigrants, the statuses “pension” and “apprenticeship” were dominant during the 10 years (“Pension” – 1.5%; “Apprenticeship” – 4.3%) (Fig. 6; see descriptive statistics in Tables 1 and 2 in Appendix 8.1).

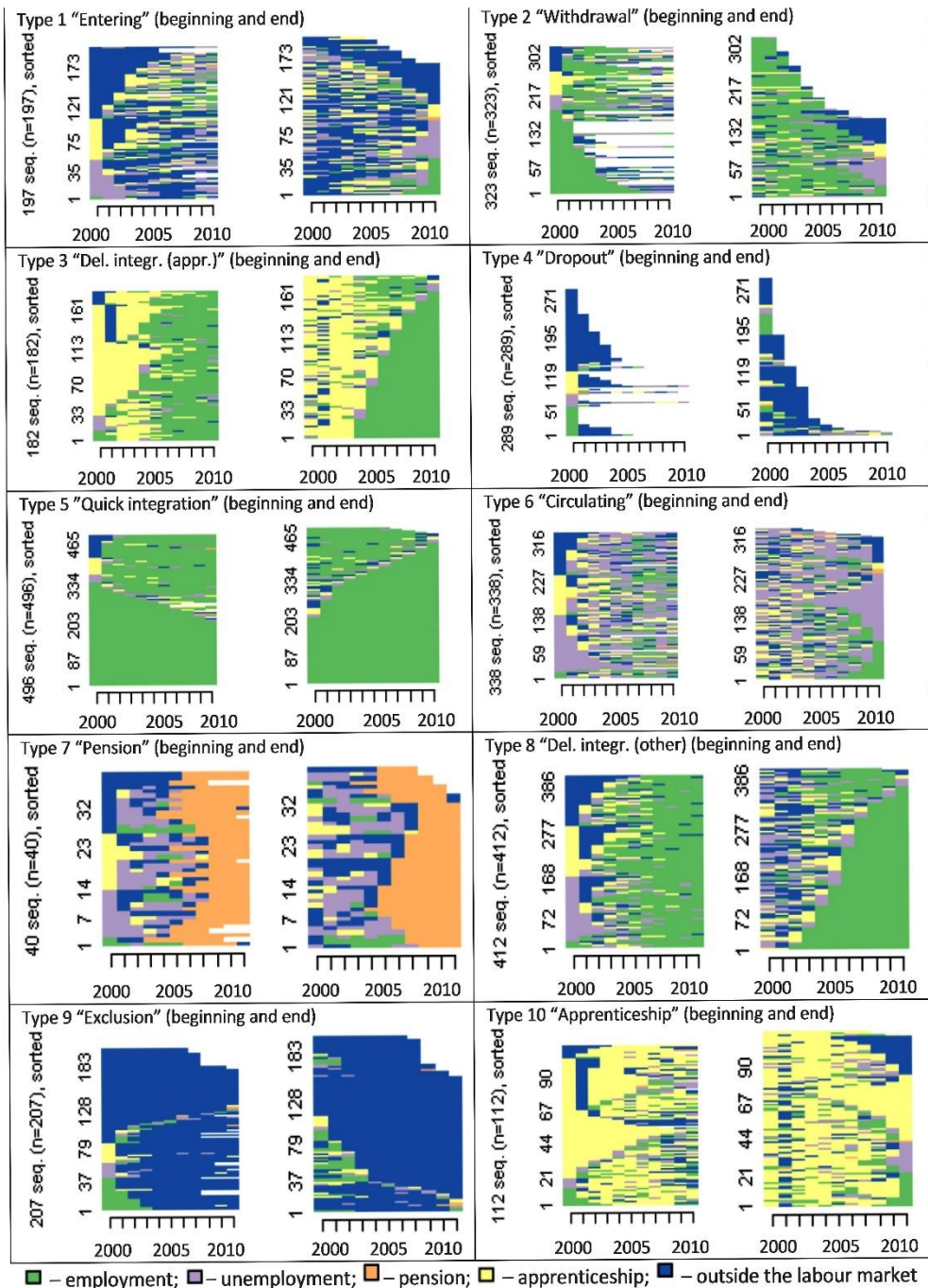


Figure 6. Full-sequence index plots as classified for ten types of transition sequences and as sorted by beginning (2000 year) and end (2010 year) (FLEED)

Both the transition rates and substitution-cost matrix show that the transitions “unemployment – apprenticeship” and “unemployment – economic inactivity” are the most “intensive” ones. Comparatively, an analysis of ten more frequently repeated sequences confirmed that the types “Circulating” and “Apprenticeship” have higher dynamics with regards to intensity of transitions. For example, the fact that only 3.3% of immigrants in the type “Circulating” repeat the same ten sequences implies high diversities in changing statuses. On the other hand, such types as “Dropout”, “Quick integration”, and “Exclusion” have a more stable model of transitions between statuses, as long as the overwhelming majority of immigrants repeat the same “model” of behavior in the labor market (“Dropout” – 74.4%; “Quick integration” – 61.1%; “Exclusion” – 58%) (Fig. 7).

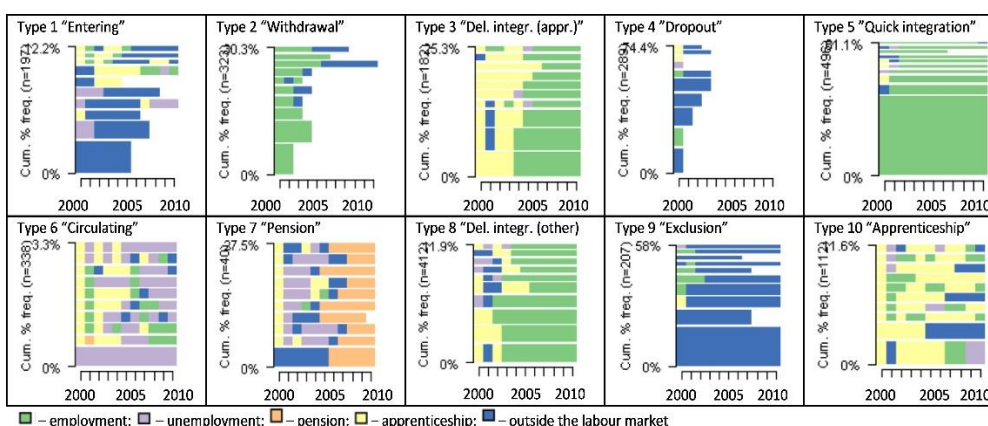


Figure 7. Unweighted sequence frequency plots representing 10 most frequent sequences according to each type of transition sequences (FLEED, period 2000-2010)

One of the most typical trajectories of behavior leads to employment and integration. In this case, quick integration in the labor market, as well as integration that is delayed owing to the influence of various factors is possible. One of the main trajectories of behavior (type 5 “Quick integration”, 19.1%, the mean age=29.3, the median=28) is typical for those immigrants who have been integrated into the labor market quickly and have found employment right after moving to Finland. The mean time of being in the status “employment” is 10 years, with short periods in other statuses predominating during the first years.

Comparatively, another group of immigrants finds jobs after an initial period of apprenticeship in the country (type 3 “Delayed integration from apprenticeship”, 7%, the mean age=19.7, the median=15). The initial period of being in a status “apprenticeship” comes to 4-6 years. A distinctive feature of this group of immigrants is a transition to the category “employment” right after a

period of education. However, for many immigrants, such employment is not permanent, because they come back to a recurrent period of education and after that, recurrently find a job. Another category of immigrants have similar trajectory, however, instead of employment they have short periods of economic inactivity or unemployment.

Another trajectory of behavior implies that immigrants find employment after a certain period of being in a status “unemployment”, “outside the labor market” or “apprenticeship” (type 8 “Delayed integration from unemployment and inactivity”, 15.9%, the mean age=28.3, the median=27). The mean time of being in a status of “employment” composes 6 years, whereas in the status “outside the labor market”, “unemployment” or “apprenticeship” – approximately 2 years (equal amongst each status). This type of behavior implies that immigrants have prolonged unemployment or economic inactivity. Many immigrants have a short period of apprenticeship in the beginning of their labor career. Final employment occurs only in the second half of the period.

However, rather often, the behavior of immigrants in the labor market leads to unsuccessful integration. Thus, one of the models of behavior of immigrants in the first group (type 1 “Entering”, 7.6%, the mean age=28.9, the median=26) implies that, after a period of being outside the labor market, immigrants try to enter the labor market by means of official unemployment status, participating in educational programs, or short-term job-placement. Nevertheless, in many cases immigrants come back to an initial status of economic inactivity or move to a category “unemployment”. The most typical status for immigrants is a status of “economically inactive population”, as a majority of immigrants spend 5.5 years in this status.

The same tendencies are typical for those immigrants who have been outside the labor market for a long time (type 9 “Exclusion”, 8%, the mean age=32.9, the median=29). At the end of the adaptation period, immigrants stay outside the labor force or move away from the country. The mean time of being in the status “outside the labor market” comes to 9 years, whereas in other statuses the mean time is less than 1 year, correspondingly to each status. In this case, transition to one of the categories occurs either directly from an initial status or by means of short-term circulation of statuses. The typical models of behavior for immigrants in this group are moving away from the country after initial periods of apprenticeship, unemployment or employment and subsequent economic inactivity during 6-7 years, or moving to a category “economically inactive population” after initial periods of apprenticeship or employment.

Compared to trajectories resulting in employment or economic inactivity, some models of labor behavior imply more active circulation between statuses in the labor market and outside it (type 6 “Circulating”, 13%, the mean age=34.7, the median=34.5). On average, the mean time of being in a status of “unemployment” comes to 5.5 years, whereas in other statuses (“employment”, “apprenticeship” or “outside the labor market”) the mean is 2 years. This type of behavior is the most dynamic compared to other types. One of the most typical trajectories of labor behavior is a transition from an initial status of “unemployment” to the same status by means of circulation of statuses in the labor market and outside it. Sometimes immigrants move to the category of economically inactive population as an intermediate stage in a chain of circulation. Another variant of behavior implies a stage of education as an intermediate period. Nevertheless, immigrants again found themselves in the category “unemployment”.

Nevertheless, one of the most typical models of behavior often ends with withdrawing from the labor market or dropping out from the database (movement to another country, death, or turning 70 years old). One of the trajectories of behavior implies that immigrants having an initial status of employment during 4 years (on average) then more often move to another category of “economic inactivity” or “unemployment”, or drop out from the labor market (type 2 “Withdrawal”, 12.4%, the mean age=29.3, the median=28). Overall, a period of dropping out occurs already in the second half of the observation period. More often, immigrants, after an initial period of prolonged employment, circulate between statuses in the labor market, and only after that move to the category “outside the labor market” (2-6 last years) or move out of the country. Comparatively, another trajectory also implies dropping out from the labor market (type 4 “Dropout”, 11.1%, the mean age=33.4, the median=30). The main category of immigrants, after an initial status of “outside the labor market” (on average during 2 years), directly moves out of the country, whereas another category of immigrants additionally goes through a circulation of statuses and finally immigrate to another country. This final period of dropping out comes to 4-10 years.

In conclusion, one more model of behavior leads to statuses which are not directly associated with employment such as, for example, “pension” or “apprenticeship”. The smallest group of immigrants ends the period of adaptation and integration in a status of “pension” (type 7 “Pension”, 1.5%, the mean age=45.4, the median=50). The mean time in the status “pension” comes to 4.5

years, while in the status “outside the labor market” and “unemployment” the mean time is 2.5 years correspondingly. Two models of behavior are peculiar to immigrants in this group. In one case, immigrants, after an initial period of economic inactivity, directly move to the category “pension”. In another case, after initial periods of apprenticeship or unemployment, immigrants leave the labor market for a period of 1-5 years and only after that, move to the category “pension” (3-6 last years of the observation period).

Another trajectory of behavior (type 10 “Apprenticeship”, 4.3%, the mean age=19.3, the median=15) implies long period of staying in the status “apprenticeship” (7 years), whereas staying in other statuses aggregates 1-2 years correspondingly to each status. One of the most typical strategies of behavior is a permanent recurrence to the sphere of apprenticeship as an intermediate stage in a chain of other statuses. This type of behavior is different from other ones because immigrants start a path to integration from studying in Finland, however, after that period their trajectories disperse. In a more successful way, after a period of apprenticeship, immigrants move to one of the other statuses and find a job (1-3 last years of the observation period). In another case, immigrants interchange statuses “apprenticeship”, “unemployment”, or “economic inactivity”. A status of “employment” or “economic inactivity” becomes the final one in a chain of statuses (1-3 last years). Finally, a certain category of immigrants, having started from an apprenticeship, ends the period of integration in the same status. As a rule, the final period of apprenticeship is much longer than an initial one.

5.1.2 Mechanisms of labor market segmentation in trajectories

Following the hypothesis that the Finnish labor market is a segmented labor market, and mechanisms of segmentation and fragmentation of the labor market significantly affect the outcomes of integration of immigrants, the next explanation of the mechanism of transitions in the labor market concerns an analysis of three basic factors, which potentially affect the situation of labor market integration. The segmentation of the labor market can concern different groups, for example, immigrants receiving different wages for the same work, in comparison to labor incomes that the native population has. Therefore, stigmatized groups who have similar educational and professional features are combined into the labor market segments according to their professional characteristics as a primary criterion compared to the same groups of native

population. Stigmatized groups, in comparison to analogous groups among the native population, possess lower professional positions and are limited in their carrier development.

Assuming that age-based segmentation potentially affects specificity of transitions between labor market statuses, significant distinctions between specificity of trajectories of integration exist as peculiar to specific age cohorts. I have tested whether age follows a normal distribution (taken on 2000 year). Carried out Kolmogorov-Smirnov Test allowed to reject a hypothesis about normal distribution of age in the sequences' groups ($p \leq .05$). Used non-parametric Kruskal-Wallis Test allowed to reject the null hypothesis that the distribution of age is the same across the sequences' groups ($p = .000$). Significantly, the mean age of the foreign population immigrating to Finland came to 29.7 years in 2000 (the median=28 years). Likewise, the number of 15-year old immigrants was quite high in the overall distribution of population (16.2%). Essentially, a share of 15-year old immigrants is rather significant in the entire trajectory types. In particular, the two “youngest” groups of immigrants for whom apprenticeship was one of the dominating statuses during the 10-year period of observation (“Delayed integration from apprenticeship” and “Apprenticeship”) were distinguished (see Table 1 in Appendix 8.1).

In 2000, the average mean of age was slightly higher for women than for men (30.3 years for women, 29.1 years for men). If at the beginning of the process in 2000, the proportions of men and women were almost the same (around 50% in each group), toward the end of the observation period, the proportions of men and women slightly changed (47.3% – men, 52.7% – women) (Table 1 in Appendix 8.1). An analysis of the initial positions among men and women in the beginning of the observation process showed that the status of employment was more typical for men than for women at the beginning of integration process (Fig. 8, two left pictures).

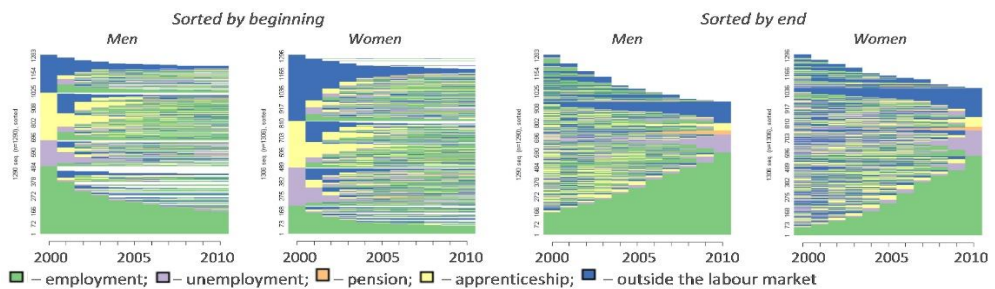


Figure 8. Sequence index plots subject to gender as sorted by beginning (2000 year) and end (2010 year) (FLEED, no. of men=1290, no. of women=1306)

The number of men who have had employment since the beginning were approximately twice as much as the number of employed women. At the same time, the number of men who were outside the labor force (economically inactive) was half the number of economically inactive women. Comparatively, to the end of the observation period (2010), similar numbers of men and women have already had employment, whereas an essential share of immigrant women remain economically inactive or unemployed (Fig. 8, two right pictures). Among men, the number of economically inactive and unemployed were a little bit smaller in comparison to the number of women. Overall, during the observation period, the number of men in the database decreased by 13%, whereas the number of women decreased by 9.5% (in comparison to number in 2000). I have tested whether the sequences' groups are different on gender by means of the Chi-square Test with Bonferroni corrections of the P values. Since the P-value (0.000) is less than the significance level (0.05), one cannot accept the null hypothesis that the sequences' groups are similar on gender. Thus, we conclude that there is a relationship between gender and the sequences' groups ($X^2(9, N = 2596) = 186.17, p = .000$).

The factor of education potentially affects the outcomes of integration. Significantly, immigrants who did not have professional education up to the moment of immigration to Finland were slightly younger (mean=29.07 years) than immigrants who have had higher education (mean=35.8 years). Comparatively, the mean age of immigrants who had a first level of higher education was 36.2 years in 2000 (median=36), and for those having complete higher education – 35.8 years (median=35). Overall, the mean age of the whole database came to 29.74 years in 2000 (Table 4; see also Table 1 in Appendix 8.1)

Table 4. Basic statistical indicators on age and educational degree (FLEED, 2000 year, N=2596)

	Mean	Median	N	Std. Dev.	Minimum	Maximum
No professional education	29,07	27,00	2310	11,78	15	70
Secondary education	33,73	32,00	116	10,45	18	63
Higher education (Bachelor)	36,21	36,00	110	10,24	18	63
Higher education (Master), post-graduate	35,80	35,00	60	9,41	23	58
Total	29,74	28,00	2596	11,77	15	70

Relatively, the Chi-square test of interdependence was calculated comparing the frequency of obtaining new educational degree and trajectory types. A significant result was found ($X^2(9, N = 2596) = 497.95, p = .000$). Additionally, the Chi-square tests also confirmed that the association between educational code

and trajectory types are quite high (X^2 (9, N = 2596) = 457.42, $p = .000$) (Table 5).

Table 5. Chi-Square Tests for variables “New educational degree” and “Educational code changed and appeared” and trajectory types (FLEED, N=2596)

Chi-Square Tests (variable “new educational degree”)			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	497,959 ^a	9	,000
Likelihood Ratio	478,064	9	,000
Linear-by-Linear Association	,671	1	,413
N of Valid Cases	2596		
a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 8,94.			
Chi-Square Tests (variable “educational code changed and appeared”)			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	457,428 ^a	9	,000
Likelihood Ratio	494,480	9	,000
Linear-by-Linear Association	2,374	1	,123
N of Valid Cases	2596		
a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 11,16.			

A general tendency of an increasing educational level existed as peculiar to all the trajectory types. Thus, to the end of the period (2010), immigrants who mostly followed trajectories resulting in “employment” or “apprenticeship”, obtained a new educational degree. Statistically significant differences between immigrants, who obtained new educational degrees was observed with regards to the types “Delayed integration from apprenticeship” and “Apprenticeship”. Among those immigrants, for whom an educational code appeared and changed, a majority also belonged to the above-mentioned groups. On the other hand, a lower share of immigrants who obtained new educational degrees during the 10-year period and increased their professional status belongs to such trajectory types as “Circulating” and “Exclusion” (see Table 1 in Appendix 8.1).

5.1.3 Conclusion and discussion on integration trajectories

The research based on sequence analysis has certain advantages that allow for representing a time-ordered sequence of socio-economic states (statuses) that immigrants have experienced. This method in combination with cluster analysis allowed for synthesizing an enormous volume of information, consisting of various sequences of statuses into relatively homogeneous groups. On the other hand, applied sequence analysis has had certain limitations, as following. While the procedure of a sequence analysis has clear interpretation in DNA-research, in

which sequence analysis methods have initially appeared, its meaning for social sciences is rather doubtful and lacks formal rules for determining indicators, offering a freedom of choice according to certain research aims and tasks. On the other hand, cluster analysis also has limitations and allows a multiplicity of various solutions and sensibility of research results to various cluster algorithms. Thus, the choice of final cluster solution depends on the subjective concepts of a researcher.

A general tendency shows that, after several years of living in a country, the employment rate essentially increases the same for men as for women whereas the unemployment rate decreases. However, the heterogeneity of immigrant groups implies also heterogeneity in ways of integration. For example, several categories of immigrants have a direct trajectory to job-placement (as immediate as delayed), while trajectories to job-placement for other categories of immigrants are more complicated, diverse, and hazardous. In this case, the factor of age has a significant influence upon the process of integration because younger immigrants orient to obtaining a new educational degree in Finland and subsequent job-placement, whereas the frequency of transitions between statuses decreases proportionally with the age of immigrants. However, a factor of higher education acquired in a destination country does not always predetermine adequate employment. Even for younger immigrants, a period of apprenticeship can be followed by either permanent job-placement or unrealized integration in the labor market and a repeated recurrence of apprenticeship. On the other hand, women are more vulnerable to be unemployed, partially employed or outside the labor market, whereas men have employment more frequently since the beginning of integration.

If to consider “risk” of transition as a subsequent withdrawal from the labor market or even a new immigration to another country, the conclusion that time is still a decisive factor for successful integration of immigrants obtains new significance. Entering the labor market earlier predetermines faster integration and more sustainable employment, whereas delayed entering decreases probability to be sustainably employed. Based on labor adaptation, the labor of migrants becomes more flexible, which implies a more circulated character of behavior in the labor market. In general, the first and longer second statuses of immigrants in the labor market are still directed to future employability. Further circulation of statuses (“spin”) signifies active adaptation to conditions, labor market attachment, and aspiration for any employment. This is a culmination and a point of bifurcation of integration. The third stage of the integration period

becomes a decisive one as it leads to final employment, isolation outside the labor market, or recurrent resettlement.

In the situation of paradoxical coexistence between labor integration, labor deprivation, or permanent entry to the labor market, like “labor adaptation”, efforts of labor market policy should be directed to creating opportunities for full economic, social, cultural, and political participation for immigrants. Consequently, successful integration policies and practices preventing isolation of certain groups are a way to enhance fulfillment of respect for common values of a society. Transparent rules, clearly articulated expectations, and predictable benefits for law-abiding immigrants are prerequisites to better immigration and integration policies.

The results of the sequence analysis prove that a majority of immigrants more frequently find a job right after they move to Finland and integrate into the labor market quickly, or come to long-term employment after other short statuses “outside the labor market”, “apprenticeship” or “unemployment” as intermediate stages on 1-2 years (“Quick integration”). Comparatively, Fuller confirms the same tendency as immigrants integrate into the labor market by means of changing statuses during the first years of living in a country. Thus, “quick integration” represents an early entrance into prolonged full-time employment while trajectories of employment are stable and homogeneous (Fuller, 2011). In the typology of Christian Brzinsky-Fay, the group “express” also represents the more successful type of integration among young people in the labor market, whereas only a small share of them have other statuses besides “employment” in the beginning of their labor career (Brzinsky-Fay, 2007, pp.416-418).

However, stable labor activity does not prove a thesis about absence of transitions inside the model “employment – employment”. Despite a permanent status of employment, there is a probability that immigrants are more dynamic as it concerns changing work places. Consequently, transitions inside the status “employment”, as maintenance transitions, are underestimated. These transitions represent moves in the context of present employment as ways of maintaining employment and employability, transitions between short-term or part-time employment and full employment, or transitions between hired work and self-employment, or combination of transitions (Schmid, 1998; Muffels et al., 2002; Räsänen & Schmid, 2008, pp.8-9; Schmid & Schömann, 2003, pp.5-6). Thus, the concept of transitional labor markets provides institutionalization of the “employment bridges”, which help to facilitate transitions between various kinds of employment as changing during one’s life-span and to do so in a way that

employability is supported and socially protected (Schmid & Schömann, 2003, pp.2-3).

Consequently, by means of transitions inside the status “employment”, higher employability as social protectability of employment, as well as higher adjustment and attachment to the labor market, are provided. As Brzinsky-Fay explains, subject to the nature and influence of employment upon future labor activity, periods of transitions including more than one episode of employment differ from periods implying long-term employment. Subsequently, there are objective reasons to analyze the increasing instability of processes in the labor market (Brzinsky-Fay, 2011, p.14). However, “instability” has a different context as one should compare “instability” inside models implying more or less stable employment, as, for example, “Quick integration” and “Delayed integration” (from “apprenticeship”, “unemployment”, or “economic inactivity”). “Instability” inside other models implies employment as an intermediate status in the overall trajectory of behavior. Thus, one should consider which “instability” is more vulnerable.

The results of the present analysis attest that there are at least two models of behavior in the labor market when immigrants start the process of labor integration from an “employment”-status. However, for one category of immigrants, employment remains a rather stable phenomenon (“Quick integration”, “Delayed integration”). In contrast, the process of labor integration is interrupted for another category of immigrants as they move out from the employment sphere, from the labor market, or even out of the country (“Withdrawal” and “Dropout”). A reasonable question appears as to what are the reasons for such different trajectories of behavior having similar initial conditions?

One of the most important issues is a matter of a first job as a starting point for the further development of workers, as well as whether a first job is “a base” for employment or “a trap”. (Brzinsky-Fay, 2007, pp.12-13) It is possible to imply that employment becomes “a trap” for immigrants in the group “Withdrawal” as long as they do not stay too long at one job and later immigrate to another country. The general model of behavior shows that after having stayed in an initial period of employment during 1-6 years, immigrants then more often drop out or go through an intermediate status of “economic inactivity” or “unemployment” and drop out. Overall, dropping out occurs after 2-6 years of living in Finland, already in the first half of the adaptation period (“Withdrawal”).

Comparatively, immigrants who have had employment since the beginning of the integration process (“Quick integration”), have initially been in the same conditions as immigrants from the “Withdrawal”-group. However, if employment is rather stable for the “Quick integration”-group, employment for the “Withdrawal”-group is interrupted. Comparatively, Fuller describes a similar type of behavior in the labor market as a “redirection”-model (it is similar to the “Withdrawal”-model, for example). The trajectory “redirection” implies that transition to full employment does not have a permanent character. After the first two years of integration, immigrants come back again to other statuses in the labor market; the trajectories of employment for immigrants have a higher rate of instability (Fuller, 2011).

Admittedly, a reason for the appearance of such different situations is the character of “first employment” as “a base” or as “a trap” for the integration process. Brzinsky-Fay explains that, at the individual level, a basic indicator of “transition” is a first shift to employment, which has not always had importance. In this case, the questions appear as to how to define whether employment is important or not, and what is an indicator of importance, or an insignificant job. In order to avoid this problem, researchers try to reveal more significant change-transitions in the labor market by means of using other concepts, such as “first significant job”, which lasts at least six months, or “first job after leaving school for the last time.” Some researchers substantiate exclusion of a very short period of work as unstable employment, as a work of “second importance” (Brzinsky-Fay, 2011, p.13).

In the case of the present research, it is rather difficult to distinguish what job is more significant for the integration process. More often, time of entrance to first employment, or a period of employment, remain the only criteria for characteristics of importance and stability of work. For example, the results of other research confirm that, while a status of employment changes to a certain extent for a period of 3.5 years, the stable employment of those who initially have employment from the beginning of integration emphasizes importance of finding a job quickly after moving to a country. In contrast, a decline in the level of activity in the labor market during a 3.5-year period after resettlement is a result of “the discouraged worker effect”. In particular, these immigrants will probably remain unemployed (Thapa & Gørgens, 2006, pp.8-9).

In the course of the present research, the results of the sequence analysis confirm that a time of entrance into employment remains a decisive factor for the integration process among immigrants. Along with “Quick integration”, which

implies rapid entrance to the sphere of employment and stable labor activity during a long time, integration can be delayed by virtue of certain reason and it specifies transition to final employment only after staying in other statuses. On average, employment occurs only after six years of staying in other statuses (“Delayed integration from unemployment and inactivity”). In the beginning of the integration process, immigrants are outside the labor force, have a status of unemployment, or circulate between statuses. Final employment occurs only in the second half of the observation period.

Comparatively, according to the results of Fuller’s research, “delayed integration” also implies full employment because of integration in the labor market. However, immigrants obtain full employment only after two years of living in a country. In particular, immigrants spend nearly two years in another status in the labor market. Many immigrants, after an initial period of unemployment, family care (women), full or part-time work, return to educational programs, whereas other immigrants have employment as a final destination (Fuller, 2011). Additionally, according to Brzinsky-Fay, in the “detour”-group, a majority of young people have an “unemployment”-status only in the beginning of the observation period, whereas many of them are already employed by the end of the period. Thus, a majority of young people come to employment by means of several other statuses in the labor market (Brzinsky-Fay, 2007, pp.416-418).

Overall, an initial period unemployment or economic inactivity continues to job-placement and effective adaptation to the labor market. However, an essential share of immigrants comes to final employment by other ways, for example, after an initial period of apprenticeship. If an initial period of integration is based on a long period of apprenticeship (on average four years), a tendency to direct transition to employment for a longer period (on average six years) is more obvious (“Delayed integration from apprenticeship”). However, this trajectory is peculiar only for those immigrants, who are rather young (the mean age is 19.76 years) and who hypothetically obtain their first professional education in Finland. Comparatively, there is a similar type “link” in the typology by Brzinsky-Fay. This “Link” means that obtaining education is an initial stage of the labor career of youth, whereas a majority of young people moves to a category “employment” at the end of the observation period (Brzinsky-Fay, 2007, pp.416-418).

However, if a sphere of apprenticeship remains an indispensable “chain” in the trajectory of changing statuses and final integration, a period of first entrance to employment, as a rule, is postponed for a long time. This situation is typical

when an initial period of “apprenticeship” (around 7 years) continues by direct transition to employment or by circulation of statuses (“Apprenticeship”). In this case, a trajectory is similar to a trajectory “Delayed integration from apprenticeship”, even though a period of apprenticeship is 1.5-2 times longer. Nevertheless, the mean age of immigrants in this group is the same (19.38 years).

In contrast to “Delayed integration from apprenticeship”, an “Apprenticeship” is more diverse indeed, because immigrants more frequently realize redirection to other statuses in their own trajectory. Thus, after an initial period of apprenticeship, immigrants move to other statuses in the labor market and outside it for a period of 6-8 years. Final employment occurs only at the end of the integration period, whereas a majority of immigrants more frequently come back to an apprenticeship during the integration process as a “social buffer”, “a bridge”, by means of which a recurrent entrance to employment is obvious with higher probability. For example, the trajectory implies that immigrants have from two to four episodes of apprenticeships during the whole period of adaptation (including first and last episodes).

Comparatively, according to Brzinsky-Fay’s research, an “apprenticeship”-status is the main one in the group “bridge”, while the majority of young people have an “employment”-status at the end of the observation period. Many young people, thus, come back to the sphere of apprenticeship and obtain new educational degrees. This transition is typical when a majority of young specialists begin their career from temporary short-term employment; for many of them, employment is “a bridge” to another employment or recurring training (Brzinsky-Fay, 2007).

From the position of transnational labor markets’ theory, apprenticeship and “bridges” to other kinds of activity in the labor market are considered as “socially constructed buffers”, which are necessary as one of elements of the transitional labor markets for providing functional equivalents and social well-being through traditional family networks and households (Schmid, 1998, pp.6-7). If to consider a period of absence in the labor markets as “social buffers”, the reasons of which are caused by a necessity to maintain households, one can imply that specific socio-demographic groups, for which this model of behavior is more acceptable, prefer to stay economically inactive. In the case of the present research, women, especially, constitute these socio-demographic groups (“Entering”, women – 74.1% в 2000, mean age=29.25 years).

Thus, if immigrants remain outside the labor market, the fact of unsuccessful adaptation, which is caused by certain reasons, becomes obvious. In this case,

immigrants “enter” the labor market by means of participation in programs initiated by the Employment Service, a new period of apprenticeship, or new employment for 1-3 years. Nevertheless, they come back to an initial situation of economic inactivity (“Entering”). Essentially, the last period of being outside the labor market, as a rule, lasts 3-4 times longer than an initial period of economic inactivity.

From the position of transitional labor market theory, markets need effective and socially important mechanisms of adjustment like short-term job-placements, for example. However, the level of flexibility of regulators in the labor market also implies that a higher necessity for adjustment and longer time necessary for adaptation to a new situation are less than the level of flexibility the labor market allows (Schmid, 1998, p.6). Consequently, longer period outside the labor market often confirms poor flexibility and poor adjustment to conditions of the labor market from the position of subjects operating in the market. Also, a longer period outside the labor market aggravates rigidity of behavior among subjects and rigidity of labor markets towards less flexible regulation of unemployment’s risks and economic inactivity.

If such models as “Quick integration” and “Delayed integration” demonstrate mechanisms of adjustment, even though as different levels of efficiency, it is rather difficult to talk about any levels of labor market flexibility as it concerns the “Exclusion”-model. One of the most typical trajectories of behavior signifies that immigrants remain outside the labor market during all 10 years (“Exclusion”). The overall model of behavior among immigrants signifies that withdrawal from the labor market occurs gradually. An initial period of apprenticeship or employment continues to a period of unemployment. Finally, one leaves the labor market for a period of 8-10 years and remains in this status, or even moves away from Finland. The transition often consists of initial and final statuses only.

In the theory of transitional labor markets, exclusionary transitions represent discontinuations of periods of employment, unemployment, or single transitions as “employment-unemployment” and vice versa, and “employment – economically inactive population (outside the labor force)”. The current dynamics of transitions imply the appearance of new forms of segmentation in the labor market and segregation when many individuals remain in exclusionary transitions, especially at low-paid job or in precarious non-standard employment relationships (Muffels et al., 2002; Räisänen & Schmid, 2008, pp.8-9; Schmid & Schömann, 2003, pp.5-6).

However, the fact that a majority of immigrants do not realize transitions in the labor markets because they remain outside the labor market during the whole period of observation, one is forced to think about the significance of “non-transitions” and the logical frame for such an analysis. Overall, the existence of “transitions,” as well as their absence, is a phenomenon that is peculiar to behavior in the labor market equally. A question for a researcher as whether to analyze “non-transitions” or not, depends on the aim of research. If a research task implies analysis of overall dynamics in the labor market, then all the variants of transitions considering “absence of transitions” are included into analysis. If researchers are interested in a specific kind of transition and try to formulate a detailed description of transitions, they must ignore the category “non-transitions” as it is less informative (Koster & Fleishman, 2012, p.3).

In the case of the present research, the absence of transitions signifies a certain specific model of behavior among immigrants in the context of a certain life situation and certain socio-demographic features. It would not be right to ignore this type of behavior as an inessential one for the analysis. Hypothetically, a certain group of immigrants keeps to this type of behavior as a “non-time-serving” strategy in the labor market. Comparatively, Brzinsky-Fay also confirms the existence of this type of behavior among other types. For example, in the “dropout”-group, a status of “economically inactive population” is the main one. In the beginning of the observation period, a majority of young people have short-term period of employment, however, at the end of the period many of them move to economic inactivity (Brzinsky-Fay, 2007, pp.416-418).

On the other hand, if behavior in the labor market implies an essential number of transitions between statuses and has a more circulating character, the increased mobility of immigrants as an intensive change of statuses also results in economic inactivity (“Circulating”). The same result is obvious for the “Apprenticeship”-model, however, more frequently, immigrants have only two statuses during the whole period: “apprenticeship” (5-6 years) and “outside the labor market” (5-6 years). In fact, the same result is clear; there is only a difference in that, in the “Apprenticeship”-model, “a bridge” to other statuses is “apprenticeship” whereas in the “Circulating”-model, “a bridge” is “unemployment”-status (the most typical status for this model).

Unemployment is one more typical model of behavior in the labor market. In the first case, if a model of trajectory of behavior in the labor market is circulating (“Circulating”), immigrants, having started from inactivity, unemployment, or apprenticeship (1-2 periods of stay in a status), then circulate between statuses

more actively and finally come back to an unemployment status, which is the longest during the process of integration (1-9, sometimes 10 years). The same tendencies of adaptation exist regarding to those immigrants who try to adapt to the labor market by means of circulation between many statuses. However, they end the period of integration with unemployment (1-3 last years) (“Entering”).

One question, in which research is more interested, is a query about what statuses in the labor market lead to unemployment. One of the main resources for unemployment is interruption of a temporary job, as a study of statistics for the first several years of the 2000s shows. This feature distinguishes one of the sides of the “transitional unemployment”-phenomenon (Räsänen & Schmid, 2008, p.27). On the other hand, adaptation to a surrounding environment by means of an “unemployment”-status can also be considered as an example of a suitable way for an immigrant to adjust to labor market conditions. Hypothetically, this circumstance is associated with maladjustment of immigrants to labor market conditions or with the existence of ineffective mechanisms of flexibility and adjustment of labor market to external conditions, their incapacity to regulating unemployment’s risks, and economic inactivity.

Successful adaptation to critical changes depends on the influence of several factors as a way of adjustment to changes, supporting environment, and individual characteristics. With respect to perception of changes, uncertainty in expected continuance of critical changes has an important role for the mobilization of available individual resources. Feeling that critical change will never end can paralyze activity to perception and integration to new conditions and can deprive an individual of potential opportunities for improvement of life conditions. In this situation, the internal supporting environment can be decisive for successful adjustment to circumstances (Schmid, 1998, pp.8-10).

From a normative point of view, the aim of functioning of the labor market is that labor markets must be flexible in order to respond to the needs of workers and to adapt their career and employment to life conditions (Koster & Fleischmann, 2012, pp.2-3). As a normative concept, the theory of transitional labor markets represents a new stage of active labor market policy, which focuses on social risks during an individual life-course. A central idea of the theory is stimulating individuals to undertake more risks during their whole life by means of not only paid jobs but also various kinds of transitions in the labor market.

However, the following question appears as a relationship between “flexibility” of behavior and its expediency for the integration process. For example, if immigrants actively circulate in the labor market (“Circulating”), a

more successful variant of circulation in the labor market is associated with job-placement at the end of integration process. It is difficult to reveal a strong tendency because immigrants actively circulate in the labor market and find employment only during the last 1-2 years of living in Finland. It is possible that a final short-term period of employment is only a regular link in a chain of status circulations. Hypothetically, increased mobility of this type of behavior will subsequently be a feature of an unstable process of integration.

Hence, to what extent must labor markets be flexible or even “ultra-mobile”? An overstated importance of mobility does not always mean more productive and effective activity. It is rather difficult to conclude, whether mobility is a positive indicator of “transitions” or not. Considering the importance of gender in the measurement of “transitions,” mobility obtains a twofold character. For example, hypothetically, women execute 60% of transitions whereas men execute only 40% of transitions. It is possible to explain this fact as the dominating mobility of women probably depends on childcare or part-time employment. This is just a possible interpretation of the fact; however, excessive mobility of women is not necessarily an indicator of career development, but a way of active adjustment to conditions of the labor market and life conditions (Gazier & Gautie, 2011, pp.15-16; Schmid & Schömann, 2003, p.18).

If to explain these circumstances from the position of the transitional labor market theory, one can find several trends. Empirical research on transitions in the labor market lack a normative dimension. While concentrating on overall models of transitions between statuses in the labor market, research loses sight of the difference between models among various groups of populations, when the effects of the same transitions for various categories of populations are different. Not counting conceptualization of “transitions” in fact, some research aims at conceptualization of risks of transitions (Brzinsky-Fay, 2007, pp.8-9; Gazier & Gautie, 2011, p.9; Räisänen & Schmid, 2008, p.24).

If to consider “risk” of transition as a subsequent withdrawal from the labor market or even a new immigration to another country, a conclusion about time is still a decisive factor for the successful integration of immigrants that obtains new significance. Earlier entering into the labor market predetermines faster integration and more sustainable employment, whereas delayed entry decreases the probability to be sustainably employed. Based on labor adaptation, the labor of migrants becomes more flexible and implies more circulated character of behavior in the labor market. In general, first and longer second statuses of immigrants in the labor market are still directed to future employability. Further

circulation of statuses (“spin”) signifies active adaptation to conditions, labor market attachment, and aspiration for any employment. This is a culmination and a point of bifurcation of integration. The third stage of the integration period becomes decisive as it leads to final employment, isolation outside the labor market, or recurrent resettlement.

Variants of behavior implying subsequent displacement to the labor market in other countries also have certain tendencies and preconditions. One of preconditions for this situation is long-term residence outside the labor market and absence of any incentives for successful entry and labor integration. It is significant that dropout at the end of an adaptation and integration period is typical for trajectories implying long-term presence outside the labor market without any additional statuses in the labor “career” (“Entering” and “Exclusion”), as well as indicating moving away from the country (“Dropout”, “Withdrawal”).

5.2 Working time flexibility of employed immigrants

Labor migration implies not only new employment for migrants, but also receiving new social and professional status. Because of labor adaptation, the activity of migrants becomes more flexible and implies also another quality of work. In these conditions, flexibility of labor becomes a more significant factor contributing to faster integration of immigrants into the labor market and predetermines new specificity of employment for immigrants in a foreign country as well. Flexibility of working time becomes a factor of higher activity in the labor market. Immigrants acquire especial labor regime concerning mostly working hour arrangements, in which flexibility of workers plays an important part, is a factor leading to successful recruitment. In this subchapter, I assume that flexibility of working time has an influence upon character of immigrant employment and leads to various models of behavior in the labor market; the factor of time thus converts into a motive power of the labor process and predetermines its special features. The analysis was carried out over the period from 2002 to 2010 using the European Social Survey data gathered from multiple sources at various time points.

5.2.1 Towards statistical modeling of working time flexibility

The initial sample for this part of the analysis consisted of 192 immigrants living in Finland. The statistical significance of parameters for the model was analyzed by means of correlation and factor analyses as the most appropriate methods. It was considered that qualitative measures would usefully supplement and extend the quantitative analysis. Thus, it became preferable to use for analysis the results on all of the European Social Survey Rounds (Table 6).

Table 6. Research sample with regard to five European Social Survey's Rounds (N=192)

Year and Round	Total
1 st Round – 2002	44
2 nd Round – 2004	17
3 rd Round – 2006	31
4 th Round – 2008	44
5 th Round – 2010	56
Total (cases)	192

In order to investigate the empirical underpinning of the flexibility of working hours, the professional status of immigrants, health, and working conditions, exploratory factor analysis was used as the most suitable method. In this case, a “factor” was considered as a reason of mutual changeableness between several initial variables. The exploratory factor analysis was executed with the aim to reveal latent powerful factor factors, which have had linear statistical correlations with observed variables. To reveal factors that are more significant, as well as the factor structure, the “Unweight Least Squares Method” allowed for determining, minimizing the sum of the squares of the residuals and minimizing off diagonal residuals between reproduced and original correlation matrix. In the case of the present research, the Unweight Least Squares Method fits well because the numbers of variables are not large, they are unweighted, and asymmetrical.

The exploratory factor analysis was carried out through four stages. At the first stage, databases, variables, and samples were analyzed, as well as the correlation matrix was estimated. At the second stage, the extraction of initial factor solution and verification of practicability for applying the factor analysis by means of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity was produced. As long as extraction was based on Eigenvalues that are greater than one, a number of factors were determined through their own statistical values of variables (Eigenvalues) and a maximum number of iterations

for convergence came to 25. At the third stage, the rotation and interpretation (validation) of factors were carried out. After extraction, the initial interpretation of factors could be problematic and, in this case, the Varimax rotation was used to improve interpretability and utility of factors. This method allowed for making factors more differing and accurate (25 iterations; absolute values that were less than 0.1 have been suppressed). Finally, at the fourth stage, the scale of factors scores coefficients for observed cases was formulated. In this case, the regression method was used. Coefficients were calculated as factor scores from original standardized variables. Further analysis was constructed on the comparison of the regression factor scores on the main observed variables.

Considering the limitations of variables which have had influence upon the overall quality of the model, the results of factor analysis also strongly depend on the quality of variables. Since the two main variables have been taken for analysis (“Contracted hours” and “Total normal hours”), other groups of variables indicated a professional-educational status of immigrants (“Occupation”, “Industry” and “Education”). Finally, two variables as evidence of working conditions (“Establishment size” and “Employment contract: unlimited or limited duration”) and two variables signifying personal characteristics of immigrants (“Health” and “Total household’s net income”) have been considered as well. In view of all the preconditions, an additional stage of research was devoted to verification of quality of the model by means of reproduced and residual correlation matrices. In particular, correlations between variables have been calculated based on their sharing common underlying factors. Comparatively, the reproduced correlation matrix was calculated from the correlations between factors and the loadings of variables. Thus, the difference between the reproduced correlation matrix and the original correlation matrix constituted the residual matrix. The most significant criterion for a good quality of model was a smaller number of non-redundant residuals (difference between original and reproduced correlation) (see Table 5 in Appendix 8.2).

By considering a small sample for carrying out the present analysis, one of the most important questions of research was if the empirical data was suitable for the factor analysis. Consequently, the quality of the statistical model was verified by means of several important parameters. One of criteria traditionally used for verification of quality of the model is the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and the Bartlett's Test of Sphericity. High values of the KMO (close to 1.0) usually indicate that factor analysis can be suitable for application. If the value is less than 0.5, the results of the factor analysis probably

will not be very useful. The Bartlett's test of Sphericity is based on the approximate Chi-Square measure as a difference between observed and expected variables. In the case of the present research, the KMO Measure and the Bartlett's Test statistically verified practicability of the given research method. As long as five various ESS databases were used, various amounts of cases, various content of variables, the levels of KMO, and Bartlett's Test were different as well. For three databases (the 1st, the 4th, and the 5th ESS Rounds), the levels of KMO Measure and the Bartlett's Test were the most essential ones. For the 1st ESS Round, the Kaiser-Meyer-Olkin measure of sampling adequacy was .607, above the recommended value of .6, and Bartlett's test of Sphericity was significant ($X^2(21) = 125.31, p = .000$). For other Rounds the Kaiser-Meyer-Olkin measure of sampling adequacy were less significant, below the recommended value of .6 (see Table 1 in Appendix 8.2).

Besides estimation of overall qualification of the factor model, analysis of initial and extraction communalities is one more important part of research that allows for concluding about the significance of variables in the factor model. The distribution of communalities demonstrates to what extent the factor model explains significance of variables or what part of dispersion every variable explains. For example, after extraction, the final factor model explained the variables "Contracted hours" and "Total normal hours" on 85.2 – 99.9% (2002), 92.8 – 86.7% (2004), 83.4 – 99.9% (2006), 99.9 – 91.3% (2008) and 93.1 – 83.6% (2010). The result indicates that the observed variables in each cluster share a large amount of variance; the amount of common variance, also known as communality, is high. On the contrary, amounts of variance among other variables are not so high, nevertheless, in most cases, they exceed .3, or each item shares some common variance with other items on more than 30% (see Table 2 in Appendix 8.2).

After description of communalities, it is reasonable also to analyze the total variance explained and to conclude the overall dispersion that the factor model explains. Variables with high values are well represented in the common factor space, while variables with low values are not well represented. Thus, according to results, three factors explained 61.5% of dispersion (1 ESS Round), four factors – 76.4% (2 ESS Round), three factors – 58.1% (3 ESS Round), four factors – 64.4% (4 ESS Round), and four factors – 56.2% (5 ESS Round) (see Table 3 in Appendix 8.2). One should mention, however, that factors explained quite a low share of dispersion for Rounds 3 and 5, and results must be interpreted with caution because of the small final sample of research and limitations of variables.

In addition, this research has had an exploratory character that predetermined the appropriate research methods.

After Varimax rotation as a rotation maximizing the dispersion, the factor matrix became more convenient for interpretation. Overall, after analysis of correlation coefficients before rotation and after it, variables as peculiar to each factor have been chosen (Table 7; see Table 4 in Appendix 8.2).

Table 7. Classification of variables as more appropriate to factors (according to the ESS Rounds)

Year, Round	Factor 1 "Time"	Factor 2 "Occupation and education"	Factor 3 "Working conditions"	Factor 4 "Income, industry, health"
2002 (1)	Contracted hours and total normal hours	Education; occupation; industry	Employment contract; establishment size	-
2004 (2)	Contracted hours and total normal hours; establishment size	Education; occupation	Health; industry	Income
2006 (3)	Contracted hours and total normal hours; health	Establishment size	Occupation; income; education	-
2008 (4)	Contracted hours and total normal hours	Occupation; education	Income	Industry; health; establishment size
2010 (5)	Contracted hours and total normal hours	Establishment size; education; income; work contract	Health	Occupation; industry

Variables in factors allocated differently could be explained by the specificity of each database. However, the main tendency proves that the first factor contained variables on time, the second on education and occupation, and the third on working conditions. Taking into account limitations of variables, one could consider the results as relatively reliable (variables are not weighted). As long as limitations and specificity of variables required applying especial method of extraction for factor analysis, the method of Reproduced Correlations was used in order to verify quality of the factor model. The unweighted least squares method has been chosen to minimize off diagonal residuals between reproduced and original correlation matrices. A reproduced correlations matrix was constructed based on interdependence between variables after their factor rotation. Finally, the residual correlation matrix represented the difference between observed and reproduced correlation matrices. The smallest number of non-redundant residuals was considered as an indicator of a reliable factor model (see Table 5 in Appendix 8.2).

Based on the above-mentioned research procedures, it became possible to formulate the Factor Score Coefficient Matrix by means of the regression method

(see Table 6 in Appendix 8.2). A factor score was calculated as a total meaning of factors received for every case (respondent) based on measuring. The sum of least squares between true and estimated factors over individuals was minimized. Thus, the method of regression factor score was beneficial because it allows for estimate meaning of the time factor for every case separately according to the estimation of influence of other variables (education, profession, working conditions, etc.).

5.2.2 Factor models: explanation and comparison

Based on analysis of regression factor scores for each case (respondent), it became possible to classify eight factor models as with negative significance of the time factor as with positive significance of the time factor (Table 8).

Table 8. Classification of factor models with regard to negative and positive factor score values on the factor "Time" (1-5 European Social Survey Rounds, N=192)

Significance of factor score values on the factor "Time"	Type of factor model	Explanation of a model	N
Negative (<0)	First	"Dis-orientation" . Flexibility of working time leads to underemployment with insufficient professional realization and full dissatisfaction with other issues of employment	18
	Second	"Orientation to profession" . Flexibility of working time leads to non-standard working regime parallel to high satisfaction with own professional activity and poor satisfaction with working conditions, health, or income	22
	Third	"Orientation to profession and working conditions" . Flexibility of working time leads to non-standard working regime parallel to high satisfaction with own educational and professional position in combination with high satisfaction with working conditions, income, or health	22
	Fourth	"Orientation to working conditions" . Flexibility of working time leads to non-standard working regime and lower occupational and educational status in combination with satisfaction with working conditions, health, or income	16
	Overall		78
Positive (>0)	Fifth	"Time and working conditions" . Flexibility of working time leads to standard officially fixed working regime (as well as undertime or overtime) in combination with high satisfaction with working conditions, income, health and poor satisfaction with occupational-educational position	37
	Sixth	"Only time is factor" . Flexibility of working time leads to standard officially fixed working regime (as well as overtime) in combination with dissatisfaction with occupational, educational positions, health, and working conditions.	28

	Seventh	“Time and profession” . Flexibility of working time leads to standard officially fixed working regime (as well as overtime and undertime) in combination with satisfaction with occupation and education and dissatisfaction with health and working conditions	29
	Eighth	“Time, profession and working conditions” . Flexibility of working time leads to full employment with sufficient professional realization and full satisfaction with other issues of employment	20
	Overall		114

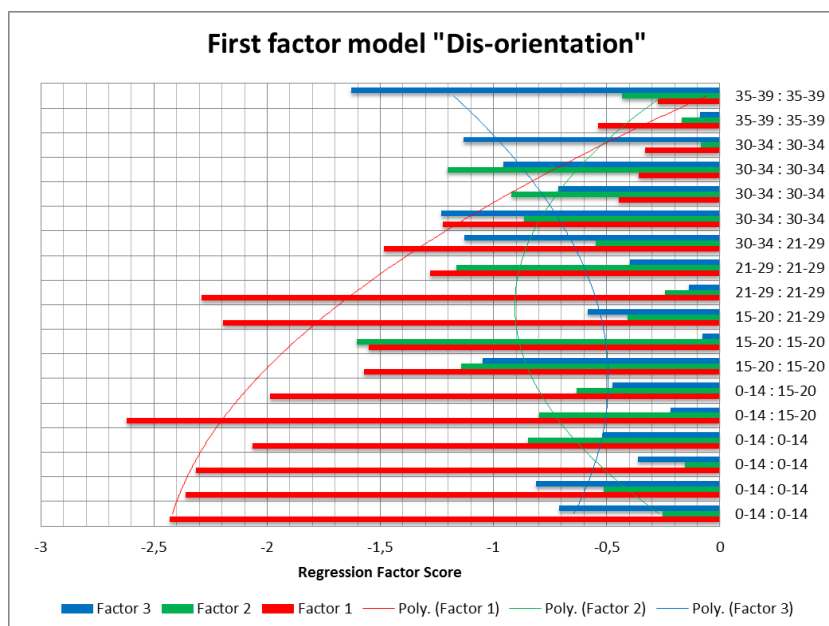
Hypothetically, flexibility of working time could be materialized in various forms as overtime (when total normal hours exceed contracted hours), undertime (when contracted hours exceed total normal hours), or longer or shorter working day (contracted and total normal hours are equal). As a result, the factor models were classified into two large groups as with positive regression factor scores or with negative regression factor scores on the factor “Time.” Negative significance of the time factor (negative regression factor scores) meant that working time was lower than officially fixed working time (40 hours per week), and (or) contacted and normal working times were different (overtime or undertime). Positive significance of the time factor (positive regression factor scores) meant that working time was equal or higher than officially fixed working time (40 hours per week), and (or) contacted and normal working hours were different (overtime or undertime).

First case: Models 1 and 6

The first model “Dis-orientation” represents a combination of negative regression factor scores only. One can conclude that for these immigrants, flexibility of working time leads to underemployment with insufficient professional realization and full dissatisfaction with other issues of employment. Comparatively, the sixth model, “Only time is factor”, represents a combination between the positive 1st and negative other factors. In some cases, such factors as health, working conditions and profession can obtain positive significance. One can conclude that for these immigrants, flexibility of working time leads to standard officially fixed working regime (as well as overtime) in combination with dissatisfaction with occupational, educational positions, health, and working conditions.

Working time is a category that becomes apparently different depending on the combination with other factors of labor such as occupation, profession, education, and working conditions (Fig. 9). In this case, it is impossible to conclude, uniquely, that reduced time regime or overemployment is a negative

phenomenon or, in contrast, standard regime of labor is a positive phenomenon. The conclusion depends on the context in which the labor regime is organized for various categories of workers. For example, if to compare two first factor models, it becomes obvious that factor of time has different meanings for two categories of immigrants. Thus, the first factor model shows that reduced regime of labor, not exceeding 39 hours per week, in combination with poor educational level of workers, and fixed-term employment at enterprises with a minimal number of personnel predetermines closeness of low-skilled immigrants in a certain social and professional niche.



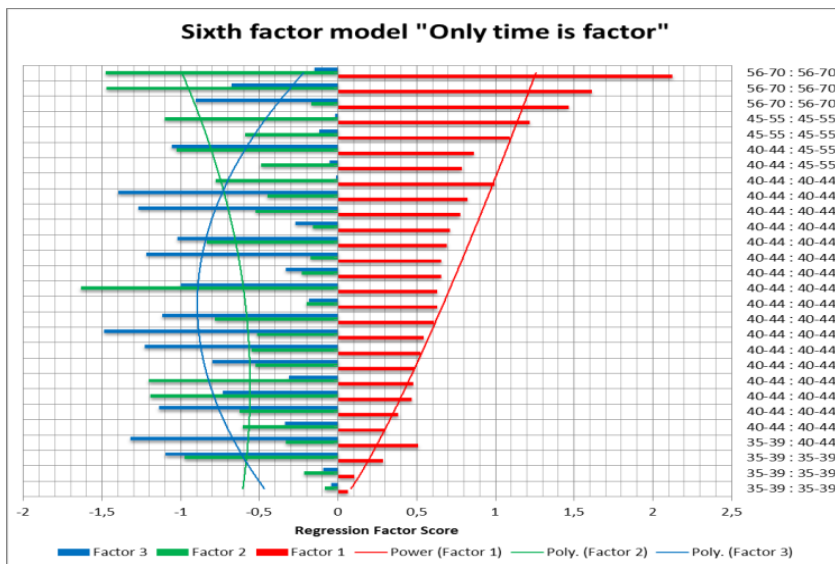
*Factor 1 – “Time”, factor 2 – “Occupation and education”, factor 3 – “Working conditions”

Figure 9. The first factor model “Dis-orientation”: regression factor scores for three factors with regard to contracted vs. normal working hours (ESS, N=18)

It is remarkable that representatives of technical and craft occupations, who work in the trade sphere, as well as representatives of physical manual labor and service occupations from the sphere of business activity, are potentially in the “risk group.” This circumstance is conditioned by the character of the sphere in which immigrants work. The sphere of trade in Finland traditionally aims to flexible regimes of labor as standard employment (35-40 hours) and reduced working time regime (20-34 hours), whereas the sphere of finance and real estate activities work mostly in the regime of standard employment (see Table 7 in Appendix 8.2.). Consequently, it is impossible to conclude that a certain regime

of work has negative influence upon the character of employment among immigrants. Having analyzed all the factors, a conclusion about the negative or positive effect from employment for immigrants becomes observable.

In contrast, if the time factor obtains positive meaning, or a positive regression factor score, an assumption about more successful labor activity of immigrants is possible (Fig. 10). However, differences in work hours between two categories of immigrants do not always mean differences in character of labor activity. It is obvious that, in this case, overemployment becomes a way for career development at an enterprise or a way for fixing formal labor relations in the form of an unlimited labor contract. It can be seen what enterprises are potentially ready for changing labor relations and what industries are traditionally oriented to overemployment of workers.



*Factor 1 – “Time”, factor 2 – “Occupation and education”, factor 3 – “Working conditions”

Figure 10. The sixth factor model “Only time is factor”: regression factor scores for three factors with regard to contracted vs. normal working hours (ESS, N=28)

Thus, for example, if the first factor model describes the behavior of immigrants in the sphere of trade and business activity, the sixth factor model describes labor behavior mainly in the sphere of agriculture and natural economy activity. To define more exactly, the sphere of agriculture in Finland orients mostly to two main regimes of work as standard employment (35-40 hours) and overemployment (more than 50 hours per week) (see Table 7 in Appendix 8.2.). If to conclude about the size of enterprises, it does not make sense because

immigrants work at small ownerships, family enterprises, and large agricultural enterprises. Employment at these enterprises does not require high professional knowledge and skills, and potentially attracts low-skilled immigrants as the main labor force to Finland.

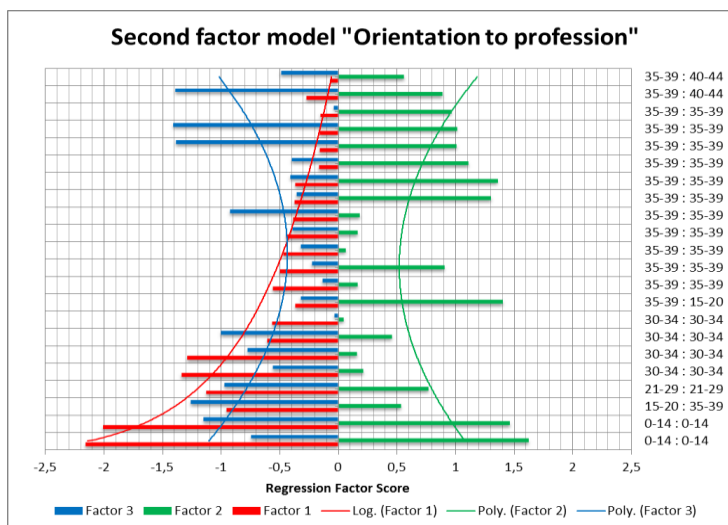
However, if immigrants have a high professional level, the sphere of economic activity of enterprises becomes a decisive factor for their job-placement and career development. Traditionally, spheres of social activity, transport, and business activity attract immigrants with high educational and professional levels. As a rule, the type of work contract is not an essential factor for employment, however, the fact that a number of personnel at an enterprise is minimal (no more than 10 people), implies limited opportunities for career development of immigrants. Another fact that is interesting is that the spheres of health and social work, professional, scientific, and technical activity in Finland offer flexible regimes of work among which standard employment and a reduced working time regime (20-34 hours) are typical. At the same time, the spheres of public administration and transport in Finland are less flexible as it concerns diversity of working time regimes and more concentrated on the standard employment regime (35-40 hours per week) (see Table 7 in Appendix 8.2.).

If to conclude about the variants of behavior in the working time regime among various professions, the following tendencies become noticeable. Representatives of pre-primary teaching professions who work in the sphere of social activity mostly orientate to a standard regime of work. The given circumstance is rather associated with a fixed work regime at enterprises of the social system sphere in Finland and specificity of work of the sphere does not imply working time flexibility as it is in the sphere of trade, for example. At the same time, the sphere of business activity in which high-qualified immigrants work, or the sphere of trade in which skilled workers and representatives of service occupations work, traditionally orientate to overemployment as one of obligatory conditions of employment. This is interesting in that representatives of art professions from the sphere of journalism and literature usually have a prolonged regime of labor (45-55 hours contracted and total normal hours are equal). Specifically, the sphere of professional, scientific, and technical activity in Finland offers various variants of working time flexibility contributing to this situation (see Table 7 in Appendix 8.2.).

Second case: Models 2 and 7

The second model “Orientation to profession” represents a combination of negative regression factor scores (the 1st and the 3rd factors) and positive factor scores (the 2nd factor). One can conclude that for these immigrants, flexibility of working time leads to a non-standard working regime parallel to high satisfaction with own professional activity and poor satisfaction with working conditions, health, income, etc. Similarly, the seventh model “Time and profession” represents a combination between the positive 1st and negatives other factors. In some cases, such factors as health, working conditions and profession can obtain positive significance. One can conclude that for these immigrants, flexibility of working time leads to a standard, officially fixed working regime (as well as undertime and overtime) in combination with satisfaction with occupation and education, and dissatisfaction with health and working conditions.

Fixed-term employment and unsatisfactory working conditions essentially reduce overall satisfaction with labor activity among immigrants. As a rule, underemployment and reduced regime of work are typical for this situation despite occupational status of immigrants (workers, clerks, or professionals) (Fig. 11).



*Factor 1 – “Time”, factor 2 – “Occupation and education”, factor 3 – “Working conditions”

Figure 11. The second factor model “Orientation to profession”: regression factor scores for three factors with regard to contracted vs normal working hours (ESS, N=22)

However, a special feature of the given factor model is the high satisfaction of immigrants from one’s own professional status. This status is especially important

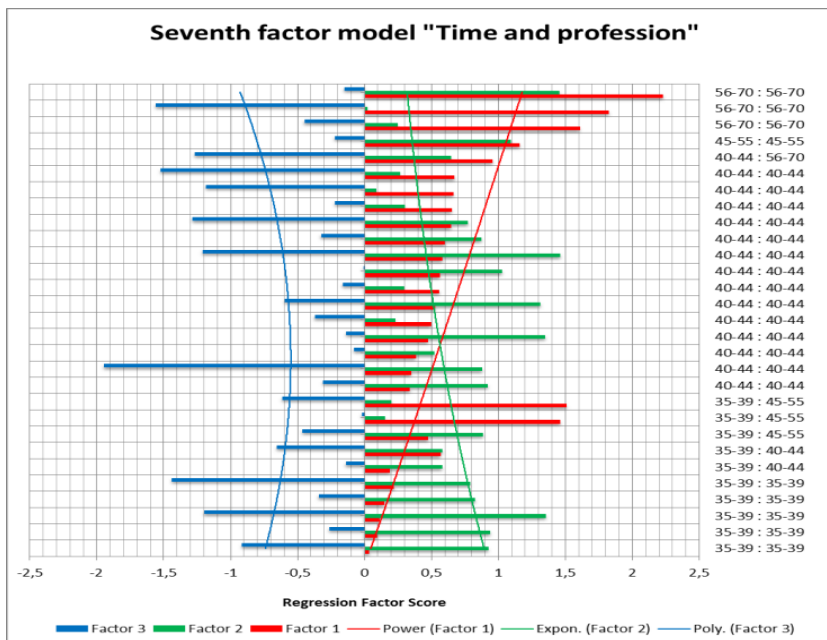
for representatives of teaching professions from the sphere of social activity (education, health, and social work), as well as representatives of clerical and intermediate occupations who work in the sphere of finances.

In Finland, specificity of labor among representatives of teaching professions is predetermined by the character of the sphere of education and sphere of health and social work which traditionally offer flexible regimes of working time as a combination between standard employment, reduced working time, and overtime (see Table 7 in Appendix 8.2.). Profession is a determinative factor of employment for these immigrants because quantity of actual working hours essentially exceeds quantity of working hours according to a work contract (comparatively 35-39 total normal and 15-20 contracted hours).

Previous examples show that satisfaction with profession can be extremely high even though immigrants work more than they must according to conditions of a fixed-term work contract. However, other situations demonstrate how a flexible regime of work becomes apparent in employment of immigrants is possible. A factor of high satisfaction with profession and education is decisive in character of labor activity; however, specificity and content of work predetermine behavior of immigrants inside a workplace. The fact is interesting that for representatives of artistic professions (musicians, composers, singers) who work in the sphere of creative activity and entertainments, actual working time is relative because it is a half than working time that is prescribed in a work contract. The assumption about flexitime and telework is possible for the given category of immigrants that is natural for the sphere of creative, arts and entertainment activities traditionally offering combination between standard regime of work (35-40 hours), reduced working time regime (20-34 hours), and marginal employment (1-19 hours) (see Table 7 in Appendix 8.2.).

If to compare two factor models, a conclusion about a similarity in satisfaction with professional status becomes obvious despite essential difference of character of working time regime. As in the previous case, professional activity of immigrants concentrates in the sphere of teaching, social, artistic, and scientific activity. An essential difference between immigrants from the two groups is in the character of regime of work when standard employment (40 hours and more) and overemployment are typical (Fig. 12). In the overall context, standard employment (35-40 hours) is typical for the sphere of social activity, however, personnel typically works less than the officially fixed limit of working time in Finland.

In this case, it is impossible to conclude that overtime is a prerogative of employment for immigrants only. However, it is obvious that for representatives of “especial” professions as for religious professionals, a prolonged working week (56-70 hours – contracted and total normal) is a typical condition of employment inside the same sphere of social activity. It is remarkable that an unlimited work contract is peculiar to employment of this category of professionals. However, in this case, it is impossible to determine uniquely whether an unlimited work contract is a consequence of prolonged working regime or whether a prolonged working day is an obligatory condition of an unlimited work contract (see Table 7 in Appendix 8.2.).



*Factor 1 – “Time”, factor 2 – “Occupation and education”, factor 3 – “Working conditions”

Figure 12. The seventh factor model “Time and profession”: regression factor scores for three factors with regard to contracted vs normal working hours (ESS, N=29)

Comparatively, representatives of modern intellectual professions whose specificity of activity associates with art and creativity have the reduced official timetable and work overtime time at the same time (35-39 hours contracted and 40-44 hours total normal). However, the fact that they work in the sphere of business, research, and estate activities, predetermines the character of their employment based on a fixed-term work contract. In this case, it is impossible to make conclusions about whether a fixed-term work contract is typical

phenomenon for employment in this sphere or whether overemployment is a typical phenomenon for the given sphere. One assumption is possible that the specificity of labor predetermines the character of employment because, for example, professionals in computer technologies have standard employment (40-44 hours) inside the same industry.

In contrast, the sphere of social activity differs from other industries by a tendency to organize a standard working regime (40-44 hours), as is for representatives of intellectual professions (doctors), professions requiring physical manual labor, and professions associated with services. Representatives of the last-mentioned professions more often associate their labor activity with care of patients inside households (with employed persons). Among those immigrants who prefer to work overtime, professionals and clerks are on equal positions if a sphere (for example, education) offers non-standard regimes of labor activity. For example, representatives of teaching professions who work in secondary educational institutions have a longer factual regime of work in comparison to conditions of a work contract (35-39 contracted and 45-55 total normal hours).

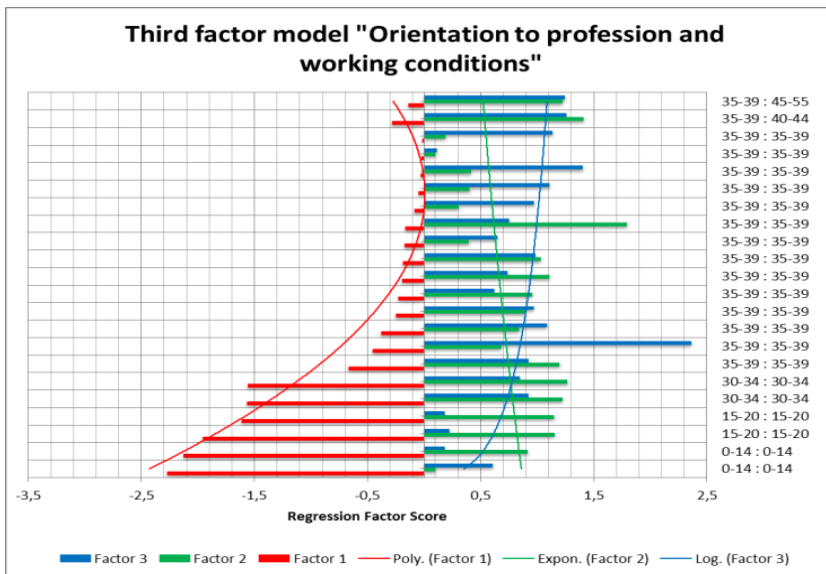
This fact is interesting in that prolonged working week (56-70 contracted and total normal hours equally) is typical for representatives of clerical and intermediate occupations who work in the sphere of servicing (hotels and restaurants), as well as for representatives of unskilled manual labor who work in the sphere of business, research and estate activities. If to compare this fact to overall tendencies, it becomes obvious that in Finland, the sphere of accommodation and food service activities, including hotels and restaurants, orientates to various variants of working regime among which “1-19 hours”, “20-34 hours” and “35-40 hours” are typical (see Table 7 in Appendix 8.2.). In this case, one can imply that immigrants are in the category of workers who habitually work prolonged time in the sphere that predominantly aims to usage of a cheap immigrant workforce. An assumption about typical tendency for overemployment among immigrants relates to workers who have job places in the sphere of financial, insurance, and real estate activities, the sphere that traditionally aims for a standard regime of work (35-40 hours per week).

Third case: Models 3 and 8

The third model “Orientation to profession and working conditions” represents a combination of two positive factors (2nd and 3rd) and negative factor of time (1st). One can conclude that for these immigrants, flexibility of working time

leads to a non-standard working regime parallel to high satisfaction with one's own educational and professional position in combination with high satisfaction with working conditions, income, or health. On the other hand, the eighth model "Time, profession and working conditions" represents a combination of positive regression factor scores only. One can conclude that for these immigrants flexibility of working time leads to undertime, standard working regime, and overtime with sufficient professional realization and full satisfaction with other issues of employment.

The third and eighth factor models are based on positive factors (regression factor scores) of profession, education, and working conditions. In this case, the category "working conditions" includes limited or unlimited character of work contract, a number of personnel at an enterprise, income and, in some cases, health. The factor of high professional status in combination with employment at enterprises (with personnel from 100 to 499 people) and an unlimited work contract often compensate for marginal employment (15-20 hours) and reduced working time regimes (30-39 hours) (Fig. 13).



*Factor 1 – "Time", factor 2 – "Occupation and education", factor 3 – "Working conditions"

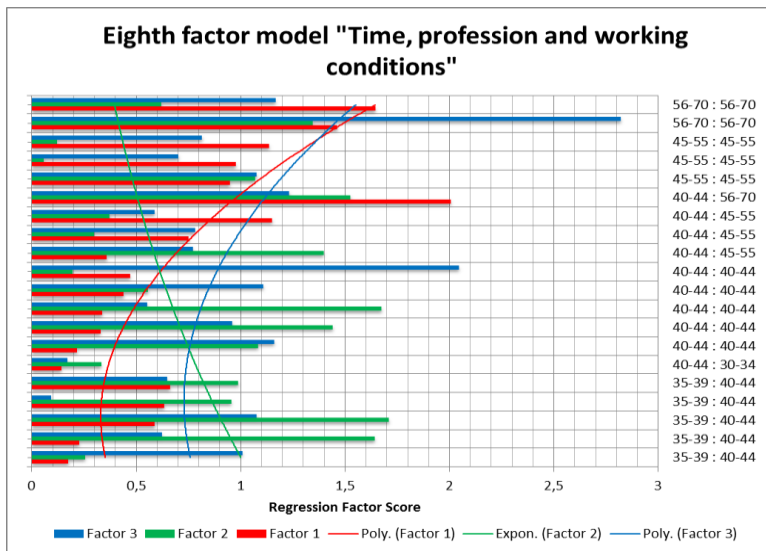
Figure 13. The third factor model "Orientation to profession and working conditions": regression factor scores for three factors with regard to contracted vs normal working hours (ESS, N=22)

As a rule, a high professional and educational status of immigrants, activity in the area of medicine, teaching, and arts is especially effective and fruitful for immigrants in industries that practice a flexible regime of working time. In this

case, the regime of work of professionals is not contrary to the overall tendencies because, in Finland, the sphere of health and social work offers a standard working regime (35-39), reduced time (20-34), and marginal time (1-19) (see Table 7 in Appendix 8.2.).

However, a non-standard regime of work is often peculiar not only to professionals but also to clerks and workers. Thus, marginal employment (0-14 hours as contracted total as normal) in combination with an unlimited work contract is peculiar to representatives of sales occupations who work in the sphere of trade and social work. As a rule, professions of this kind do not require high educational levels and long-term training that implies equal level of work remuneration. Therefore, in many cases the sphere of trade orientates to usage of a cheap immigrant work force. Comparatively, the given situation is typical for representatives of religious professions, for whom higher education, high levels of income, and an unlimited work contract compensate marginal employment.

In contrast, if the time factor has a positive character (positive regression factor score) it is especially important in combination with level of education, professional level, and working conditions (Fig. 14).



*Factor 1 – “Time”, factor 2 – “Occupation and education”, factor 3 – “Working conditions”

Figure 14. The eighth factor model “Time, profession and working conditions”: regression factor scores for three factors with regard to contracted vs normal working hours (ESS, N=20)

One can imply that on the assumption of a favorable combination of all of the above-mentioned factors, employment for immigrants is more fruitful and contributes to career development. It is remarkable that an unlimited work

contract and employment at enterprises with personnel from 100 to 500 people contributes to the career development of teachers, government social benefit officials, and senior finance and administration managers. The given situation suits toward overall tendencies because, traditionally, spheres of education, finances, and trade imply flexible regimes of work for more productive employment among representatives of professions requiring higher intellectual levels.

As already mentioned, the sphere of education in Finland traditionally orientates to flexible regimes of work as standard employment, reduced working time, and marginal employment. It is noticeable that immigrants who work in the system of education more often have overtime because, along with the conditions of employment that are prescribed in a work contract, the factual time of work is much bigger (40-44 contracted hours and 56-70 total normal hours). Comparatively, the sphere of finance work often orients to overemployment (41-49 hours) although a reduced working time regime (20-34 hours) and standard employment (35-40 hours) are more acceptable for a majority of personnel (see Table 7 in Appendix 8.2.). In particular, representatives of higher government occupations who have employment in the sphere of finance more often work overtime, in comparison to other immigrants (40-44 contracted hours and 45-55 total normal hours).

If to compare the character of employment among managers of various levels, a conclusion about various variants of working time flexibility for the two categories of managerial personnel becomes apparent. The situation when factual working time and time that is officially fixed in a work contract exceed the official working time limit in Finland (40 hours) is typical for representatives of middle and junior managerial staff in the sphere of trade. They traditionally have a prolonged working week (45-55 or 56-70 hours per week, contracted and total normal equally). The same situation is typical for representatives of modern professional occupations like artists, sculptors, or painters from the same industry who also work in the regime of a prolonged working week (45-55 hours per week, contracted and total normal hours equally) without a work contract. A factor of health for high-professional immigrants is especially important that is conditioned by non-satisfactory physical levels.

Another case is top-managers (directors and chief executives) who work in the sphere of construction in the regime of a prolonged working week (45-55 hours as contracted as the normal total). In comparison to managers, sales and marketing managers from the same sphere work overtime in the working time

regime, exceeding officially fixed working time (40-44 contracted and 45-55 total normal hours). In this case, enterprises at which managers have jobs can vary on the amount of personnel; they can have less than 10 people or more than 500 people. It is remarkable that, side by side with representatives of manual labor and the service industry whose activity implies care of patients in medical institutions, managers of middle and junior level also estimate their own health as non-satisfactory. The serious distinction is in the character of working time regime because caretakers work in the regime of reduced working time, whereas managers work overtime.

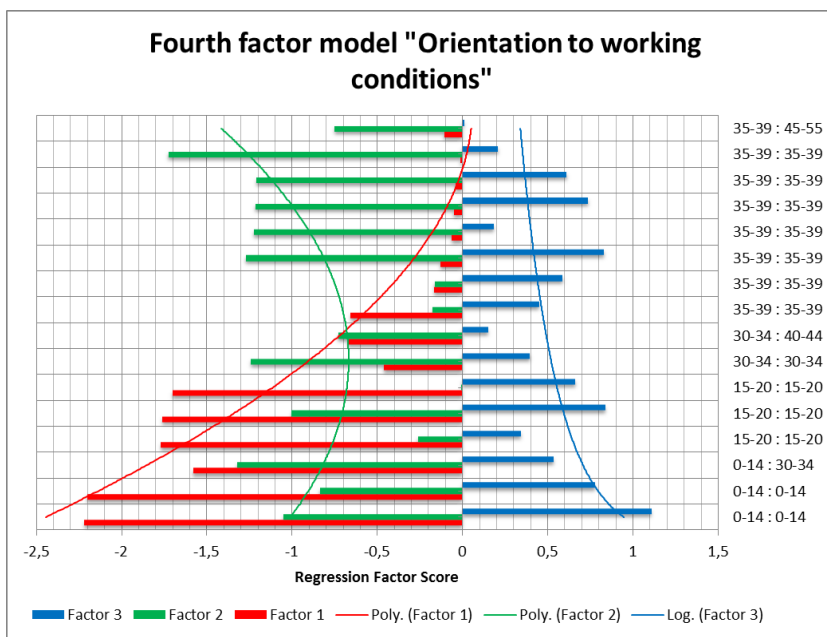
If making a conclusion about the overall tendencies, the sphere of construction conventionally offers a standard working time regime (35-40 hours per week) parallel to the regime of working time exceeding 50 hours per week. In contrast, along with standard regime of work, the sphere of trade often proposes a regime of reduced working time (20-34 hours per week) as one of the main regimes of working time (see Table 7 in Appendix 8.2.). Overall, a standard working time regime (40-44 hours) is typical for the sphere of construction if it concerns representatives of technical and craft occupations, for the sphere of social activity if it concerns managers at the middle and junior level, and for the sphere of manufactures if it concerns qualified workers. A factor of health in this case develops significantly because the overall phenomenon for all these immigrants is a non-satisfactory level of physical state.

Fourth case: Models 4 and 5

The fourth model, “Orientation to working conditions”, represents combination between negative factors of time, occupation-education, and the positive significance of other factors. One can conclude that for these immigrants, flexibility of working time leads to a non-standard working regime and lower occupational and educational status in combination with satisfaction with working conditions, health, and income. Comparatively, the fifth model, “Time and working conditions”, represents a combination between the positive 1st and 3rd factors and the negative 2nd factor. One can conclude that for these immigrants, flexibility of working time leads to a standard, officially fixed working regime (as well as undertime or overtime) in combination with high a satisfaction with working conditions, income, health.

A distinctive feature of the fourth factor model is that the main category of immigrants includes workers and clerks. If the time factor has a negative character (negative regression factor score), workers and clerks differently combine

flexibility of working time and preferences for more beneficial working conditions and higher labor income (Fig. 15). In this case, a non-standard regime of working time is not so important for immigrants if they have a sufficient level of monetary income. For example, representatives of technical and craft occupations who work in the sphere of construction or representatives of professions requiring physical labor, as well as service personnel who work in the sphere of social activity, have marginal employment (0-14 or 15-20 hours per week, equally contracted and normal). At the same time, they estimate their own level of monetary incomes as higher. Their labor activity is often concentrated at poor-skilled job places not requiring higher professional training, or at middle-qualified positions as caretakers in the sphere of health and social work.



*Factor 1 – “Time”, factor 2 – “Occupation and education”, factor 3 – “Working conditions”

Figure 15. The fourth factor model “Orientation to working conditions”: regression factor scores for three factors with regard to contracted vs. normal working hours (ESS, N=16)

Additionally, overtime is an inalienable feature of labor activity among qualified workers if they work in the sphere of construction. In this case, the specificity of labor associated with servicing technical equipment or construction of buildings predetermines longer working days. Thus, technical and craft occupations have 30-34 contracted hours but work 40-44 total normal hours per week, whereas skilled workers (builders) have 35-39 contracted hours and work 45-55 total normal hours per week. One can imply that immigrants having such

labor activity choose longer working time regimes with the aim of getting higher earnings, and integration in the labor market that is more successful. Therefore, the sphere of construction traditionally offers work in shifts that predetermine especial employment for immigrants.

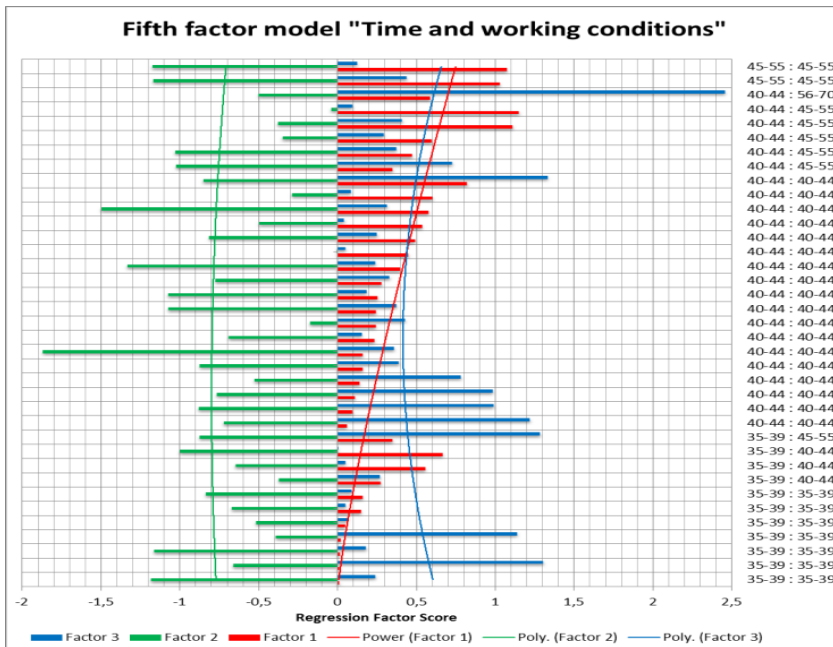
Working time flexibility can be reasonable if labor immigrants value health as one of the main criteria of a good quality of life. Several examples support this assumption. Thus, some examples show that marginal employment (less than 20 hours per week) in combination with a limited labor contract, work at enterprises with minimal number of personnel (less than 10 people), minimal level of material income, and poor occupational level. This can be reasonable if immigrants determine that good health is a primary value in their life. In this case, factor of health (high level of regression factor score coefficient) is much higher in comparison to other factors such as time, profession, education, and working conditions.

One more case differs from the above-mentioned cases by a character of professional grounding of immigrants when higher professional level, employment in the sphere of business, research, and estate activities combines with a good physical state. Namely, activity in the sphere of architectural and engineering activities, technical testing and analysis, and town and traffic planning are examples. Here, working time flexibility is characterized by marginal employment according to conditions of work contract (0-14 contracted hours) and a reduced working time regime according to officially fixed labor time-tables (30-34 normally worked hours). Hypothetically, a reason for overemployment is an aspiration for higher labor income and aspiration for gaining permanent employment at an enterprise.

In contrast, a distinctive feature of immigrants who have positive regression factor scores on the time factor is that they belong to the working class and jobs in the sphere of manufactures, construction, transport, service (hotels and restaurants), trade, and sphere of social activity (health and social work)(Fig. 16). Lower levels of education, unlimited work contracts, and standard work time regimes (40 officially fixed hours) are peculiar to employment for immigrants; however, one can see a deviation from this overall tendency. Thus, overtime is reasonable for those immigrants who aim to have higher labor income and to use opportunities of enterprise for their own career development.

Comparatively, the same tendencies are among high-professional immigrants from the sphere of business who had negative regression factor scores on the time factor. However, in the case of immigrants having positive regression factor

scores, their occupational status is not so high, whereas essential flexibility of working time is obvious. What is more, working time flexibility is realized in employment among drivers whose working week lasts 5-15 hours longer than the officially established limit of working time (40-44 contracted and 45-55 total normal hours).



*Factor 1 – “Time”, factor 2 – “Occupation and education”, factor 3 – “Working conditions”

Figure 16. The fifth factor model “Time and working conditions”: regression factor scores for three factors with regard to contracted vs normal working hours (ESS, N=37)

At the same time, the factor of time can be less essential in comparison to the factor of working conditions. Thus, this situation is typical for qualified workers from the sphere of manufacturing with large numbers of personnel, unlimited work contracts, and standard employment (40-44 hours, contracted and total normal hours equally). The same situation is peculiar for qualified workers from the sphere of trade who work at enterprises with a minimal number of personnel (less than 10 people) and who have overtime (45-55 hours, contracted and total normal equally). In this case, the size of enterprise does not make sense for representatives of the service sphere who associate their activity with beauty and health. A common feature for these workers is a high level of material income and good health.

On the other hand, if the activity of immigrants is associated with the care of patients inside medical institutions or in computer technologies, a reduced working week is typical for their employment (35-39 hours contracted and normal equally). As a rule, these immigrants have limited work contracts or do not have one at all, and work at enterprises with personnel that do not exceed 24 people. In this case, the factor of profession has higher importance for them than factors of time, health, education, and working conditions. At the same time, if immigrants have an unlimited work contract, they more often choose a regime of overemployment independently of professional status and education as in the case of clearing and forwarding agents (35-39 contracted and 45-55 normal working hours), and transport laborers and freight handlers (40-44 contracted and 56-70 normal working hours). A factor of health has primary importance for immigrants especially because overemployment is often accompanied with overall non-satisfactory physical state.

Conclusions

Flexibility of working time represents a twofold process during which the regime of work changes depending on intentions and objective reasons of an organization in favor of deregulation of working time, and mutual (or forced) consent of personnel to the changing of working time. Working time flexibility is the flexibility of proactive enterprises. As a result, regimes of working times form depending on the economic situation at an enterprise, the character and specificity of a sector, the propensity of certain professions to corresponding regimes of work, and aspiration of personnel to this or that regime of working time. It is obvious the influence working time flexibility has on the professional activity of immigrants in Finland and their behavior at enterprises of various industries (spheres of economic activity).

Firstly, poor-skilled labor immigrants are inside their own professional and social niche with limited opportunities to further carrier development if flexibility of working time leads to underemployment with insufficient professional realization and full dissatisfaction with other issues of employment. Fixed-term employment that is peculiar to labor immigrants with this type of flexibility of working time is conducive to the long process of labor adaptation and integration into the labor market. However, if flexibility of working time leads to standard, officially fixed working regimes and overtime, this circumstance does not always mean that labor immigrants have opportunities to further their professional development. The sphere of labor activity of enterprises where immigrants have

jobs prescribes the requirements to labor discipline and work arrangements. In combination with dissatisfaction with occupational, educational, health, or working conditions, this situation leads to permanent adaptation to the labor market and longer working regimes. The education and profession of immigrants does not predetermine employment that correlates to their human capital characteristics.

Secondly, satisfaction with one's own professional activity potentially predetermines more opportunities for career development. If flexibility of working time leads to non-standard working regimes parallel to high satisfaction with one's own professional activity and poor satisfaction with working conditions, health, income, and the sphere of labor activity are satisfactory for immigrants, even in the case of shorter working regimes and unsatisfactory working conditions. The sphere of economic activity of enterprises where immigrants have jobs usually prescribes a necessity for higher education and labor experience, as well as dictates working regime, character of working time flexibility, and opportunities for career development for personnel. Labor immigrants adapt and integrate into the labor market well if they are satisfied with their own professional and educational status, and if flexibility of working time leads to a standard officially fixed working regime (as well as undertime and overtime). In this case, working conditions do not have any significance, however, fixed-term employment and unsatisfactory working conditions significantly decrease overall satisfaction with working life. Overtime becomes a necessary attribute of employment for these immigrants as an opportunity to be in a profession and to develop their own career.

Thirdly, non-standard working regimes do not always have a negative influence upon the employment of immigrants. If labor immigrants have more opportunities to realize professional activity and to be satisfied with working conditions, income, and health, a non-standard regime is not a factor of negative perception of employment. In this case, the industry where immigrants have a job is decisive as an initial point to career development and faster integration into the labor market. This circumstance compensates for the insufficient working regime the same as it does for professionals as for workers and clerks. In addition, sufficient professional realization and full satisfaction with other issues of employment can combine with a standard working regime and overtime. Thus, the highest professional managerial positions practice flexible working regimes as a combination between flexitime, overtime, and dual employment. In this case, the size of enterprises and industry do not have any significance as factors of

career development for immigrants. The factors of health and professional realization become the main motives for employment among these labor immigrants.

Finally, non-standard employment and a lower professional and education status of labor immigrants do not always predetermine negative perceptions of employment. In this case, working conditions are considered as the most attractive feature of employment and compensate for dissatisfaction with other aspects of labor activity. If the time factor is negative, workers and clerks have numerous combinations between flexibility of working time and preferences to have better working conditions, in order to gain an opportunity to care about their health or to have a higher income. In this case, their labor adaptation and integration is slowed down owing to a lower position in the labor market. However, in comparison to other immigrants, they have more stable labor positions; the aspiration to have better working conditions and good health predetermines the situation when laborers prefer to have overtime, even though their labor incomes are not so high. The industry in which immigrants prefer to have jobs is decisive for their employment because it initially prescribes a working regime, discipline, requirements to work, contract arrangements, working conditions, etc. Thus, immigrants are oriented toward content of work and working arrangements mostly that prescribe their future behavior inside an enterprise and character of labor adaptation. More often, these are the spheres of manufacturing, construction, land transport, hotels and restaurants, retail trade, and health and social work.

5.3 From unemployment to labor market attachment

According to earlier studies, unsuccessful attachment to the labor market is one of the reasons for growing marginalization in working life. In the short-term perspective, ineffective labor market attachment leads to unemployment, whereas longer periods outside the labor market presuppose longer social marginalization. Employment Services provide unemployed people with various forms of support, such as labor market training, traineeships, etc. However, what do we know about the effectiveness of such measures toward final job-placement? Do we know why a certain group of unemployed people such as immigrants cannot be employed over the long-term and have more difficulties in this process, in comparison to the native population? The research question of this subchapter deals with the

transitions from unemployment contributing to the labor market integration of unemployed immigrants in Finland. This subchapter focuses on an analysis of time in which unemployed immigrants spend in unemployment until they realize transitions to other different positions in the labor market. Based on the research aim, only immigrants who have been registered in the URA–database as “unemployed population”, and, consequently, who obtained a right to participate in programs of adaptation for unemployed persons initiated by the Government of Finland, have been chosen for the present research. The data contains information about immigrants who integrated into the labor market during the period 1952-2014.

5.3.1 Intensity changes over the course of unemployment

Looking at the tendencies of job-placement for unemployed people over time, it becomes apparent that economic cycles, in many respects, predetermine the dynamics of job-placement. An essential modification of overall economic situation in Finland in a short space of time predetermines the overall change of dynamics of participation of unemployed in Employment Policy. Consequently, estimating the overall time tendencies of job-placement among the unemployed population, a time-period of staying in unemployment turns out to be one of the important factors of job-placement for the unemployed. Besides, describing the history of unemployment from the position of a life-course approach, one should also consider the significance of “age” as a form of social imaginary parallel to the significance of “period”-effect in transitions from unemployment. Following this logic and taking into account the large observation period, I rely mainly on the cohort analysis in order to understand significance of birth- or entrance cohorts in specificity of transitions from unemployment as strongly conditioned by age or time, when immigrants receive their first status of unemployment in Finland (see Table 1 in Appendix 8.3).

However, another matter concerns the approach of analysis to “unemployment period” in itself. In this case, the most important question concerns the issue of how to analyze an unemployment period; as an episode in a chain of unemployment periods during the life-course or as a single event. Guided by the first approach, an unemployment period is considered as one of the possible, multiple episodes during the whole observation period. In this respect, the count-time analysis helps to analyze chains of unemployment periods with regards to each case separately (see Tables 2 and 3 in Appendix 8.3). Parallel to verification

of the basic hypothesis about a significant influence of the mechanism of transitional labor market upon specificity of labor market integration, the mechanism of segmented labor market is also considered as one of the basic regulators for the integration of immigrants. In this respect, the mechanism of transition from unemployment in itself is conformed with the mechanism of segmentation of labor force on gender, education, age (birth cohort), and time of first unemployment (entrance cohort).

Describing the general tendencies, the count-time data is viewed as containing 2,698 observations, instead of the previous 16,166 observations, as completed unemployment periods during 1952-2014. Considering the influence of the four basic factors on the time of completion of an unemployment period, further count-time data is transformed into survival-time analysis, allowing for an examination of real time exits from unemployment (survival time) with regards to each case particularly (Table 9).

Table 9. Basic characteristics of the model for the count-time analysis with regard to basic variables (URA-database, N=16166 unemployment periods, period 1952-2014)

	time at risk	incidence rate	no. of subjects	Survival time		
				25%	50%	75%
Total	2073443	.007	16166	42	93	178
Gender						
Male	854905	.008	7669	38	77	157
Female	1218538	.006	8497	48	109	196
Education						
Early education	112	.008	1	.	.	.
Primary education	117112	.008	955	37	75	194
Lower secondary	250400	.008	2218	37	81	149
Upper secondary	750330	.008	6442	42	86	165
Short-cycle tertiary	256344	.006	1669	54	115	216
Bachelor or equivalent	256480	.006	1624	45	104	282
Master or equivalent	265279	.006	1831	60	125	196
Doctoral or equivalent	31580	.006	211	65	108	227
Not elsewhere classified	145806	.008	1215	37	85	187
Birth cohort						
1935-1946	379797	.003	1484	105	260	390
1947-1956	616600	.005	3120	80	182	307
1957-1966	657434	.007	5259	59	116	178
1967-1976	352174	.013	4827	33	60	101
1977-1986	67438	.021	1476	15	36	72
Entrance cohort						
1952-1961	158842	.002	400	367	434	481
1962-1971	354428	.003	1070	288	339	390
1972-1981	565063	.004	2512	171	227	286
1982-1991	630114	.008	5337	68	111	159
1992-2001	326300	.018	5959	22	42	74
2002-2014	38696	.022	888	20	39	62

With regards to influence of the four main factors (gender, education, birth cohort and entrance cohort), the situation for completion of unemployment significantly changes depending on the influence of an individual factor. Thus, the time at “risk” (status of unemployment) is much higher for women than it is for men. Likewise, the incidence rates are lower for women than for men. Comparatively, an analysis of survival time with regards to education as another socio-demographic characteristic of immigrants confirms that the time at risk is less for immigrants having upper secondary education, whereas prolonged unemployment periods are typical especially for immigrants with higher education (master and doctoral degrees).

On the other hand, the factor of “cohort” is more important for exits from unemployment as long as the time at “risk” is essentially longer for the two older cohorts, “1935-1946” and “1947-1956”. Likewise, the time for completing unemployment is essentially decreased depending on birth cohort. The difference between the first cohort (“1935-1946”) and the most recent cohort (“1977-1986”) is significantly crucial. On the other hand, the time of completion of unemployment differs depending on belonging to a certain entrance cohort as well. Immigrants from the entrance cohorts “1992-2001” and “2002-2014” spend significantly less time in unemployment than immigrants from earlier entrance cohorts do.

The above-mentioned results concern mainly real time, when an unemployment period ended with regards to influence of the four explanatory factors. However, hypothetically, the intensity of unemployment periods also significantly differs depending on the different influence of all four above-mentioned factors. If events (unemployment periods) occur independently, and at a constant rate, then the count of events over a given period follow a Poisson distribution. For simplicity, it is expected that “gender”, “education”, “birth cohort”, and “entrance cohort” influence the log number of unemployment periods to be linear.

For the regression above, the event count (number of failures, or “unemployment periods”) is specified as the dependent variable, while “gender”, “education”, “birth cohort”, and “entrance cohort” are specified as independent ones. The Poisson exposure variable for “months_total” reflects the cumulative number of months for each person separately in each category of “gender”, “education”, “birth cohort”, and “entrance cohort”. The irr option calls for incidence rate ratios rather than regression coefficients in the results table – that

is, there are estimates of $\exp(\beta)$ instead of β , the default (Table 10). Further logic of the analysis is based on the inclusion of one by one variables into the model and specification of results with regards to influence of each of the factors to overall intensity of unemployment periods, in the history of unemployment.

Table 10. Poisson regression model with regard to influence of gender, education, birth cohort and entrance cohort (URA –database, N=2,698 unemployed immigrants, period 1952-2014)

	Model 1	Model 2	Model 3	Model 4
gender	0.77***	0.77***	0.89**	0.97 ^{ns}
education		0.97*	0.99 ^{ns}	0.98 ^{ns}
birth cohort			1.68***	1.09***
entrance cohort				1.91***
_cons	0.01***	0.01***	0.00***	0.00***
Log likelihood	-4611.03	-4608.22	-4137.74	-3760.50
Pseudo R ²	0.0049	0.0055	0.1071	0.1885
^{ns} – no significance, *P < 0.05, ** P < 0.01, *** P < 0.001				

Thus, the first model is based on one predictor-variable, or the “gender”-variable. As the incidence rate ratio reports, the number of failures (unemployment periods) becomes 0.770 times lower (decreased by 22.9%) for women. As the ratio is statistically significant, the fit is not impressive (the Pseudo R² is 0.0049). To perform a goodness-of-fit test, comparing the Poisson model’s predictions with the observed counts, the post-estimation is used. The goodness-of-fit test results indicate that the model’s predictions are significantly different from the actual counts – another sign that the model fits poorly. In other words, gender as a factor does not hypothetically exert influence upon the intensity of transitions from unemployment. Secondly, when including one more factor in the model, “education”, the Pseudo R² then rises to .0055. The goodness-of-fit test results also indicate that the model’s predictions are significantly different from the actual counts – another sign that the model fits poorly. This last circumstance means that parallel to “gender”, “education” does not hypothetically have an influence upon the intensity of transitions from unemployment.

Considering the overall situation from the position of the cohort analysis, one can prove the significance of the third predictor-variable “birth cohort” as being more important when compared to the two previous factors. Although the Pseudo R² rises to 0.1071, the goodness-of-fit test results indicate that the model’s predictions are significantly different from the actual counts – another sign that the model fits poorly. Consequently, the “gender”-factor, the “education”-factor, and the “birth cohort”-factor potentially do not affect the number of

unemployment periods of immigrants and intensity of transitions from unemployment.

Finally, by including the fourth predictor variable “entrance cohort”, the Pseudo R^2 then rises to 0.1885. According to this incidence rate ratio, the number of failures becomes 1.090 times higher (increased by 9%) with each birth cohort. This means that the younger unemployed immigrants are, the more unemployment periods they have. On the other hand, according to this incidence rate ratio, the number of failures becomes 1.919 times higher (increased by 91.9%) with each entrance cohort. This means that the later a period of first unemployment occurs, the more unemployment periods unemployed people have. As these ratios are statistically significant, the fit is rather impressive. The Pseudo R^2 then rises to .1885, and the goodness-of-fit test no longer leads to rejection of the model. The final goodness-of-fit test results indicate that the model’s predictions are not significantly different from the actual counts – another sign that the model fits well. Consequently, the results of the Poisson regression analysis lead to the first important conclusion about the significance of the first unemployment period in Finland as a factor influencing the behavior of unemployed immigrants, and the intensity of their unemployment periods.

5.3.2 Unemployment period: transition – context – outcome

In the case of the present research, the mechanisms of transition from unemployment are considered from the position of influence by the mechanism of the segmented labor market and, consequently, represent specific “outcomes” after a specific type of transition has been completed. These often belong to a specific group of the population, differentiated on gender, education, age, and entrance into unemployment. Following this logic, the given approach considers each unemployment period as a separate event. By means of the Kaplan-Meier Survivor Functions, the time of completion of unemployment and decomposition of the groups on the four categorical variables are analyzed with regards to every “status” (transition from unemployment to another status) separately. The analysis includes then 16,166 unemployment periods, while the overall time at “risk” amounts 260,859.5 months (see Fig. 1 and Tables 4 and 5 in Appendix 8.3).

According to general Kaplan-Meier estimators with regards to influence of gender upon transitions from unemployment, there appears to be difference between the survivor functions of men and women as both genders move to one

of the statuses at different rates. The survival probabilities of transition to a status steeply decline during the first months after an unemployment period begins, except for statuses 02 “On reduced working week” and 03 “Job-placed itself” (Fig. 2 and Table 6 in Appendix 8.3). The incidence rates for both genders appear to be slightly different as well. Thus, men find a job through employment services, are employed in the general labor market, or find part-time employment faster than women do. The log-rank test for equality of survivor functions (“gender” –variable) finds a significant difference ($Pr > \chi^2 = .0000$) in transition to statuses 00 “Employed through employment services”, 02 “On reduced working week”, 04 “In LM training”, 05 “Outside the labor force”, and 06 “Another reason” between men and women (Table 7 in Appendix 8.3).

Hypothetically, the educational background of unemployed immigrants has less significant influence on transitions from unemployment than gender has. As the Kaplan-Meier estimator shows, the distributions of shares of unemployed immigrants by educational levels and reasons of completed unemployed periods are rather diversified (Fig. 3 and Table 8 in Appendix 8.3). The incidence rates for all educational levels appear to be different. As it concerns employment through employment services, faster allocation is more probable for immigrants with lower levels of education, whereas allocation to part-time employment occurs independent of educational level (on average, after three months of staying in unemployment). The log-rank test for equality of survivor functions finds a significant difference ($Pr > \chi^2 = .0000$) in transition to the statuses 00 “Employed through employment services”, 01 “Employed in the general labor market”, 02 “On reduced working week”, 04 “In LM training”, and 06 “Another reason” between immigrants with various educational levels (Table 9 in Appendix 8.3).

In contrast to the previous two variables, belonging to a certain birth cohort is an essential reason for completion of an unemployment periods. There appears to be a difference between the survivor functions for various birth cohorts as long as all the birth cohorts complete unemployment periods at different rates. The survival probabilities of unemployed immigrants decline steeply during the first months after an unemployment period begins for all statuses, except status 02 “On reduced working week” and 03 “Job-placed itself” (Fig. 4 and Table 10 in Appendix 8.3). The analysis allows for the conclusion that the younger, and faster, an immigrant is employed through employment services, they tend to find full-time or part-time employment in the general labor market. This difference is rather important for all the cohorts. The log-rank test for equality of survivor functions finds a significant difference ($Pr > \chi^2 = .0000$) in the transition to all

statuses, without exception, between immigrants from various birth cohorts (Table 11 in Appendix 8.3).

Finally, the analysis of periods when an immigrant becomes unemployed for the first time (or belonging to an entrance cohort) allows for the same conclusion of tendencies as in the case of belonging to a birth cohort. All the entrance cohorts move to one of the statuses at different rates. As in previous case, the survival probabilities of unemployed immigrants to complete an unemployment period decline steeply during the first months after an unemployment period begins, except for the statuses 02 “On reduced working week” and 03 “Job-placed itself” (Fig. 5 and Table 12 in Appendix 8.3). Hypothetically, the earlier immigrants became unemployed for the first time, the longer a period of unemployment they had. The difference in time of transition from unemployment to another status is rather important as it concerns employment through employment services, employment in the general labor market, or allocation to part-time employment. The log-rank test for equality of survivor functions finds a significant difference ($Pr > \chi^2 = .0000$) in the transition to all statuses between immigrants from various entrance cohorts (Table 13 in Appendix 8.3).

Consequently, the time of completion of unemployment periods significantly differs depending on the different influence of all the four above-mentioned factors, however, factors of birth- and entrance cohorts have a higher significance. Nevertheless, by looking at the influence of the above-mentioned factors, one can also conclude about the specific “offsets” of unemployment (or transitions from unemployment to different statuses). In this case, regression methods allow for taking the survival analysis further and examining the effects of multiple continuous or categorical predictors. Considering the influence of factors upon “outcome” of unemployment, the Cox regression indicates the proportional changes relative to the baseline hazard rate. For the present research, the Cox regression analysis is based on the Breslow method for ties (Table 14 in Appendix 8.3).

In the first case, “gender” turns out to be an important factor in the realization of transitions to part-time employment, LM training, or economic inactivity. The estimated hazard ratio is assessed for the “gender” –variable with reference to two individuals, whose genders are a (male) and a+1 (female). Thus, the results of the analysis more clearly indicate that women are 26.4% more likely to be placed in a job on a reduced working week over a short period than men are⁴. On the other hand, over a short period, women are 46% less likely to have LM training over a

⁴ The ratio of respective hazards is 1.26, the ratio differs significantly from 1 ($p = .000$)

short period (.53, $p = .000$), are 34.4% less likely to become economically inactive (.65, $p = .001$), as well as are 29.2% less likely to complete unemployment according to unknown reasons in comparison to men (.70, $p = .005$).

Secondly, one's educational degree turns out to predetermine transitions to self-employment, LM training, or economic inactivity. The hazard ratio is estimated for the "education" –variable with reference to two individuals, whose educational levels are a (early education), a+1 (primary education), a+2 (lower secondary education), etc. Thus, immigrants with a higher level of education are 9% less likely to find a job on their own over a short period compared to immigrants with lower levels of education⁵. Immigrants with higher levels of education are 8.4% less likely to have LM training over a short period (.91, $p = .000$), are 9.5% less likely to move out from the labor market (.90, $p = .001$), and are 7.1% less likely to complete unemployment according to unknown reasons, in comparison to immigrants with lower levels of education (.92, $p = .011$).

Thirdly, the factor of belonging to a birth cohort potentially predetermines job-placement in the general labor market or pursuit of self-employment, as well as transitions to unemployment pension. The estimated hazard ratio for the "birth cohort" –variable is interpreted with reference to two individuals, whose birth cohorts are a (1935-1946), a+1 (1947-1956), a+2 (1957-1966), etc. According to the results, immigrants from later birth cohorts are 36% more likely to be placed in jobs over a short period than immigrants from an earlier birth cohort are⁶. Immigrants from later birth cohorts are 65.8% more likely to be find a job themselves (1.65, $p = .000$), are 26.3% more likely to complete unemployment for unknown reasons (1.26, $p = .002$), and are 21.7% more likely to move to unemployment pension (1.21, $p = .000$) over a short period, compared to immigrants from an earlier birth cohorts.

Finally, the factor of belonging to an entrance cohort turns out to predetermine when immigrants are placed into subsidized employment, are job placed on a reduced working week, or start LM training. The estimated hazard ratio is interpreted for the "entrance cohort" –variable with reference to two individuals, whose entrance cohorts are a (1952-1961), a+1 (1962-1971), a+2 (1972-1981), etc. Thus, immigrants from later entrance cohorts are 31% more likely to be employed through employment services over a short period than immigrants from earlier entrance cohorts are⁷. Immigrants from later entrance cohorts are 37.3%

⁵ The ratio of respective hazards is .90, the ratio differs significantly from 1 ($p = .021$)

⁶ The ratio of respective hazards is 1.36, the ratio differs significantly from 1 ($p = .000$)

⁷ The ratio of respective hazards is 1.31, the ratio differs significantly from 1 ($p = .000$)

more likely to be job placed on a reduced working week (1.37, $p = .000$), are 77.4% more likely to have LM training (1.77, $p = .000$), and are 53.8% more likely to complete unemployment according to unknown reasons (1.53, $p = .000$) over a short period, compared to immigrants from earlier entrance cohort.

Both in the case of Kaplan-Meier estimators and in the case of Cox proportional hazard, survival times follow real categorical predictors. The Cox regression, which makes no a priori assumptions about distribution shape, remains useful in a wider variety of situations, because a Cox regression estimates the baseline survivor empirically without reference to any theoretical distribution. On the contrary, several alternative parametric approaches, such as an Exponential or Weibull regression, begin instead from the assumption that survival times do follow a known theoretical distribution. These are preferable compared to the Cox regression, when survival times actually follow any theoretical distribution. Such models have the same general form as a Cox regression, but define the baseline hazard $h_0(t)$ differently. If failures occur independently, with a constant hazard, then survival times follow an exponential distribution and can be analyzed by exponential regression.

For the purposes of the present research, the results of the exponential regression analysis are based on the log relative-hazard form (Table 15 in Appendix 8.3). The analysis of distributions as applied to various statuses proves that, regarding all the statuses, the hazard ratios for “gender” and “education” estimated by this exponential regression do not greatly differ from their counterparts in the earlier Cox regression. The similarity reflects the degree of correspondence between the empirical hazard function and the constant hazard implied by an exponential distribution. However, for two other variables, “birth cohort” and “entrance cohort”, ratios differ significantly especially for statuses 00 “Employed through employment services”, 02 “On reduced working week”, 03 “Job-placed itself”, 06 “Another reason”, and 07 “On unemployment pension” (Table 11).

For example, according to the exponential model, the hazard ratio of the event “employment through employment services” increases by about 11% depending on a birth cohort (Cox – 6.9%) and increases by about 75.9% depending on an entrance cohort (Cox – 31%). Comparatively, looking at job-placement on a reduced working week, the hazard ratio decreases by about 3.8% depending on a birth cohort (Cox – 8.2%) and increases by about 103.1% depending on an entrance cohort (Cox – 37.3%).

Table 11. Hazard ratios with regard to Cox, Exponential, and Weibull Model Estimates of Proportional Hazards (URA–database, N=16166 unemployment periods, period 1952-2014)

Status	_t	Cox	Exponential	Weibull
Status_00 "Employed through empl.services"	Gender	0.94	0.93	0.93
	Education	0.98	0.98	0.98
	Birth cohort	1.07	1.11	1.08
	Entrance cohort	1.31	1.76	1.45
Status_01 "Employed in the general labour market"	Gender	0.96	0.95	0.95
	Education	0.98	0.98	0.98
	Birth cohort	1.36	1.39	1.39
	Entrance cohort	1.00	1.04	1.05
Status_02 "On reduced working week"	Gender	1.26	1.25	1.25
	Education	1.00	1.00	1.00
	Birth cohort	0.92	0.96	0.94
	Entrance cohort	1.37	2.03	1.58
Status_03 "Job-placed itself"	Gender	0.86	0.89	0.87
	Education	0.91	0.89	0.90
	Birth cohort	1.66	1.75	1.67
	Entrance cohort	1.19	1.69	1.33
Status_04 "In LM training"	Gender	0.54	0.54	0.54
	Education	0.92	0.92	0.91
	Birth cohort	0.97	0.98	0.99
	Entrance cohort	1.77	1.75	1.86
Status_05 "Outside the labour force"	Gender	0.66	0.66	0.66
	Education	0.90	0.90	0.90
	Birth cohort	1.03	1.06	1.04
	Entrance cohort	1.08	1.20	1.11
Status_06 "Another reason"	Gender	0.71	0.71	0.71
	Education	0.93	0.93	0.93
	Birth cohort	1.26	1.26	1.28
	Entrance cohort	1.54	1.44	1.58
Status_07 "On unemployment pension"	Gender	0.91	0.92	0.92
	Education	0.99	0.99	0.99
	Birth cohort	1.22	1.23	1.23
	Entrance cohort	1.10	1.13	1.11

Therefore, theoretically, belonging to a birth cohort would have a bigger impact on subsidized employment than it does in real life. Comparatively, belonging to an entrance cohort would have much less impact on employment through employment services theoretically, which is true. In reality, the effect of birth cohort on part-time employment is even higher than it would be implied, theoretically. On the contrary, the significance of belonging to an entrance cohort for transitions to part-time employment is even higher theoretically, than it is in fact.

Comparable to exponential regression, a second common parametric approach is based on a general Weibull distribution. This distribution does not require

failure to remain constant, but allows them to increase or decrease smoothly, over time. The most noticeable difference from those earlier models is the presence of a Weibull distribution shape parameter p . If a p value of 1 corresponds to an exponential model, the hazard does not change with time. Comparatively, $P>1$ indicates that hazard increases with time; $p<1$ indicates that the hazard decreases. Different, but mathematically equivalent, parameterizations of the Weibull model focus on $\ln(p)$, p or $1/p$. The results of the Weibull regression analysis are based on the log relative-hazard form (Table 16 in Appendix 8.3).

Thus, the research results prove that the Weibull regression obtains hazard ratio estimates intermediately between the previous Cox and exponential results, except for the “gender”-factor, for which hazard ratio is slightly lower. By looking at situations, when the hazard decreases with time, a 95% confidence interval for p ranges from .66 to .69 for the status “Employed through employment services.” The same tendencies concern other statuses such as “Reduced working week” (a 95% CI for p ranges from .58 to .60), “Self-job-placement” (a 95% CI for p ranges from .49 to .64), “Outside the labor force” (a 95% CI for p ranges from .79 to .93), and “Unemployment pension” (a 95% CI for p ranges from .93 to 1.01). Therefore, in all these cases, there is an essential reason to reject the exponential ($p<1$) model here, because p does not correspond to an exponential model.

Conversely, the other three statuses represent more optimistic situations when $p=1$ or $p>1$. As it concerns the status “Employment in the general labor market”, a 95% CI for p ranges from .99 to 1.04. The same characteristic is peculiar for the “LM training” -status (a 95% CI for p ranges from 1.04 to 1.16) and “Another reason” -status (a 95% CI for p ranges from 1.08 to 1.25). Therefore, there is no reason to reject the exponential model, because $p>1$ and this means that hazard increases with time. The basic conclusion, which follows from the analysis of statistical results, testifies to the existence of two obvious tendencies. On the one hand, employment in the general labor market and participation in labor market training are tendencies that have almost a 100%-probability to be realized, independent of the influence of external factors. On the other hand, subsidized employment, a reduced working week, self-employment, or transitions to economic inactivity are tendencies that are strongly conditioned by the influence of external factors. Consequently, in each certain case, transitions from unemployment occur as conditioned by external factors.

5.3.3 Unemployment period as a predicted completed event

The time of completion of unemployment, hypothetically, predetermines an “outcome” of unemployment. Various studies confirm that, especially during the first three months of staying in unemployment, job-placement is more effective; completion of unemployment periods during this time for the reason of job-placement is one of the highest. Another dynamic concerns unemployment periods lasting more than 1 year, when a share of those who have found a job essentially decreases. Consequently, objective tendency proves that a probability for job-placement decreases in proportion to a period of staying in unemployment. Admittedly, the longer unemployment lasts and more episodes of unemployment an unemployed person has, consequently, the lesser the probability to be employed. In the case of the present research, the above-mentioned tendencies are verified by means of Discrete-Time Survival models, which are specified in terms of the discrete-time hazard, and defined as the conditional probability that the event occurs in time t , given that it has not occurred (Rabe-Hesketh & Skrondal, 2012b, p.750). By looking at general tendencies, three important issues are considered as the time of completion of unemployment, transitions to employment or other statuses, and overall time trends of transitions after 3, 6, 12, and 24 months in unemployment.

The research results signify that the estimated hazard of job-placement through employment services reaches a maximum three times (in the interval “3-4 months”, “6-7 months” and “12-13 months”), as well as at the end of the observation period; the cumulative failure comes to 69.7% (Table 17 in Appendix 8.3). In comparison to employment through employment services, the estimated hazard for job-placement with a reduced working week also reaches a maximum three times (in the interval “3-4 months”, “6-7 months” and “12-13 months”). At the end of the observation period, the cumulative failure for this “event” amounts to 64.2% (Table 19 in Appendix 8.3). On the other hand, the estimated hazard for employment in the general labor market significantly changes during first 23 months of the observation period. Toward the end of the observation period, it comes to 96.7% (Table 18 in Appendix 8.3). However, the situation develops in another way if unemployed immigrants find a job themselves. As the number of those immigrants who were able to find a job themselves is rather small, this circumstance affects also the estimated hazard, which reaches a maximum in the interval “3-4 months” and then significantly declines to zero. The cumulative

failure accounts then only to 3.2% at the end of the observation period (Table 20 in Appendix 8.3).

Basically, employment in the general labor market occurs with almost the same share of probability for all the birth cohorts (the cumulative failure varies from 91.3% to 100%). On the contrary, employment through employment services has less probability and accounts for 73.5% to 82.4% for all the cohorts, except the cohort “1935-1946”, for which the cumulative failure is minimal (52.2%). As it concerns job-placement with a reduced working week, the analysis shows that the maximal cumulative failure is widely peculiar to three cohorts, “1957-1966”, “1967-1976”, and “1977-1986” (73.2% – 79.1%). However, a factor of belonging to an entrance cohort has an admittedly essential transition to this or that status in the labor market. As it concerns employment through employment services, the analysis shows that the three latest entrance cohorts (“1982-1991”, “1992-2001”, “2002-2014”) have the maximal cumulative failure. On the other hand, the probability to be employed in the general labor market is even higher for all the entrance cohorts. Likewise, the cumulative failure is the highest for two entrance cohorts “1972-1981” and “1982-1991”. Comparatively, the cumulative failure of job-placement with a reduced working week is the maximal for two latest cohorts (“2002-2014” and “1992-2001”).

In contrast to the statuses concerning the job-placement of unemployed immigrants, transitions to other statuses have more manifold features. Firstly, the probabilities of transition to labor market training are rather small in the beginning of the observation period, whereas these probabilities become more visible toward the end of the observation period, when the cumulative failure of allocation to labor market training achieves a 100%-probability (Table 21 in Appendix 8.3). Comparatively, transitions to economic inactivity from unemployment (status “Outside the labor force”) also differ from other situations as the estimated hazard changes during the entire observation period and reaches a maximum at various time-intervals. Toward the end of the observation period, the cumulative failure amounts to 28.7% (Table 22 in Appendix 8.3). Finally, the transitions to unemployment pension have their own features. Transitions to this status from unemployment occur rather late, almost at the end of the observation period, when the cumulative failure comes to 93.3% (Table 24 in Appendix 8.3).

Taking into account the hypothetical influence of the effects of belonging to a birth- or an entrance cohort, the analysis of transitions to labor market training gives diversified results. On the one hand, the earliest birth cohort, “1935-1946”, is exceptional in this case, because the cumulative failure for this cohort is the

maximal. On the other hand, as it concerns transitions from unemployment to economic inactivity, the analysis shows that the maximal cumulative failure is widely peculiar both to the cohorts “1967-1976”, “1977-1986” and “1935-1946”. It is typical, however, that earlier cohorts (“1935-1946”, “1947-1956” and “1957-1966”) realize more transitions from unemployment to unemployment pension.

Comparatively, transitions from unemployment to labor market training essentially differ depending on an entrance cohort. Thus, the maximal cumulative failure occurs for two marginal entrance cohorts (“1952-1961” and “2002-2014”). As it concerns transitions from unemployment to economic inactivity, the maximal cumulative failure ensues for the two entrance cohorts “1992-2001” and “1952-1961”. Finally, the maximal cumulative failure for completion of an unemployment period according to another reason occurs with a higher share of probability for the cohort “2002-2014”. The maximal cumulative failure to realize transitions to unemployment pension exist for such entrance cohorts as “1962-1971” and “1952-1961”.

By analyzing the situation in general, an additional part of the research includes a study of the estimated hazards and cumulative failures as limited by certain time-periods, specifically 3, 6, 12, and 24 months after unemployment has ended (Fig. 17, see also Table 25 in Appendix 8.3).

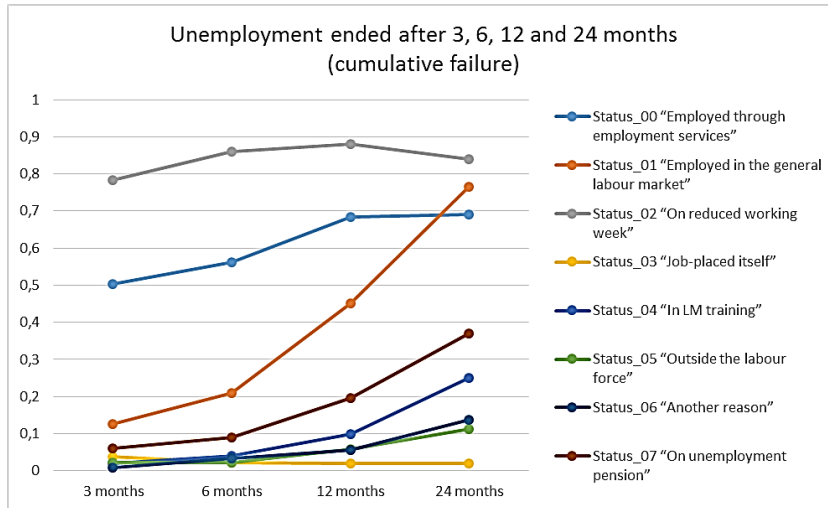


Figure 17. Cumulative failure for completed unemployment periods after 3, 6, 12, and 24 months (URA-database, N=16166 unemployment periods, period 1952-2014)

According to estimations, after three months of staying in unemployment, immigrants with a 50.3% -share of probability are employed through employment

services, and those with 78.3% -share of probability are employed on a reduced working week. With time, the probability to realize transitions to one of these statuses increases by 18.7% for the status 00 “Employed through employment services”, and by 5.7% for the status 02 “On reduced working week.” On the other hand, the probability of employment in the general labor market comes to 12.5% after three months of staying in unemployment, whereas, after 24 months, this probability amounts already 76.6%.

The analysis of the same tendencies from the position of belonging to a birth cohort gives grounds to assert that the probability to be employed through employment services is higher for the cohort “1977-1986”, considering all the periods of observation (3, 6, 12, etc. months). At the same time, if the probability to be placed in a job already after 3 months in unemployment is higher for birth cohorts “1967-1976” and “1977-1986”, with time this probability increases for all cohorts to the rate, which is more than 70%, except the cohort “1977-1986”. On the other hand, if the probability to be placed in a job with a reduced working time after 3 months in unemployment is higher for cohorts “1947-1956” and “1957-1966”, with time this probability increases also for other cohorts, such as “1977-1986” (Table 26 in Appendix 8.3). As it concerns other statuses, which do not directly concern employment of unemployed immigrants, the tendency of a later allocation to LM training (12-24 months) is typical for all the cohorts. The same trend is typical for transitions from unemployment to economic inactivity (outside the labor force). The most significant difference in this case exists for the cohorts “1935-1946” and “1947-1956”. Finally, as in two previous cases, the probability to move to unemployment pension also increases after the first year in unemployment. It is essential, however, that the two cohorts “1957-1966” and “1977-1986” differ from other cohorts in this case.

The analysis of the tendencies from the position of belonging to this or that entrance cohort, gives grounds to assert that immigrants from later entrance cohorts (“1992-2001” and “2002-2014”) have more chances to be employed through employment services. At the same time, it is more typical that immigrants from earlier entrance cohorts have slightly more chances to find a job (“1952-1961” and “1962-1971”). As the analysis shows, hypothetically, the earlier an immigrant became unemployed, the more chances he has to find a job in the general labor market. The difference between entrance cohorts can be rather essential in this case. On the other hand, another tendency testifies to a situation where immigrants from later entrance cohorts have more chances to a regime of reduced working time. In contrast to ordinary job-placement, the later (later

entrance cohort) an immigrant became unemployed, than more chances, hypothetically, he has to be “part time” –employed (Table 27 in Appendix 8.3).

As it concerns the statuses that do not concern direct job-placement, the general tendency testifies to that transitions from unemployment to LM training intensifies only after 12 months in unemployment and has different significance for different cohorts (for example, for “1982-1991” and “1992-2001”). On the other hand, immigrants from the earliest entrance cohort (“1952-1961”) have more chances to move from unemployment to economic inactivity. With time, this difference even intensifies. The same tendency takes place when immigrants move to unemployment pension. The difference between cohorts in this case is rather essential - immigrants from the earliest entrance cohort have a higher probability to end an unemployment period by movement to unemployment pension.

Conclusions

The overall results of the research argue that 80.2% of immigrants realize transitions from unemployment to one of the forms of employment, namely to employment through employment services, employment in the general labor market or job-placement with a reduced working week. Therefore, the probability of transition from unemployment to employment in the general labor market has a growing tendency and achieves toward the end of the observation period the total-lot. This same tendency is peculiar to transitions from unemployment to LM training or to unemployment pension.

The socio-demographic characteristics of immigrants become apparent in a different way depending on a status to which a transition is realized. A factor of education appears in an unexpected way, because this factor becomes a decisive one for the more educated groups of immigrants when realizing transitions from unemployment to self-employment, LM training, or to economic inactivity. A factor of higher education, in that way, admittedly becomes a reason for stagnation of transitions from unemployment and contributes to longer periods in unemployment. However, on the other hand, a factor of belonging to a later birth cohort undoubtedly becomes apparent as a motivational power for transitions from unemployment, because it contributes to more intensive employment in the general labor market, self-employment, or competing unemployment for unknown reasons (that can indirectly testify to job-placement). Finally, a factor of belonging to an entrance cohort in many respects becomes a factor predetermining intensity of transitions. Along with a factor of belonging to a birth

cohort, this factor contributed to more intensive job-placement through employment services, job-placement with a reduced working week, or completion of unemployment for unknown reasons.

Modeling and predicting transitions from unemployment to statuses of employment based on the discrete-time analysis confirms a hypothesis about the statistical regularity of job-placement processes for immigrants. For example, if a period of unemployment is completed and transitions to such statuses as “job-placement through employment services” or “job-placement on reduced working week” are equally time-directed, a transition from unemployment to regular employment admittedly occurs later and has a longer time to be realized, which testifies to its complicated character as well.

In this context, the socio-demographic characteristics of immigrants are also developed differently. A factor of gender is weakly apparent in a case of employment through employment services, whereas in other cases, equality between genders in the process of job-placement is evident. Secondly, a factor of education also develops differently depending on the form of job-placement for immigrants. If, during the process of employment through employment services, a factor of education does not admittedly have a meaning of principle, during the process of employment in the general labor market a tendency for more effective job-placement among immigrants having secondary education is obvious. On the other hand, during the process of job-placement with a reduced working week, a factor of higher education, in contrast, is more ponderable.

Along with statuses, implying job-placement in one of forms, less intensive transitions from unemployment to other statuses are apparent. In the case in question, it is difficult to reveal a pattern of relationships between transitions and periods, as well as a probability of transition to a status. At that, the gender characteristics of groups of immigrants influence realization of transitions from unemployment to other statuses. Side by side with transitions to employment's statuses, transitions to other statuses are also influenced by different factors of education. If transitions from unemployment to LM training are similar, independent of initial level of education, the probability of a transition to economic inactivity is higher for immigrants having higher education. Finally, immigrants with secondary education potentially realize more transitions to unemployment pension. A factor of belonging to a birth cohort or an entrance cohort becomes apparent in a different way; therefore, it is difficult to reveal a statistical regularity.

5.4 Integrative capacity of labor market training

Labor market training serves as one of the most important mechanisms of integration for immigrants into working life. However, on the other hand, the efficiency of placing immigrants in jobs after their completion of labor market training remains an openly debatable topic. The results of various researches verify that, after completion of the LM training, more than half of unemployed people remain in the same status of unemployment, whereas only a fourth found a job in the general labor market. At that, the probability of staying in a previous status of unemployment in a case of interrupted training is even higher, while the probability to be employed in the labor market is comparatively lower. The research question of this part asks what significance does continuity of labor market training have for the labor market integration of unemployed immigrants in Finland? The aim of this chapter is to focus on the completed and interrupted periods of labor market training, as well as to analyze the reasons according to which immigrants interrupt training. Based on the research aim, only immigrants who obtained a right to participate in labor market training programs initiated by the Employment Services of Finland have been chosen for the present research from the URA-database. The data contains information about immigrants who participated in labor market training during the period 1992-2014.

5.4.1 Intensity of participation in labor market training

Labor market training remains one of the most important indicators of the integrative capacity of a labor market. Even though overall tendencies show that, after completion of LM training, more than half of the unemployed people remain in the same status of unemployment, a fourth of the unemployed population find a job in the general labor market. One should also remember that the probability of staying in a previous status of unemployment in the case of interrupted training is even higher, as well as the probability to be employed in the labor market is comparatively lower (Tuomala, 2002). However, despite the overall tendencies, the integrative capacity of labor market training has hypothetically played a significant role in the job-placement of immigrants, even though immigrants have two to three labor market training periods when in an official status of unemployment. It is interesting, that, in many cases, those immigrants who take part in and complete labor market training later realized transitions to one of the forms of employment (Table 12).

Table 12. Numbers of labor market training periods with regard to completed unemployment periods (URA-database, N=3416 LM training periods as calculated for 1325 immigrants)

	Status_00 "Empl. services"	Status_01 "Empl. in the LM"	Status_02 "Reduced work. week"	Status_03 "Job-placed itself"	Status_04 "In LM training"	Status_05 "Outside the LM"	Status_06 "Another reason"	Status_07 "Unempl. pension"	Total
0 "Completed LMT"	643	734	1,008	28	72	68	53	276	2,882
1 "Interrupted LMT: new qual."	8	12	9	0	1	0	0	4	34
2 "Interrupted LMT: job-plac. an. qual."	16	22	16	1	1	1	1	9	67
3 "Interrupted LMT: an. LM tr. started"	20	17	26	2	0	0	1	7	73
4 "Interrupted LMT: health problems"	12	4	20	1	0	0	1	3	41
5 "Interrupted LMT: personal reasons"	19	11	32	0	1	1	7	12	83
6 "Interrupted LMT: refusal"	8	14	24	0	2	1	1	4	54
7 "Interrupted LMT: other reasons"	8	17	31	1	3	0	2	6	68
8 "Interrupted LMT: excl., non-att."	13	12	23	2	4	0	0	6	60
9 "Interrupted LMT: excl., ot. reason"	2	1	1	0	0	0	0	0	4
10 "Completed LMT and final exam"	11	9	24	0	1	1	1	3	50
Total	760	853	1,214	35	85	72	67	330	3,416

Continuing the argumentation about the recurrence of LM training periods, the significance of labor market training periods can be considered from two points of view. On the one hand, each LM training period represents an event in the overall chain of episodes, while, on the other hand, it can be understood also as a single event taken separately. Taking into account the analysis of labor market training periods as one of the episodes in the overall chain of LM training periods, and based on a duration analysis of the time taken to complete the labor market training, the analysis includes 4,091 observations (completed LM training periods). The same variables used for the count-time analysis include 1,460 people instead of the previous 4,091 LM training periods (failures) for the period 1992-2014 (see Tables 1, 2, and 3 in Appendix 8.4). Following the hypothesis about the influence of the fragmented labor market upon specificity of participation in labor market training, further analysis includes a full description of survival times as concerning basic explanatory factors, and "time" when labor market training periods end (Table 13).

Table 13. Basic characteristics of the model for the count-time analysis with regard to basic variables (URA-database, N=4091 LM training periods for variables "Gender" and "Birth cohort", N=3840 LM training periods for variables "Education" and "Entrance cohort", period 1992-2014)

	time at risk	incidence rate	no. of subjects	Survival time		
				25%	50%	75%
Total (for "Gender" and "Birth cohort")	74788	.054	4091	8	15	25
Total (for "Education" and "Entrance cohort")	72455	.052	3840	9	16	25
Gender						
male	31659	.057	1818	8	14	24
female	43129	.052	2273	9	16	26
Education						
Primary education	4705	.047	222	9	16	33
Lower secondary	9492	.059	563	8	14	25
Upper secondary	30552	.050	1548	9	16	27
Short-cycle tertiary	8034	.051	417	10	17	25
Bachelor or equivalent	5042	.063	320	7	13	23
Master or equivalent	7966	.046	369	10	17	27
Doctoral or equivalent	223	.076	17	9	15	16
Not elsewhere classified	6441	.059	384	9	16	23
Birth cohort						
1935-1946	2825	.081	229	5	9	18
1947-1956	13796	.056	780	10	15	24
1957-1966	28604	.049	1404	10	17	26
1967-1976	22581	.057	1290	8	14	25
1977-1986	6982	.055	388	6	13	25
Entrance cohort						
1952-1961	859	.059	51	6	13	22
1962-1971	3619	.061	224	9	14	20
1972-1981	12051	.049	593	12	19	27
1982-1991	16961	.054	928	8	16	24
1992-2001	26113	.057	1494	8	14	23
2002-2014	12852	.042	550	13	23	33

Analysis of the influence of basic explanatory variables shows that, with regards to the gender of immigrants, the time at risk, or continuity of LM training period is slightly longer for women than for men. Secondly, relative to a factor of education, the research results report that the time at risk differs depending on the educational level of immigrants. Likewise, incidence rates are different for all the eight educational groups. Thirdly, analysis of birth cohorts and survival-time indicates that the time at risk is longer for the cohorts "1947-1956" and "1957-1966". Finally, analysis of belonging to an entrance cohort shows that those immigrants who belong to the entrance cohorts "1972-1981" and "2002-2014" have longer periods of LM training.

The results of the descriptive analysis of the database for this empirical part reveal that there is a slight differentiation between groups of immigrants regarding time of completion of labor market training. Consequently, and hypothetically, a number of failures (LM training periods) do not change significantly depending on age, education, birth-, and entrance cohort. However, taking into account an assumption that events occur independently and at a constant rate, then the counts of events over a given period follow a Poisson distribution. For the regression above, the event count is specified both as a number of failures, or “LM training periods”, and as the dependent variable. On the other hand, “gender”, “education”, “birth cohort”, and “entrance cohort” are considered as independent variables. The Poisson exposure variable is “counttime”, which is the cumulative number of months for each person examined separately in each category of “gender”, “education”, “birth cohort” and “entrance cohort” (Table 14).

Table 14. Poisson regression model with regard to influence of gender, education, birth cohort and entrance cohort (URA-database, N=1460 unemployed immigrants completing LM training periods, period 1992-2014)

	Model 1	Model 2	Model 3	Model 4
gender	0.89*	0.88*	0.88*	0.88*
education		1.00	1.00	1.00
birth cohort			0.99	1.01
entrance cohort				0.95
_cons	0.10***	0.09***	0.09***	0.11***
Log likelihood	-2086.31	-1879.64	-1879.61	-1878.49
Pseudo R ²	0.0011	0.0012	0.0013	0.0019
ns – no significance, *P < 0.05, ** P < 0.01, *** P < 0.001				

As in the case of the analysis of unemployment periods, a similar model is applied to an analysis of labor market training periods. Thus, the first model is based on one dependent variable (number of failures of “labor market training”) and one the predictor-variables, “gender”. According to the incidence rate ratio, the numbers of failures become 0.894 times lower (decreased by 10.6%) for women. As the ratio is statistically significant, the fit is not impressive; the Pseudo R² is 0.0011. Comparatively, in the second model, the “education”-variable is included into the model as a second predictor. However the Prob>chi2 is greater than 0.05 (0.0960). In the third model, the third predictor variable, “birth cohort”, is included into the analysis. As in previous case, here the Prob>chi2 (0.1920) is greater than 0.05 indicating that one cannot reject the null hypothesis and so there is constant variance.

Finally, in the fourth model, the fourth predictor variable is the “entrance cohort”. Comparatively to the second model, the Prob>chi2 is greater than 0.05 (0.1369). According to the incidence rate ratio for the variable “birth cohort”, the number of failures becomes 1.018 times higher (increased by 1.8%) with each birth cohort, meaning that the younger unemployed immigrants are, than more LM training periods they have. On the other hand, according to the incidence rate ratio for the variable “entrance cohort”, the number of failures becomes 0.959 times lower (decreased by 4.1%) with each entrance cohort. This means that the later a period of LM training occurs, the less LM training periods unemployed immigrants have. As these ratios are statistically insignificant, the fit is not impressive. For all four models, the final goodness-of-fit test results indicate that the models’ predictions are not significantly different from the actual counts – another sign that each model fits well. However, the Prob>chi2 for the 2nd, 3rd, and 4th models is greater than 0.05, which indicates that one cannot reject the null hypothesis, so there is constant variance. Thus, the conclusion is that not one of the explanatory factors potentially affects a number of labor market training periods.

5.4.2 LM training period: outcome in a context

Taking into account the assumption that, theoretically, a labor market training period is a single event, the significance of continuity of a labor market training period can have supreme importance for a later transition from LM training, and from unemployment in general. As in the case of the subchapter 5.3, the time for completion of labor market training periods is analyzed from the position of decomposition of the groups on the four categorical variables (“gender”, “education”, “birth cohort” and “entrance cohort”) as applied to every “status” (or a reason why LM training period has ended) separately. The analysis includes then 4,091 labor market training periods and the overall time at risk amounts of 16,874 months (see Fig. 1, Tables 4 and 5 in Appendix 8.4).

According to Kaplan-Meier estimators, there appears to be a slight difference between the survivor functions of men and women as both genders move to one of the statuses at about a similar rate. The survival probabilities of transition to a status steeply decline during the first months after the LM training started as concerned with statuses 00 “Completed LMT”, and 10 “Completed LMT and final exam” (Fig. 2 and Table 6 in Appendix 8.4). The incidence rates for both genders appear to be almost similar (except for status 10). The Log-rank test for

equality of survivor functions finds a significant difference between men and women for statuses 06 “Interrupted LMT: refusal”, 07 “Interrupted LMT: other reasons”, and 08 “Interrupted LMT: excluded, non-attendance” ($Pr > \chi^2 = .0000$) (Table 7 in Appendix 8.4).

The factor of educational background gives less obvious distinctions for reasons for completion of labor market training than the “gender”-factors does. As the Kaplan-Meier estimator proves, the distributions of shares of unemployed immigrants by educational levels and reasons of completed LM training periods are rather diverse. There appears to be a difference between the survivor functions for various educational levels for statuses 08 “Interrupted LMT: excluded, non-attendance”, and 10 “Completed LMT and final exam.” Consequently, immigrants with various educational levels complete LM training periods at different rates. The survival probabilities of unemployed immigrants decline very steeply during the first months after beginning a LM training period only for the status 00 “Completed LMT” (Fig. 3 and Table 8 in Appendix 8.4). The log-rank test for equality of survivor functions finds a significant difference between immigrants with various educational levels in transition to the statuses 06 “Interrupted LMT: refusal”, 07 “Interrupted LMT: other reasons”, and 08 “Interrupted LMT: excluded, non-attendance” ($Pr > \chi^2 = .0000$) (Table 9 in Appendix 8.4).

In contrast to the previous two variables, belonging to a certain birth cohort is an essential factor regarding the time of completion of LM training periods. There appears to be difference between the survivor functions for various birth cohorts. All the birth cohorts complete LM training periods with a final exam at different rates. Likewise, the survival probabilities of unemployed immigrants decline very steeply during the first months after LM training periods begin for the statuses 00 “Completed LMT”, and 10 “Completed LMT and final exam” (Fig. 4 and Table 10 in Appendix 8.4). The incidence rates for all the birth cohorts appear to be different for status 10 and similar for status 00. The log-rank test for equality of survivor functions finds a significant difference between immigrants from various birth cohorts in transition to statuses 00 “Completed LMT”, 03 “Interrupted LMT: another LM training started”, 05 “Interrupted LMT: other personal reasons”, and 08 “Interrupted LMT: excluded, non-attendance” ($Pr > \chi^2 = .0000$) (Table 11 in Appendix 8.4).

Finally, analysis of the periods when an immigrant becomes unemployed for the first time (or belonging to an entrance cohort) allows for a conclusion regarding the same tendencies as in the case of belonging to a birth cohort. There

appears to be difference between the survivor functions for various entrance cohorts, because all the entrance cohorts move to one of the statuses at different rates. The survival probabilities of unemployed immigrants decline very steeply during the first months after a LM training period started for the statuses 00 “Completed LMT” and 10 “Completed LMT and final exam” (Fig. 5 and Table 12 in Appendix 8.4). The log-rank test for equality of survivor functions finds a significant difference between immigrants from various entrance cohorts in transition to statuses 07 “Interrupted LMT: other reasons” and 08 “Interrupted LMT: excluded, non-attendance” ($P > \chi^2 = .0000$) (Table 13 in Appendix 8.4).

Admittedly, the influence of the four explanatory variables does not have a single meaning when taking into account completion of labor market training or its interruption. As it concerns completion of labor market training, these factors turn out to be not as significant as in the case of interruption of labor market training. Hypothetically, “gender”, “education”, “birth cohort,” or “entrance cohort” differently affect the “offset” of labor market training. As in the case of behavior of unemployment, the Cox Proportional Hazard Models help to understand specificity of behavior in labor market training. The Cox regression analysis is based on the Breslow method for ties (Table 14 in Appendix 8.4).

Firstly, “gender”, as a factor of labor market training, obtains another significance in comparison to behavior in unemployment. In this case, “gender” hypothetically affects a situation of completion or interruption of labor market training periods. As long as the estimated hazard ratio is interpreted for the “gender” –variable with reference to two individuals, whose genders are a (male) and a+1 (female), the results of the analysis more clearly indicate that women are 5.8% more likely to complete LM training⁸. On the other hand, women are 10.7% more likely to complete LM training with a final exam compared to men⁹. Finally, over a short period, women are less likely to interrupt LM training for various reasons. Overall, as analysis shows, the difference between men and women is more obvious for “statuses” 00 “Completed LMT”, 02 “Interrupted LMT: job-placement matching another qualification”, 03 “Interrupted LMT: another LM training started”, 05 “Interrupted LMT: other personal reasons”, 06 “Interrupted LMT: refusal”, 07 “Interrupted LMT: other reasons”, and 08 “Interrupted LMT: excluded, non-attendance”.

Secondly, a factor of higher educational background of immigrants, in many respects, predetermines a situation of recurrent labor market training period rather

⁸ The ratio of respective hazards is 1.05 and it does not differ significantly from 1 ($p = .119$)

⁹ The ratio of respective hazards is 1.10, the ratio does not differ significantly from 1 ($p = .702$)

than a situation of job-placement as matched to a new or additional qualification. The estimated hazard ratio is interpreted for the “education” –variable with reference to two individuals, whose educational levels are a (early education), a+1 (primary education), a+2 (lower secondary education), etc. The results of analysis more clearly indicate that immigrants with higher level of education are 8.5% more likely to complete LM training with a final exam over a short period compared to immigrants with lower levels of education¹⁰. On the other hand, immigrants with a higher level of education more likely interrupt LM training and start another LM training, or interrupt LM training because of health problems or other personal reasons. In other cases, immigrants with a higher level of education are 6% less likely to interrupt LM training because of job-placement matching a new qualification (.93, p= .468), or are 10.2% less likely to interrupt LM training because of job-placement matching another qualification (.89, p= .085).

Thirdly, belonging to a birth cohort potentially affects a situation of quicker interruption of labor market training. The estimated hazard ratio is analyzed for the “birth cohort” –variable with reference to two individuals, whose birth cohorts are a (1935-1946), a+1 (1947-1956), a+2 (1957-1966), etc. The results of analysis more clearly indicate that immigrants from later birth cohorts are 7.3% less likely to complete LM training than immigrants from earlier birth cohorts do¹¹. On the other hand, immigrants from later birth cohorts are more likely to interrupt LM training according to various reasons.

Finally, a factor of an entrance cohort potentially predetermines a situation where immigrants interrupt labor market training in order to be placed in a job according to a new or additional qualification. The estimated hazard ratio is applied to the “entrance cohort” –variable with reference to two individuals, whose entrance cohorts are a (1952-1961), a+1 (1962-1971), and a+2 (1972-1981). The results more clearly indicate that immigrants from later entrance cohorts are 25.8% less likely to interrupt LM training because of job-placement matching a new qualification over a short period compared to immigrants from earlier entrance cohorts¹². On the other hand, immigrants from a later entrance cohort are 15.4% less likely to interrupt LM training because of job-placement matching another qualification (.84, p= .217). Finally, immigrants from later entrance cohorts are more likely to interrupt LM training and start another LM

¹⁰ The ratio of respective hazards is 1.08, the ratio does not differ significantly from 1 (p= .196)

¹¹ The ratio of respective hazards is .92, the ratio differs significantly from 1 (p= .000)

¹² The ratio of respective hazards is .74, the ratio does not differ significantly from 1 (p= .110)

training, or interrupt LM training because of health problems or other personal reasons.

Research results verify both the differentiation of reasons according to which labor market training ends and a mechanism of fragmentation of the work force regarding gender, education, birth-, or entrance cohort. Allowing for the assumption of the existence of theoretical distribution, without and influence of the above-mentioned factors, the results of the exponential regression analysis are based on the log relative-hazard form (Table 15 in Appendix 8.4). Analysis of the distributions as applied to various statuses shows that with regards to the statuses “Completed LM training”, “Interrupted LMT because of job-placement matching new qualification”, and “Interrupted LMT because of job-placement matching another qualification”, the hazard ratios estimated by this exponential regression do not greatly differ from their counterparts in the earlier Cox regression. The similarity reflects the degree of correspondence between empirical hazard function and the constant hazard implied by an exponential distribution. On the other hand, the similarity between the results of the Cox regression and exponential regression is obvious also for other statuses, concerning the interruption of LM training (Table 15).

As it concerns the status “Completed LM training and final exam”, ratios differ significantly. For example, according to this exponential model, the hazard ratio decreases by about 2.7% depending on gender (Cox – increases by 10.7%). The last circumstance implies that, in fact, the influence of gender on reasons why LM training ends is higher than would be expected based on the theoretical distribution. On the other hand, the hazard ratio increases by about 48.3% depending on belonging to a birth cohort (Cox – 29.4%) and decreases by about 23.2% depending on an entrance cohort (Cox – 11.2%). These results imply that belonging to a birth cohort or to an entrance cohort would have a greater significance theoretically, than it is in reality.

Comparatively, the results of the Weibull regression analysis are based on the log relative-hazard form (Table 16 in Appendix 8.4). The general results of the analysis indicate that, with regards to the statuses 05 “Interrupted LMT: other personal reasons”, 06 “Interrupted LMT: refusal”, 07 “Interrupted LMT: other reasons”, and 09 “Interrupted LMT: excluded, other reason”, there are essential reason to reject the exponential model ($p < 1$), because p does not correspondent to an exponential model.

Table 15. Hazard ratios with regard to Cox, Exponential, and Weibull Model Estimates of Proportional Hazards (URA–database, N=4091 LM training periods, period 1992-2014)

Status	_t	Cox	Exponential	Weibull
00_ Completed LMT	Gender	1.06	1.06	1.08
	Education	1.00	1.00	0.99
	Birth cohort	0.93	0.93	0.90
	Entrance cohort	1.02	1.02	1.03
01_ Interrupted LMT: job-placement matching new qual.	Gender	0.52	0.51	0.51
	Education	0.94	0.94	0.94
	Birth cohort	1.27	1.29	1.28
	Entrance cohort	0.74	0.74	0.74
02_ Interrupted LMT: job-plac. –another qualification	Gender	0.73	0.73	0.73
	Education	0.90	0.89	0.89
	Birth cohort	1.44	1.42	1.42
	Entrance cohort	0.85	0.85	0.85
03_ Interrupted LMT: another LM training started	Gender	0.99	1.00	1.00
	Education	1.08	1.08	1.08
	Birth cohort	1.43	1.41	1.41
	Entrance cohort	1.21	1.22	1.23
04_ Interrupted LMT: health problems	Gender	0.82	0.82	0.82
	Education	1.03	1.03	1.03
	Birth cohort	1.00	0.99	0.99
	Entrance cohort	1.15	1.16	1.16
05_ Interrupted LMT: other personal reasons	Gender	1.18	1.19	1.19
	Education	1.02	1.02	1.02
	Birth cohort	1.26	1.25	1.25
	Entrance cohort	1.24	1.25	1.25
06_ Interrupted LMT: refusal	Gender	0.52	0.50	0.50
	Education	0.80	0.78	0.79
	Birth cohort	1.16	1.15	1.16
	Entrance cohort	0.98	0.98	0.98
07_ Interrupted LMT: other reasons	Gender	0.33	0.33	0.33
	Education	1.10	1.11	1.11
	Birth cohort	1.29	1.27	1.28
	Entrance cohort	1.55	1.56	1.56
08_ Interrupted LMT: excluded, non-attendance	Gender	0.26	0.26	0.26
	Education	0.85	0.84	0.84
	Birth cohort	1.48	1.47	1.46
	Entrance cohort	0.85	0.85	0.85
09_ Interrupted LMT: excluded, other reasons	Gender	0.20	0.20	0.20
	Education	1.27	1.26	1.27
	Birth cohort	1.36	1.33	1.33
	Entrance cohort	0.54	0.55	0.55
10_ Completed LMT and final exam	Gender	1.11	0.97	1.04
	Education	1.08	1.08	1.09
	Birth cohort	1.29	1.48	1.30
	Entrance cohort	0.89	0.77	0.87

The other seven statuses represents a more optimistic situation when $p=1$ or $p>1$. As it concerns the status 10 “Completed LMT and final exam”, there is a

95% CI for p ranges from 2.65 to 3.35. The same tendencies are peculiar for the status 00 “Completed LMT” (a CI ranges from 1.37 to 1.44), status 01 “Interrupted LMT: job-placement matching new qualification” (a CI ranges from .87 to 1.45), and status 02 “Interrupted LMT: job-placement matching another qualification” (a CI ranges from .86 to 1.25). For the three remaining statuses (03 “Interrupted LMT: another LM training started”, 04 “Interrupted LMT: health problems”, and 08 “Interrupted LMT: excluded, non-attendance”), p is also exceeds 1. Therefore, there is no reason to reject the exponential model, because $p > 1$ and means that the hazard increases with time. Two tendencies become obvious when considering the results of the Weibull regression. On the one hand, the tendency of for completing LM training with or without a final exam and the interruption of LM training because of job-placement matching a new or additional qualification have a stable character, and are not conditioned by the influence of external characters. On the other hand, interruption of LM training according to reasons not implying job-placement is hypothetically, and strongly, conditioned by the influence of external factors.

5.4.3 LM training period as a predicted single event

Assuming that labor market training represents a single event, without reference to any other periods in the overall chain of LM training periods, this part of the analysis considers only the continuity of a period from the point of view of a single “time”-dimension. In this case, firstly, those periods, which have been completed, are taken into account as an example of an ended event. Overall, the results of the discrete-time analysis, as it concerns the statuses 00 “Completed LM training” and 10 “Completed LMT with final exam”, clearly indicate that the cumulative failure achieves almost 100% for the first as for the second statuses (Tables 17 and 27 in Appendix 8.4). The only difference is that for the status 00 “Completed LM training”, the estimated hazard reaches a maximum for the first time in the interval “6-7 months” and then declines, reaching a maximum for the second time in the interval “10-11 months”. On the other hand, the hazard for the status 10 “Completed LMT and final exam” slightly changes during first 12-13 months of the observation period. Consequently, the time for completion of a LM training program with a final exam is longer and fluctuates during the first year.

Analysis of the transitions to statuses concerning completion of LM training (statuses 00 “Completed LM training” and 10 “Completed LMT with final exam”) from the positions of influence of the “gender”-factor proves that

completion of LM training (status 00) occurs with the same probability for men as for women. On the other hand, concerning the completion of LM training with a final exam (status 10), the analysis confirms that the cumulative failure for women is slightly lower than it is for men. Typically, statuses 00 and 10 differ from each other on the factor of education as well. As it concerns the completion of LM training without the final exam (status 00), the cumulative failure achieves almost 100% for all educational groups. On the contrary, completion of LM training with a final exam differs mostly for the three educational levels “lower secondary education”, “upper secondary education”, and “bachelor, or equivalent”.

On the other hand, as it concerns completion of LM training without the final exam (status 00), the cumulative failure achieves almost 100% for all birth cohorts. On the other hand, completion of LM training with a final exam (status 10) is more peculiar to the three birth cohorts “1947-1956”, “1957-1966”, and “1967-1976”, whereas two marginal cohorts either have small cumulative failures or failure is even absent (for the cohort “1935-1946”, for example). Finally, a factor of belonging to an entrance cohort is admittedly essential in transition to this or that status in the labor market. As analysis shows, all the entrance cohorts have the maximum, almost 100%, cumulative failure of completion of LM training program (status 00). On the contrary, if the LM training program is completed by a final exam, three entrance cohorts are the most frequent ones. They are “1962-1971”, “1972-1981”, and “1982-1991”.

On the other hand, if the LM training is interrupted due to a reason of job-placement, the estimated hazard to realize transition to another status is very small (Tables 18 and 19 in Appendix 8.4). Thus, the estimated hazard for the status 01 “Interrupted LMT: job-placement matching new qualification” slightly changes during the first 16 months of the observation period; after that, it instantly decreases to zero. On the other hand, the estimated hazard for the status 02 “Interrupted LMT: job-placement matching another qualification” slightly changes during first 9-10 months of the observation period; after that, it instantly decreases to zero.

If LM training is interrupted due to job-placement, differences in gender structures of groups of immigrants are more essential than in other cases. On the one hand, if immigrants find a job matching a new qualification (status 01), the cumulative failure for men is 6.8%, whereas for women it is only 2.9%. The same tendency is obvious, however, when immigrants find a job matching another qualification (status 02). The cumulative failure for men then achieves 7.3%,

whereas for women – 2.4%. Consequently, the probability to find a job for men is obviously higher than it is for women. Essentially, as it concerns the interruption of LM training due to a reason of job-placement matching a new qualification (status 01), the factor of education seems to have a meaning only for the two educational levels “lower secondary education” and “upper secondary education”. Comparatively, as it concerns job-placement matching another qualification, the dispersion of educational levels is wider. In this case, lower and higher educational levels are both frequent.

Taking into account factors of birth- and entrance cohorts, transitions from LM training by reason of job-placement matching a new qualification occurs with a higher probability for the two birth cohorts “1947-1956” (the cumulative failure is 8.3%) and “1967-1976” (5.6%). If transitions and job-placement match another qualification, the probability is higher for such birth cohorts as “1967-1976” and “1977-1986”. In case a LM training program is interrupted by reason of job-placement matching a new qualification (status 01), the analysis shows the tendency of the prevalence of two entrance cohorts (“1972-1981” and “1982-1991”). A similar tendency can be observed for transitions to job-placement matching another qualification. Three entrance cohorts prevail in this case (“1972-1981”, “1982-1991” and “1992-2001”).

Parallel to interruption of LM training by reason of job-placement, the next issue concerns the interruption of LM training due to other reasons¹³. In this case, the estimated hazard to leave LM training and to start another training program (status 03) is higher and occurs already during the first 6-7 months of the observation period (the cumulative failure comes to 10.2%) (Table 20 in Appendix 8.4). As it concerns other statuses, the estimated hazard slightly changes during first 8-11 months of the observation period, and after that, it instantly decreases to zero. Toward the end of the observation period (37-38 months), the cumulative failure comes to 2.2 – 5% (Tables 21, 22, 23, 24 in Appendix 8.4).

Analysis of influence of gender on transitions from LM training occurs according to one of obvious tendencies. In one case, the hazard to interrupt LM training by reason of beginning another LM training (status 03), refusal (status 06), or other reasons (status 07) is obviously higher for women than it is for men. For example, the cumulative failure for men to interrupt LM training and start

¹³ Statuses 03 “Interrupted LMT: another LM training started”, 04 “Interrupted LMT: health problems”, 05 “Interrupted LMT: other personal reasons”, 06 “Interrupted LMT: refusal” and 07 “Interrupted LMT: other reasons”.

another LM training comes to 6.8% for men and 11.8% for women. As it concerns statuses 06 and 07 (refusal or other reasons), the cumulative failure for women is even lower. On the other hand, as it concerns the statuses 04 and 05, the cumulative failure for women is higher than it is for men. If LM training is interrupted by reason of starting another training program (status 03), the factor of education is rather obvious. Thus, groups of immigrants with “short-cycle tertiary education” or “doctoral or equivalent” -degree have higher cumulative failure. In the case of transitions to other statuses, the factor of education is not so obvious, even though the educational level “lower secondary education” is the most frequent one.

On the other hand, in the case that LM training is interrupted by reason of starting another training program (status 03), the probability to realize a transition is hypothetically higher for the three later birth cohorts. They are “1957-1966”, “1967-1976”, and “1977-1986”. As it concerns the other four statuses, it is difficult to distinguish a certain tendency in belonging to cohorts and transitions. However, the most recent birth cohort (“1977-1986”) is found in all four cases with different significance. If a LM training program is interrupted because of starting another LM training (status 03), it is obvious that the three latest entrance cohorts remain in a situation of “risk” with a higher probability (“1982-1991”, “1992-2001” and “2002-2014”). The two earlier entrance cohorts are absent in this case (“1952-1961” and “1962-1971”). Significantly, interruption of LM training by other reasons is also typical for the two latest entrance cohorts (“1992-2001” and “2002-2014”).

Finally, the estimated hazard for the statuses concerning interruption of LM training because of exclusion essentially differs depending on reason. For example, the estimated hazard for the status 08 “Interrupted LMT: excluded, non-attendance” slightly changes during first 14-15 months of the observation period. The cumulative failure comes to 5.4% at the end of the observation period (Table 25 in Appendix 8.4). On the contrary, the estimated hazard for the status 09 “Interrupted LMT: excluded, other reason” slightly changes during first 2-3 months of the observation period; after that, it instantly decreases to zero. The cumulative failure comes to 0.1% at the end of the observation period (Table 26 in Appendix 8.4).

The analysis of influence of gender on transitions from LM training by reason of exclusion (non-attendance or other reasons) shows that for both men and women, the cumulative failure remains almost the same. On the other hand, the cumulative failure for the status 09 is almost zero for both men and women. As it

concerns transitions from LM training by reason of exclusion (non-attendance, status 08), two educational levels are the most frequent (“short-cycle tertiary education” and “lower secondary education”). If exclusion from LM training program occurs for other reasons, the cumulative failure for the majority of educational groups is almost zero. Such groups as “primary education”, “lower secondary education”, “doctoral or equivalent”, and “not elsewhere classified” are absent.

On the other hand, as it concerns interruption of LM training program by reason of exclusion (non-attendance, status 08), three birth cohorts are the most frequent ones in this case. They are “1957-1966”, “1967-1976”, and “1977-1986”. On the contrary, exclusion from a LM training program for other reasons occurs rarely; the cumulative failures are available for the birth cohorts “1947-1956”, “1957-1966”, and “1967-1976”. The two other cohorts (“1935-1946” and “1977-1986”) are absent. Finally, if transition to another status occurs due to exclusion from LM training by reason of non-attendance (status 08), two entrance cohorts are the most frequent ones in this case (“1982-1991” and “1992-2001”). As it concerns exclusion from LM training programs for other reasons, only two entrance cohorts “1972-1981” and “1982-1991” are the most frequent.

Conclusions

Labor market training is one of the most important mechanisms of adaptation and integration for immigrants into the labor market. The results of the analysis show that 85% of LM training periods are completed ones. At that, the socio-demographic characteristics of immigrants do not potentially contribute to more or, in contrast, less intensive participation in labor market training, as well as do not have influence upon the number of the labor market training periods.

On the other hand, a more detailed analysis of periods of labor market training and “transitions” to other statuses, as well as completion of labor market training or interruption because of job-placement or beginning new training, confirms that gender and educational level of immigrants, birth cohort, or time of first unemployment in Finland essentially differ from each other. It is obvious that secondary education potentially implies even faster adaptation of immigrants into the labor market. This is because immigrants with a lower level of education, hypothetically, more effectively complete labor market training in the form of longer programs, implying final attestation; they potentially more often interrupt labor market training because of job-placement matching a new qualification. On the other hand, immigrants with a higher level of education, hypothetically, more

quickly interrupt labor market training with the aim of starting new training programs.

Labor market training represents an important institution of integration into the labor market based on equal participation in it by immigrants, independent of their initial educational background, gender, belonging to a birth cohort, or previous experience in unemployment. However, a situation of completion or interruption of labor market training still remains a consequence of the influence of socio-demographic features of immigrants. Likewise, their situation is potentially conditioned by the period of economic and political development of Finland in which immigrants retrain and obtain new qualification.

5.5 Full integration vs. reduced integration

Exclusionary positions in the labor market and unsuccessful inclusion into working life more frequently turn out to be significant factors for the growing marginalization of immigrants. Based on the experience of other countries, one can conclude that a failure to address the integration of immigrants in the short to medium term will lead to social marginalization, and even ghettoization and exclusion in the medium to long term. Even though the State tolerates the presence of immigrants as a potentially necessary work force, it does little to welcome them into society or provide for their integration (Governance, the Third Sector and New Migrants: a comparative study 2005). The main research question of this part is what are the typical trajectories of labor market integration for unemployed immigrants in Finland? This study tries to find an answer to this question by means of analyzing unemployment periods and transitions from unemployment to other statuses in the labor market. In this subchapter, I focus on characterization and summarization of longitudinal characteristics of individual sequences during the process of labor market integration of initially unemployed immigrants in Finland, by means of applying sequence analysis. Like subchapters 5.3 and 5.4, this research is based on the data on unemployed immigrants chosen from the URA-database and including 2,701 persons and 29,257 observations for the period 1952 to 2014.

5.5.1 Uniqueness of sequences

The sequence analysis was based on an analysis of unemployment periods, which were completed according to one of eight reasons: employed through employment services, employed in the general labor market, job-placement on reduced working week, self-employment, labor market training, outside the labor force (economic inactivity), another reason, and unemployment pension. The variable “Year of unemployment period” was used as the “order” –variable (delta – 1 year). Four additional variables (“gender”, “education”, “birth cohort” and “entrance cohort”) were used in the quality of explanatory variables (see Table 1 in Appendix 8.5). The “Optimal Matching” algorithm, which standardizes the distances by dividing each distance by the length of the longest sequence in the dataset, is traditionally the basic method used for carrying out a sequence analysis. The “Levenshtein distance” used for these aims allows free specification of “Indel” and “substitution” cost, as well as different kinds of standardizations¹⁴. Further, carrying out the full OM analysis allows for getting a full-substitution cost matrix, which is defined with standard matrix commands. Based on the base of the Needleman-Wunsch algorithm, the full OM analysis requests every possible comparison to be calculated. However, in order to reduce this enormous work, the full OM analysis performs calculations for only 2,317 different sequences.

Looking at the differentiation of sequences, one can consider to what extent concentration of sequences is an evidence of their uniqueness or similarity. In sequence analysis, concentration of sequences produces a descriptive overview of the sequences in the dataset. More specifically, it shows the number of elements observable over all sequences, the maximum length of the sequences, the number of possible sequences that might be formed with k elements of length of the sequences, the number of different sequences in the dataset, and the number of sequences that are shared by a certain number of persons. In the limiting case, when all observed sequences are unique (or “no concentration”), the division of the number of different sequences by the number of observed sequences would be equal to 1, whereby this number would converge to 0 when all observed sequences were equal (“high concentration”) (Brzinsky-Fay et al., 2006, p.440).

Overall, among the 2,701 observed sequences, there are 2,317 different sequences (the measure of concentration comes to 0.85) and, in total 2,180 of the 2,317 observed sequences are unique ones (shared by one person) (Table 2 in

¹⁴ The default parameters are k=0, indel=1, substitution cost=2, reference sequence is not used.

Appendix 8.5). Analysis of the concentration of sequences from the positions of the same order of elements in a sequence (without ranking) shows that the measure of concentration comes to 0.72. In total, 456 of the 630 observed productive types of sequences are unique (shared by one person) (Table 3 in Appendix 8.5). On the other hand, analysis of a sequences' concentration from the positions of the same elements in a sequence (without ranking) shows that the measure of concentration comes to 0.27. In total, 37 of the 136 observed producible types of sequences are unique (shared by one person) (Table 4 in Appendix 8.5).

Looking at the structure of sequences from the positions of their frequencies, orders, and lengths of elements in sequences, sequences are rather multifarious and, likewise, a share of “common” sequences (or repeated frequently) is rather small. Thus, the sequence containing the element designed as “reduced working week” (code 2, continuity – 1 year) is the most frequent sequence in the dataset, followed by a sequence containing the element “employment services” (code 0, continuity – 2 years). In other words, only 3.2% of immigrants spent 1 year in unemployment and then move to reduced working time regime, as well as only 2.5% of immigrants after two years in unemployment are job-placed through employment policy measures (Table 16). As it is seen, a uniqueness of experience of unemployment is even, in this case, evident.

Table 16. Frequency tables of sequences (sequence-pattern) (URA-database, N=2701 sequences, period 1952-2014)

Frequency tables of sequences Sequence-Pattern	Freq.	Percent	Cum.
2	87	3.22	3.22
0:2	69	2.55	5.78
0	57	2.11	7.89
2:2	54	2.00	9.89
2:3	52	1.93	11.81
2:4	38	1.41	13.22
0:3	26	0.96	14.18
1:2	24	0.89	15.07
(output omitted)			
7:9 4:2 1 7 1:5 7:17	1	0.04	99.96
7:9 6:4 4:2	1	0.04	100.00
Total	2,701	100.00	

It is significant that there are many sequences that are observed only once, which are indeed “unique” sequences. In order to see what typical sequences are, I choose only the 30 most frequent sequences for description (Fig. 18).

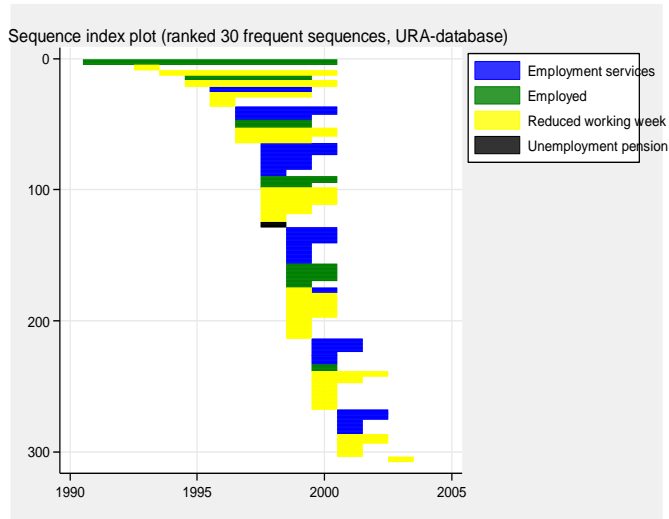


Figure 18. Sequence index plot representing 30 frequent sequences ranked (URA–database, $N=307$, period 1990-2005)

Consequently, among the most frequent sequences, transitions from unemployment to one of the three “statuses” (“employment through employment services”, “employment in the general labor market” and “reduced working week”) prevail. In that case, only 11.3% of immigrants repeat the same frequent sequences (307 observations in this category) (Table 17).

Table 17. 30 most frequent sequences (sequence-pattern) (URA–database, $N=307$ sequences, period 1952-2014)

30 most freq. Sequence-Pattern	Freq.	Percent	Cum.
2	67	21.82	21.82
0	42	13.68	35.50
0:2	41	13.36	48.86
2:2	38	12.38	61.24
2:3	22	7.17	68.40
1:2	17	5.54	73.94
0:3	13	4.23	78.18
1:3	11	3.58	81.76
(output omitted)	4	1.30	94.79
7	4	1.30	100.00
Total	307	100.00	

Even though the sequences are mostly unique ones, a share of sequences having the same order of elements is rather large (Fig. 19).

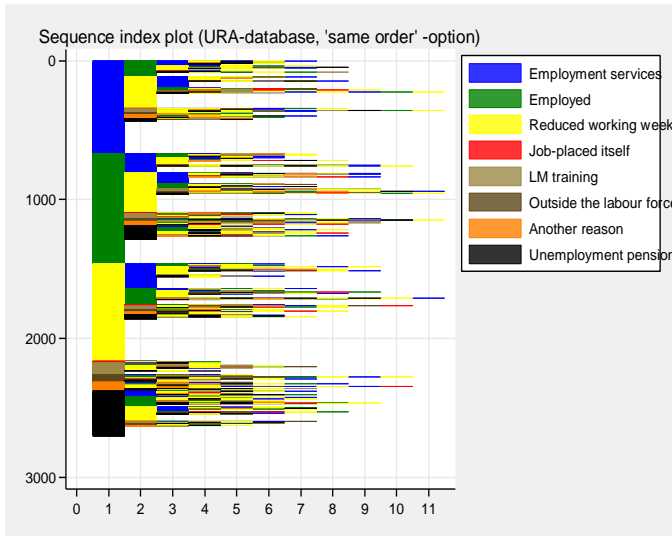


Figure 19. Sequence index plot representing sequences as sorted by same order of labor market statuses (URA-database, N=2701, period 1952-2014)

Thus, all the sequences that have the same order of elements are collapsed together and are ranked as the 30 most frequent sequences. A more detailed analysis of sequences proves that 63.7% of unemployed immigrants have the same frequent order of elements in sequences. Therefore, among those unemployed immigrants who share the same order of elements, a majority, after one year in unemployment, finds employment on a reduced working week (17.7%), employment through employment services (13.7%), or employment in the general labor market (10.4%) (Table 18).

Table 18. 30 most frequent sequences (sequence-order) (URA-database, N=1721 sequences, period 1952-2014)

SO, 30 freq. Sequence-Order	Freq.	Percent	Cum.
2	305	17.72	17.72
0	236	13.71	31.44
1	179	10.40	41.84
1 2	133	7.73	49.56
0 2	109	6.33	55.90
2 0	87	5.06	60.95
7	70	4.07	65.02
(output omitted)			
2 4	11	0.64	100.00
Total	1,721	100.00	

On the other hand, all the sequence considered as identical if they consist of the same elements (Fig. 20).

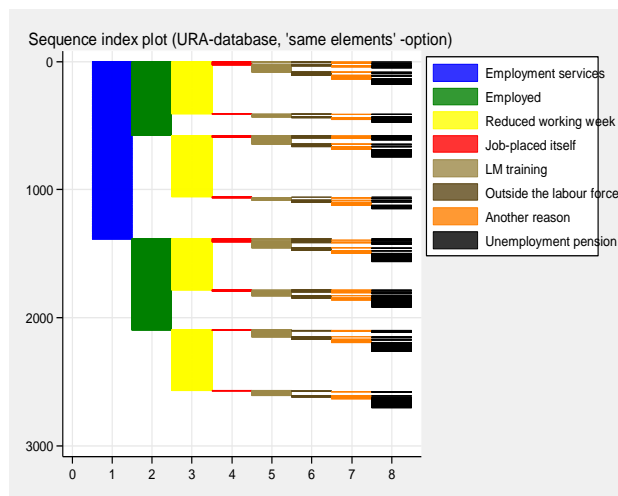


Figure 20. Sequence index plot representing sequences as sorted by same elements (labor market statuses) (URA-database, N=2701, period 1952-2014)

These sequences are collapsed together and ranked as the 30 most frequent sequences. Significantly, 86.4% of unemployed immigrants have the same frequent elements in sequences. Consequently, among those unemployed immigrants, a majority has two elements in a sequence at a run (“employed through employment services” – 1 year and “reduced working week” – 1 year, 13.4%), or just one of them (“reduced working week”, 1 year, 13%, or “employed through employment services”, 1 year, 10.1%) (Table 19).

Table 19. 30 most frequent sequences (sequence-elements) (URA-database, N=2335 sequences, period 1952-2014)

SE, 30 freq. Sequence-Elements	Freq.	Percent	Cum.
0 2	313	13.40	13.40
2	305	13.06	26.47
0	236	10.11	36.57
0 1 2	228	9.76	46.34
1 2	222	9.51	55.85
1	179	7.67	63.51
0 1	105	4.50	68.01
2 7	71	3.04	71.05
7	70	3.00	74.05
(output omitted)	55	2.36	81.50
2 5	15	0.64	100.00
Total	2,335	100.00	

The uniqueness of sequences is a multiple-valued category. On the one hand, uniqueness of sequences is peculiar mostly to the existence of same order of elements in sequences rather than existence of same elements. On the other hand, looking at the content of sequences, one can see how frequent sequences are from the positions of the same order of elements or the same elements. While in the first case one can see the proportions between types of sequences and observations, sharing the same sequences, in the second case, one can see the frequent sequences as consisting of the same elements or the same order of elements.

5.5.2 Types of transitions from unemployment

The uniqueness of sequences implies rather high differentiation of ways of transitions from unemployment. In this case, the classification of sequences becomes the research task, which requires theoretical substantiation of basis for further typology of immigrants into groups on typical sequences of transitions. In order to classify sequences into groups as applied to each immigrant taken separately, a cluster analysis based on the K-medians method has been used. A cluster analysis was based on created variables reflecting the lengths of and numbers of episodes of each of eight elements calculated from the overall number of observations (Table 20). The mean, minimum, and maximum, as reflecting a period of unemployment (a number of years), were calculated based on the whole observation period (from 1952-2014) and the whole research sampling (2,701 unemployed immigrants).

Table 20. Frequency tables on all the variables generated from sequences (URA–database, N=2701 sequences, period 1952-2014)

Generated variable	Obs	Mean	Std. Dev.	Min	Max
Length of sequence	2,701	10.83	9.45	1	56
Length of episodes of element 0 “Employment services”	2,701	2.08	4.13	0	39
Length of episodes of element 1 “Employed”	2,701	3.46	6.35	0	43
Length of episodes of element 2 “Reduced working week”	2,701	2.40	3.10	0	30
Length of episodes of element 3 “Job-placed itself”	2,701	.06	.65	0	23
Length of episodes of element 4 “LM training”	2,701	.56	2.44	0	46
Length of episodes of element 5 “Outside the labor force”	2,701	.33	2.19	0	43
Length of episodes of element 6 “Another reason”	2,701	.38	2.10	0	40
Length of episodes of element 7 “Unemployment pension”	2,701	1.52	4.97	0	42
Number of different elements in sequence	2,701	2.15	1.04	1	7
Number of episodes	2,701	2.59	1.67	1	11
Number of episodes (of element 0 “Employment services”)	2,701	.63	.71	0	4

Number of episodes (of element 1 "Employed")	2,701	.57	.67	0	4
Number of episodes (of element 2 "Reduced working week")	2,701	.83	.75	0	5
Number of episodes (of element 3 "Job-placed itself")	2,701	.03	.20	0	3
Number of episodes (of element 4 "LM training")	2,701	.13	.37	0	4
Number of episodes (of element 5 "Outside the labor force")	2,701	.07	.28	0	3
Number of episodes (of element 6 "Another reason")	2,701	.08	.29	0	3
Number of episodes (of element 7 "Unemployment pension")	2,701	.22	.46	0	3

Based on two groups of created variables (length of, and number of episodes), the cluster analysis was based on the K-medians method as a variation of k-means clustering, where instead of calculating the mean for each cluster to determine its centroid, one instead calculates the median. Further, it became possible to characterize five types of transitions from unemployment: “Reducing employment” (18.9%), “Delayed full employment” (5.1%), “Employed through employment policy measure” (3.8%), “Part-time employment (68.6%) and “Unemployment pension” (3.2%) (Fig. 21; see also descriptive statistics in Tables 5-8 in Appendix 8.5).

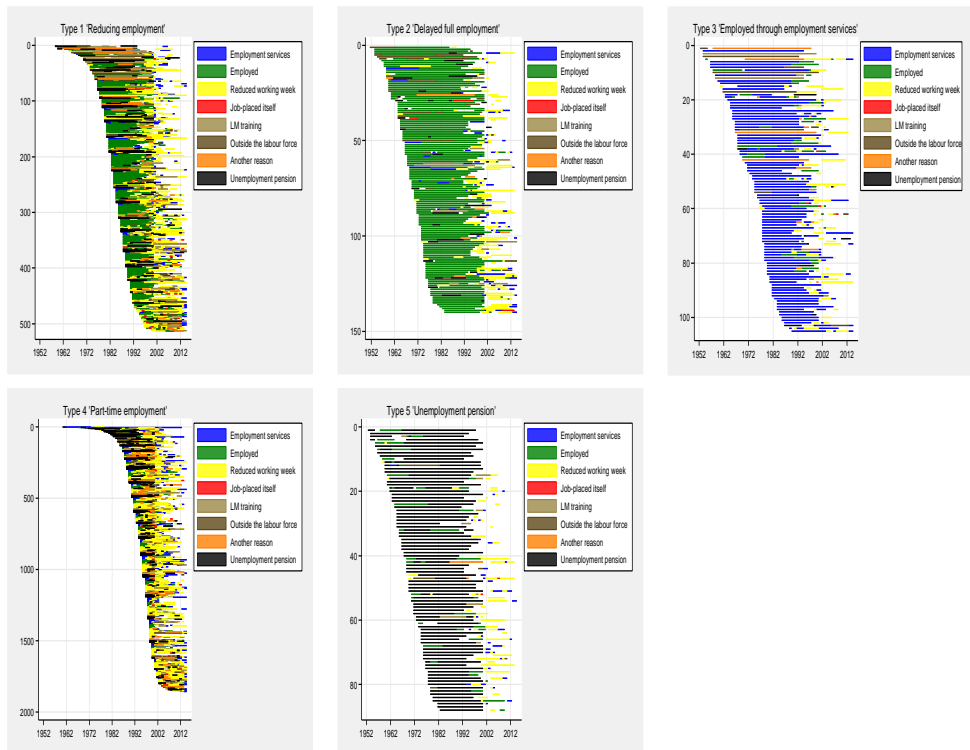


Figure 21. Sequence index plots representing five types of transitions from unemployment (URA-database, N=2701, period 1952-2014)

A general analysis of the length of episodes in sequences shows high distribution of continuity of episodes and their different number in sequences (Tables 9-13 in Appendix 8.5). Hereby, I enclose information about the numbers of immigrants having various episodes of unemployment periods according to the five types of transitions from unemployment. The mean is based on length of episodes and number of episodes of each element and, thus, represents an average length of one episode of an element (Table 21).

Table 21. Frequency tables on the variables generated from sequences with regard to types 1-5 separately (URA-database, period 1952-2014)

	Obs	Mean	Std. Dev.	Min	Max
Type 1 "Reducing employment"					
Length of one episode 0 "Employment services"	264	2.4	2.0	1	11
Length of one episode 1 "Employed"	454	7.1	4.5	1	20
Length of one episode 2 "Reduced working week"	357	3.5	3.3	1	22
Length of one episode 3 "Job-placed itself"	31	2.5	4.8	1	23
Length of one episode 4 "LM training"	107	5.7	6.3	1	28
Length of one episode 5 "Outside the labor force"	60	4.3	5.9	1	31
Length of one episode 6 "Another reason"	68	5.7	6.3	1	32
Length of one episode 7 "Unemployment pension"	139	4.9	3.8	1	15
Type 2 "Delayed full employment"					
Length of one episode 0 "Employment services"	58	2.4	2.2	1	14
Length of one episode 1 "Employed"	140	20.6	9.2	3	42
Length of one episode 2 "Reduced working week"	87	4.1	3.3	1	13
Length of one episode 3 "Job-placed itself"	3	5.3	2.5	3	8
Length of one episode 4 "LM training"	13	7.6	7.7	1	26
Length of one episode 5 "Outside the labor force"	21	5.8	5.1	1	22
Length of one episode 6 "Another reason"	10	5.6	6.9	1	25
Length of one episode 7 "Unemployment pension"	33	4.2	3.1	1	12
Type 3 "Employment through employment services"					
Length of one episode 0 "Employment services"	97	15.0	7.8	2	39
Length of one episode 1 "Employed"	36	4.8	3.0	1	11
Length of one episode 2 "Reduced working week"	66	3.1	2.6	1	14
Length of one episode 3 "Job-placed itself"	4	1.0	0.0	1	1
Length of one episode 4 "LM training"	11	8.9	16.0	1	46
Length of one episode 5 "Outside the labor force"	10	16.6	16.1	2	43
Length of one episode 6 "Another reason"	13	11.2	14.2	1	40
Length of one episode 7 "Unemployment pension"	10	3.3	2.6	1	9
Type 4 "Part-time employment"					
Length of one episode 0 "Employment services"	934	2.5	2.1	1	13
Length of one episode 1 "Employed"	627	2.6	1.7	1	8
Length of one episode 2 "Reduced working week"	1,19	2.7	2.1	1	14
Length of one episode 3 "Job-placed itself"	50	1.4	0.9	1	6
Length of one episode 4 "LM training"	196	3.0	2.4	1	14
Length of one episode 5 "Outside the labor force"	90	2.7	2.6	1	13
Length of one episode 6 "Another reason"	126	3.2	2.3	1	13
Length of one episode 7 "Unemployment pension"	291	3.2	2.8	1	15
Type 5 "Unemployment pension"					

Length of one episode 0 “Employment services”	29	1.5	0.7	1	4
Length of one episode 1 “Employed”	31	4.7	2.9	1	14
Length of one episode 2 “Reduced working week”	51	2.9	2.2	1	10
Length of one episode 3 “Job-placed itself”	2	1.0	0.0	1	1
Length of one episode 4 “LM training”	9	4.3	3.1	1	11
Length of one episode 5 “Outside the labor force”	5	6.2	6.3	1	16
Length of one episode 6 “Another reason”	2	7.5	9.1	1	14
Length of one episode 7 “Unemployment pension”	88	23.2	8.5	6.3	42

For the first type, “Reducing employment” (513 people, 18.9%), two types of transitions from unemployment are the most frequent ones: transitions to full employment and to part-time employment. The analysis of the main transitions from unemployment to other statuses allows for concluding that immigrants, after a long period of unemployment, found a job (in the general labor market). However, it is possible there is a recurrence of unemployment or job-placement in the labor market in the form of reduced working time. The analysis of the same elements in a chain of unemployment periods shows that the statuses “employment”, “employment services”, and “reduced working time” are frequent ones for this type of transitions (Fig. 22).

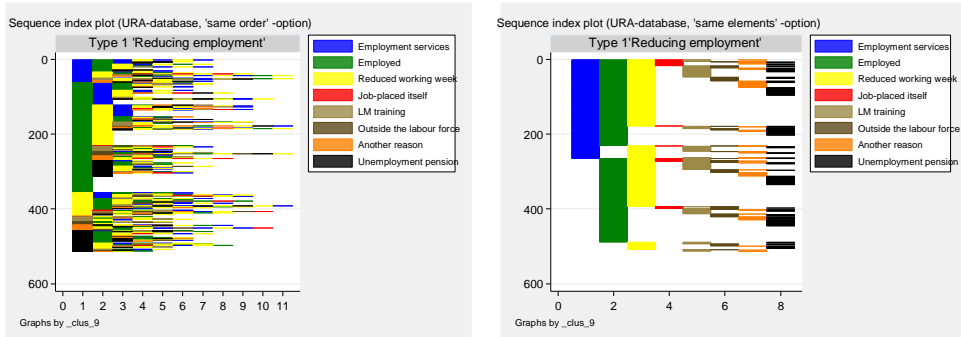


Figure 22. Sequence index plots representing sequences as sorted by same order of elements (right) and same elements (left) for the type 1 “Reducing employment” (URA-database, N=513, period 1952-2014)

The second type of transition was named “Delayed full employment” (140 people, 5.1%), because after long periods in unemployment, immigrants come to final employment. The analysis of the main transitions from unemployment to other statuses allows for concluding that immigrants, after very long periods spent in unemployment, find a job. It is possible that unemployment period repeat themselves, after which time reduced employment occurs. In comparison to the first group, periods of unemployment leading to a reduced working regime are longer as well. The analysis of the same elements in a sequence allows concluding

that, as in the previous group, three elements are frequently observed (“employment”, “employment service” and “reduced working week”) (Fig. 23).

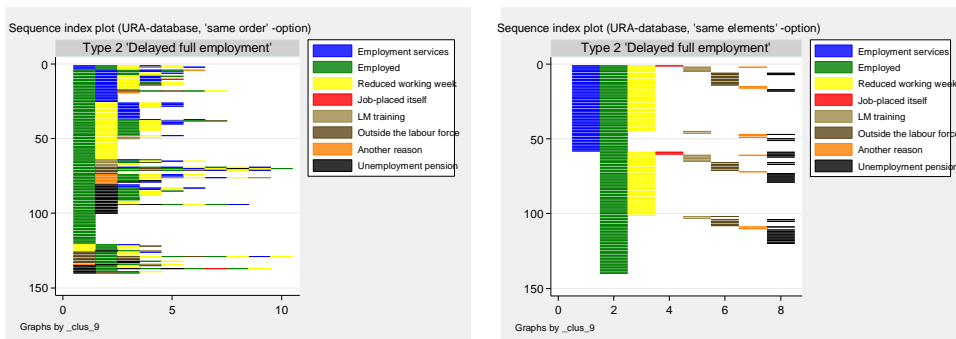


Figure 23. Sequence index plots representing sequences as sorted by same order of elements (right) and same elements (left) for the type 2 “Delayed full employment” (URA–database, N=140, period 1952-2014)

The third type of transition is “Employment through employment services” (105 people, 3.8%), because immigrants realize transitions mostly from unemployment to employment through employment services. The analysis of main transitions from unemployment to other statuses proves that immigrants, after a rather long period in unemployment, find a job through employment policy services. Often, the first period of unemployment continues with a second period of unemployment, which then ends through partial job-placement (“reduced working week”). With regards to the same elements in a sequence, the status “employment through employment services” remains the most frequent for immigrants in this group, whereas statuses concerning job-placement (“full” and “partial” employment) are not so frequent, however, they are significant (Fig. 24).



Figure 24. Sequence index plots representing sequences as sorted by same order of elements (right) and same elements (left) for the type 3 “Employed through employment services” (URA–database, N=105, period 1952-2014)

The fourth type of transition, “Part-time employment”, is the most numerous one (1,855 people, 68.6%) (Fig. 25).

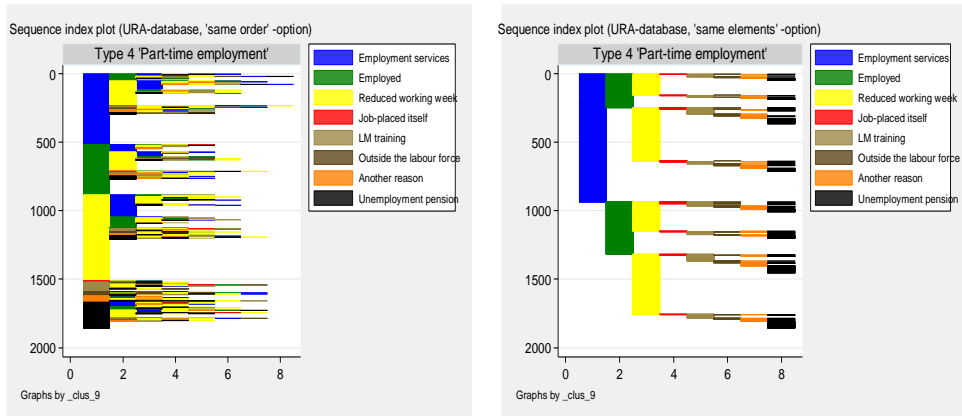


Figure 25. Sequence index plots representing sequences as sorted by same order of elements (right) and same elements (left) for the type 4 “Part-time employment” (URA–database, N=1855, period 1952-2014)

This type represents rather fast transitions from unemployment to part-time employment. An analysis of the main transitions from unemployment to other statuses allows for concluding that, in most cases, after a certain period of unemployment, immigrants are job-placed on a reduced working regime. The analysis of the same elements in a sequence allows for concluding that immigrants combine mostly the two elements of “reduced working week” and “employment through employment services”.

Finally, the fifth type, “Unemployment pension,” (88 people, 3.2%) represents transitions from unemployment to unemployment pension. The analysis of the main transitions from unemployment to other statuses allows for concluding that, in most cases, after a long period of unemployment, immigrants move to unemployment pension. Concerning the same elements in a sequence, immigrants combine the element “unemployment pension” with three other elements: “employment through employment services”, “employment”, and “reduced working week” (Fig. 26).

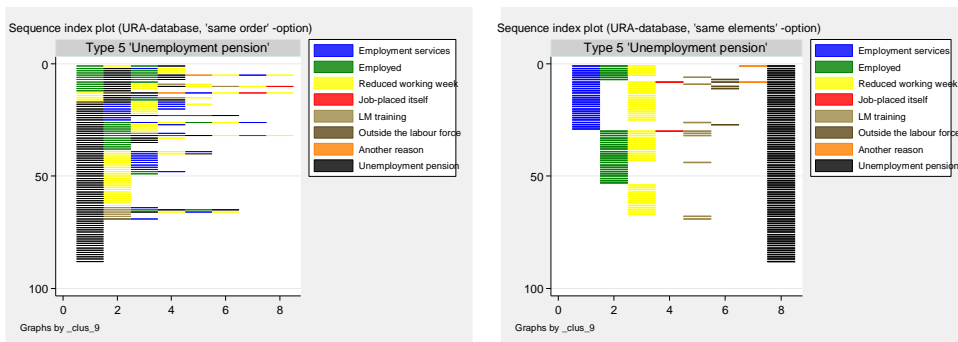


Figure 26. Sequence index plots representing sequences as sorted by same order of elements (right) and same elements (left) for the type 5 “Unemployment pension” (URA-database, $N=88$, period 1952-2014)

All five types of transitions from unemployment are rather multifarious, as well as have different intensities of transitions. Intensity of transitions is considered as an important indicator of activity in the labor market. In the case of the present research, a minimal frequency of transitions is peculiar to the transition types “Part-time employment” and “Unemployment pension”. On the other hand, the transition types “Reducing employment” and “Delayed full employment” are remarkable in more frequent intensity of transitions (Fig. 27).

All five types of transitions have different intensities of transitions; however, periodicity of sequences of transitions is obvious as well. For example, for each of these types one of the basic “statuses” is typical. For example, a status “employment in the general labor market” is peculiar for “Reducing employment” and “Delayed full employment”. On the other hand, it is seen that after these initial “statuses”, the second “status” occurs and in most cases, this status is “reduced working week”. The last conclusion leads to the hypothesis about the existence of two variants of “integration” as “full” and “reduced” integration, and typical consistency of these two types of integration when “reduced” integration follows “full” integration.

Taking into account a hypothesis about two types of “integration”, a further stage of research implies an analysis of those episodes, which concern employment in the general labor market (the element “employed”) and part-time employment (the element “reduced working week”). Admittedly, each of these kinds of employment testifies to “full” or “reduced” integration.

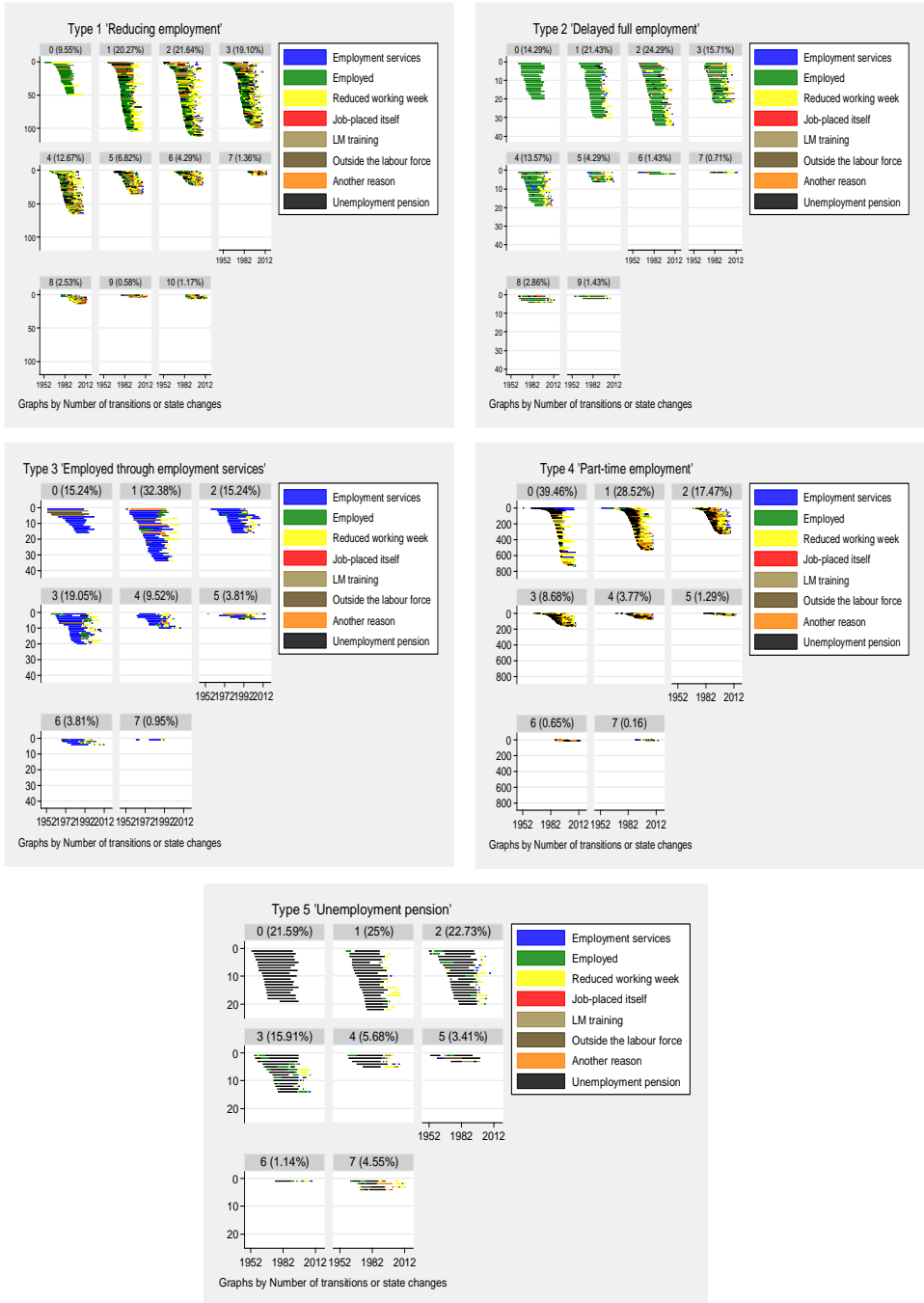


Figure 27. Sequence index plots representing sequences with regard to number of transitions for five types of transitions from unemployment (URA-database, period 1952-2014)

Based on the length of sequences as leading to full or partial employment, two additional coefficients as “full integration” and “reduced integration” have been created and calculated. In the first case, the coefficient “full integration” reflects a period during which immigrants achieve full employment; a period of unemployment, leading to employment in the general labor market, is divided on a quantity of episodes in similar unemployment periods. Hypothetically, this number talks about the average length of unemployment leading to employment in the general labor market (only one episode is considered). In the second case, the coefficient “reduced integration” is calculated on the same principles based on the episode “reduced working week”. Hypothetically, this number talks about the average number of years spent in unemployment (only one episode is considered), leading to reduced working week (part-time employment) (Table 22).

Table 22. Types of transitions from unemployment as regards to “full” or “reduced” integration (frequency tables) (URA–database, period 1952-2014)

	Variable	Obs	Mean	Std. Dev.	Min	Max
Reducing employment	Full integration	454	7.17	4.50	1	20
	Reduced integration	357	3.56	3.31	1	22
Delayed full employment	Full integration	140	20.63	9.21	3	42
	Reduced integration	87	4.12	3.31	1	13
Employment through employment services	Full integration	36	4.85	3.05	1	11
	Reduced integration	66	3.12	2.61	1	14
Part-time employment	Full integration	627	2.64	1.71	1	8
	Reduced integration	1,195	2.73	2.12	1	14
Unemployment pension	Full integration	31	4.77	2.90	1	14
	Reduced integration	51	2.99	2.27	1	10

The arithmetic mean for “full” and “reduced” integration has been calculated based on the whole observation period (1952-2014). Considering the significant differences between continuities of unemployment periods with regards to different types of transitions from unemployment, the differentiation of types of transitions from unemployment is conditioned by the influence of certain factors of external or internal character. In this case, hypothetically, a mechanism of fragmentation in the labor market on gender, educational background, birth cohort, and entrance cohort explains a difference in continuities of unemployment periods and types of transitions from unemployment. In order to explain, how these four variables and type of transitions interrelate between themselves, the following step of analysis allowed for predicting the probabilities of the different possible outcomes of a categorically distributed dependent variable (type of

transitions from unemployment), given a set of independent variables (“gender”, “education”, “birth cohort” and “entrance cohort”) (Table 23).

Table 23. Relative Risk Ratios calculated for types 1-5 and basic explanatory variables (multinomial logistic regression, URA–database, N=29,257 years, period 1952-2014)

	Type	RRR	Std. Err.	z	P>z	[95% CI]	
Reducing employment	Gender	1.17	.041	4.64	0.000	1.10	1.26
	Education	1.04	.008	5.00	0.000	1.02	1.05
	Birth cohort	1.01	.020	0.79	0.430	.97	1.05
	Entrance cohort	.15	.004	-60.63	0.000	.14	.15
Delayed full employment	Gender	1.64	.090	9.05	0.000	1.47	1.83
	Education	1.07	.013	5.56	0.000	1.04	1.09
	Birth cohort	.96	.036	-0.87	0.385	.90	1.04
	Entrance cohort	.02	.001	-78.58	0.000	.01	.02
Employment through empl. services	Gender	1.26	.073	4.11	0.000	1.13	1.42
	Education	1.08	.014	6.28	0.000	1.05	1.11
	Birth cohort	.96	.038	-0.90	0.369	.89	1.04
	Entrance cohort	.02	.001	-70.70	0.000	.02	.03
Part-time employment (base outcome)							
Unemployment pension	Gender	1.73	.107	8.89	0.000	1.53	1.96
	Education	1.20	.016	13.76	0.000	1.17	1.23
	Birth cohort	.66	.029	-9.26	0.000	.61	.72
	Entrance cohort	.02	.001	-71.54	0.000	.02	.02
Number of obs. = 29257, LR chi2(16) = 28149.88, Prob > chi2 = 0.0000, Pseudo R ² = 0.3296, Log likelihood = -28621.862							

Based on the results of the multinomial logistic regression, one can conclude that, for immigrants, a risk to find oneself in the second category (“delayed full integration”) or in the fifth category (“unemployment pension”) is mostly conditioned by the “gender”-factor. Additionally, a risk to move to unemployment pension is also affected by the educational level of an immigrant, whereas, in contrast, these risks are lower for the immigrants belonging to the first category of “Reducing employment”. A factor belonging to a birth cohort has an influence only upon transitions to unemployment pension, whereas in other cases, the statistical significance of this parameter is rather low. Finally, the factor of entrance cohort almost does not have an effect on transitions inside any of these five types.

Consequently, the above-mentioned factors differently affect belonging to any one type of transition. Further, the five types of transitions are tested on sensitiveness to the four main explanatory variables (gender, education, birth cohort and entrance cohort) in conformity with “full” or “reduced” integration. In

this case, one can assume that the variances between achievement of full or reduced integration, type of transition, and explanatory variables are the same across groups, and explanatory variables do not have influence upon belonging to a type of transition. In order to verify this assumption, I used the ANOVA-test and, in particular, the Bartlett's test for equal variances. The Bartlett's test verifies if k samples are from populations with equal variances; the small value for Bartlett's statistic confirms that this assumption is not violated in this data. Statistical analysis based on the ANOVA-testing shows that the types of transitions are rather different as influenced by all four variables. Especially high differences between types of transitions and continuity of unemployment periods are conditioned by belonging to a birth cohort or an entrance cohort (Table 24).

Table 24. One-way ANOVA-test of variance between continuity of unemployment periods and explanatory variables "gender", "education", "birth cohort" and "entrance cohort" (URA-database, N=29257 years, period 1952-2014)

One-way ANOVA-test, gender and continuity of unemployment periods	Source	SS	df	MS	F	Prob > F
	Between groups	64.05	1	64.05	31.57	0.0000
	Within groups	59352.72	29255	2.02		
	Total	59416.77	29256	2.03		
	Bartlett's test for equal variances: $\chi^2(1) = 4.78$ Prob> $\chi^2 = 0.029$					
One-way ANOVA-test, education and continuity of unemployment periods	Source	SS	df	MS	F	Prob > F
	Between groups	740.09	8	92.51	46.11	0.0000
	Within groups	58676.68	29248	2.00		
	Total	59416.77	29256	2.03		
	Bartlett's test for equal variances: $\chi^2(7) = 57.33$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, birth cohort and continuity of unemployment periods	Source	SS	df	MS	F	Prob > F
	Between groups	3126.11	4	781.52	406.13	0.0000
	Within groups	56290.66	29252	1.92		
	Total	59416.77	29256	2.03		
	Bartlett's test for equal variances: $\chi^2(4) = 195.45$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, entrance cohort and continuity of unemployment periods	Source	SS	df	MS	F	Prob > F
	Between groups	8483.69	5	1696.73	974.44	0.0000
	Within groups	50933.08	29251	1.74		
	Total	59416.77	29256	2.03		
	Bartlett's test for equal variances: $\chi^2(5) = 2.0e+03$ Prob> $\chi^2 = 0.000$					

The analysis of meanings of the two coefficients "full integration" and "reduced integration" for four variables "gender", "education", "birth cohort" and "entrance cohort" allowed to make some conclusions about the interdependence between belonging to a type of transition and belonging to a socio-demographic group, on the basis of one of four above-mentioned criteria (Table 24 in Appendix 8.5). In particular, the analysis has showed that in comparison to other groups, significance of gender is especially high for the groups "Reducing employment"

and “Delayed full employment” as concerning “full integration” (Table 16 in Appendix 8.5). The values of the Bartlett’s test for equal variances are 9.27 and 8.92. The corresponding significance levels (X^2 with 1 degree of freedom) are 0.002 and 0.003, so, hypothetically, the variances are heterogeneous. On the other hand, when the matter concerns “reduced integration”, gender belonging is important for the groups “Reducing employment” (the Bartlett’s test for equal variances is 135.73), “Delayed full employment” (65.36), “Part-time employment” (49.37) and “Unemployment pension” (97.93) (Table 17 in Appendix 8.5). The corresponding significance levels (X^2 with 1 degree of freedom) are 0.000, so, hypothetically, the variances are heterogeneous.

The analysis of influence of educational levels on achievement of “full integration” or “reduced integration” shows that for two groups, a factor of education is rather important when it concerns “full integration” for all five groups. The values of the Bartlett’s test for equal variances are biggest for the groups “Employed through employment services” (288.53) and “Delayed full employment” (158.96). The corresponding significance levels (X^2 with 6-7 degrees of freedom) are 0.000, so, hypothetically, the variances are heterogeneous (Table 18 in Appendix 8.5). On the other hand, as it concerns “reduced integration”, a factor of education is rather high for all five groups. The values of the Bartlett’s test for equal variances are the biggest for the groups “Reducing employment” and “Employed through employment services”. The corresponding significance levels (X^2 with 7 degrees of freedom) are 0.000, so, hypothetically, the variances are, again, heterogeneous (Table 19 in Appendix 8.5).

Two other variables (“birth cohort” and “entrance cohort”) concern the time of birth of immigrants and their first unemployment period in Finland. Thus, birth cohort is especially significant for achievement of “full integration” for such groups as “Reducing employment” and “Delayed full employment”. The values of the Bartlett’s test for equal variances are the biggest for these two groups (490.02 and 279.29). The corresponding significance levels (X^2 with 3-4 degrees of freedom) are 0.000, so, hypothetically, the variances are heterogeneous once again (Table 20 in Appendix 8.5). As it concerns “reduced integration”, a factor of belonging to a birth cohort is higher for the group “Reducing employment”. The value of the Bartlett’s test for equal variances is the biggest for this group (648.89). The corresponding significance level (X^2 with 4 degrees of freedom) is 0.000, so, hypothetically, the variances are heterogeneous like the previous variances (Table 21 in Appendix 8.5).

Finally, belonging to an entrance cohort has different meanings for “full integration” and for “reduced integration”. In particular, belonging to a certain entrance cohort has significant influence for “full integration” for two groups: “Reducing employment” and “Delayed full employment”. The values of the Bartlett’s test for equal variances are the biggest for these two groups (574.69 and 390.05). The corresponding significance levels (X^2 with 3 and 5 degrees of freedom) are 0.000, so, hypothetically, the variances are heterogeneous, like prior (Table 22 in Appendix 8.5). On the contrary, the significance of entrance cohort for “reduced integration” is higher for the group “Unemployment pension”. The value of the Bartlett’s test for equal variances is the biggest for this group (493.88). The corresponding significance level (X^2 with 3 degrees of freedom) is 0.000, so, hypothetically, the variances are heterogeneous (Table 23 in Appendix 8.5).

Overall, the analysis shows that as it concerns different types of transitions from unemployment, “full” or “reduced” integration and influence by one of four explanatory variables, variances are heterogeneous for the most part. However, on the other hand, homogeneity of variances (variances across groups are equal) is mostly peculiar to the types of transitions “Employed through employment services”, “Part-time employment” and “Unemployment pension”, when it concerns the influence of the “gender” –factor and achievement of “full” integration. Nevertheless, the same tendency exists when it concerns achievement of “reduced integration” for the type of transitions “Employed through employment services”. This circumstance means that potentially, in the presence of these types of transitions from unemployment, an influence of gender is almost absent, especially for the transition type “Employed through employment services”.

5.5.3 Cohort and period effects in transitions

As the results of the ANOVA-test have shown, a factor of belonging to a cohort has a direct influence upon specificity of transitions from unemployment. More detailed analysis of the coefficients “full integration” and “reduced integration” regarding transitions from unemployment show that belonging to a birth cohort has more important influence on transition to full employment (“full integration”) as concerns the types “Reducing employment” and “Delayed full employment”. Hence, the factor of birth cohort has a significant effect on transition to partial employment (“reduced integration”) for the type “Reducing employment” as

well. On the other hand, as the ANOVA-test has shown, a factor of belonging to an entrance cohort has a more powerful influence upon transition to full employment (“full integration”) for such types as “Reducing employment” and “Delayed full employment”. The situation changes as conditioned by transitions to partial employment (“reduced integration”). Further, the significance of “the birth cohort” is considered as one of the most significant factors in the overall structure of types of transitions from unemployment (Fig. 28).

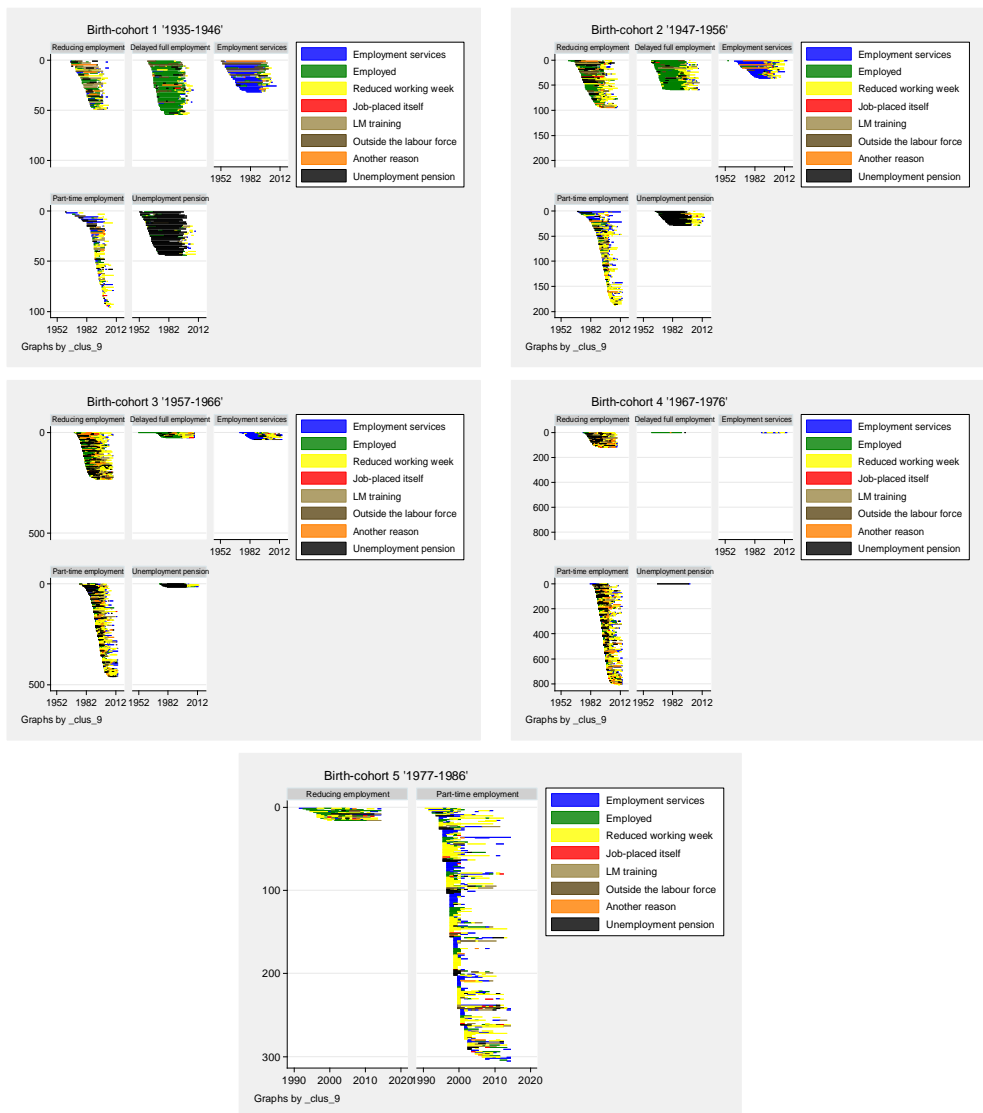


Figure 28. Sequence index plots representing sequences as classified by birth cohorts (URA-database, $N=2701$ sequences, period 1952-2014)

An overall analysis of distributions of birth cohorts shows that types of transitions from unemployment differ depending on birth cohorts. For example, as concerns the first birth cohort “1935-1946”, two leading groups are “Part-time employment” (34.9%) and “Delayed full employment” (19.6%). For the cohort “1947-1956” three groups are leading: “Part-time employment” (46.1%), “Reducing employment” (23.4%) and “Delayed full employment” (14.5%). However, three other birth cohort types of transitions have a little bit of another character. For the third birth cohort “1957-1966”, two groups are leading: “Part-time employment” (59.9%) and “Reducing employment” (30.2%). For the fourth birth cohort “1967-1976”, two groups are also principal: “Part-time employment” (86.5%) and “Reducing employment” (12.9%). Finally, for the fifth birth cohort “1977-1986”, only one group is most important, which is “Part-time employment” (95%).

Obviously, “full integration” occurs faster depending on belonging to a birth cohort. In particular, the differences between moments until “full integration” decrease proportionally from 12.45 years on average for the birth cohort 1 and 2.16 years for the birth cohort 5. Comparatively, the time until “reduced integration” occurs remains almost the same for all the cohorts (Table 25; see also Table 14 in Appendix 8.5).

Table 25. Birth cohorts and types of sequence transitions with regard to “full” or “reduced” integration (frequency tables) (URA–database, period 1952-2014)

	Variable	Obs	Mean	Std. Dev.	Min	Max
Birth cohort 1 “1935–1946”	Full integration	142	12.45	11.49	1	42
	Reduced integration	134	3.44	3.17	1	22
Birth cohort 2 “1947–1956”	Full integration	208	9.94	8.28	1	33
	Reduced integration	285	3.53	2.82	1	15
Birth cohort 3 “1957–1966”	Full integration	392	6.46	5.39	1	26
	Reduced integration	535	3.23	2.67	1	21
Birth cohort 4 “1967–1976”	Full integration	434	3.48	2.65	1	16
	Reduced integration	594	2.71	2.25	1	17
Birth cohort 5 “1977–1986”	Full integration	112	2.16	1.57	1	9
	Reduced integration	208	2.15	1.54	1	11

However, when analyzing mean time until “full integration” or (and) “reduced integration” occurs, one should take into consideration how often episodes of unemployment leading to full or partial employment occur. Likewise, it should be considered whether it is possible that these episodes repeat several times, or if immigrants come back to unemployment and find employment later again. Detailed analysis of “intensity” of transitions shows a clear tendency of an increasing number of episodes for the types “Reducing employment”, “Delayed

full employment” and “Part-time employment” for later birth cohorts. This fact implies that a younger age of immigrants contributes to transitions that are more intensive from unemployment to full or partial employment. However, for types “Reducing employment” and “Delayed full employment”, the intensity of “full integration” is higher than it is for “reduced integration”, whereas for the type “Part-time employment” intensity is higher for “reduced integration” (Table 26).

Table 26. Average number of episodes for birth cohorts and types of sequence transitions (URA-database, period 1952-2014)

		Reduc. empl.	Delayed full empl.	Empl. through empl. serv.	Part-time empl.	Unempl. pension
Birth cohort 1 “1935-1946”	1 “Employed”	.81	1.37	.56	.22	.47
	2 “Reduced working week”	.53	.61	.53	.67	.5
Birth cohort 2 “1947-1956”	1 “Employed”	1.07	1.42	.41	.24	.53
	2 “Reduced working week”	1.00	.93	.91	.84	1.10
Birth cohort 3 “1957-1966”	1 “Employed”	1.13	1.38	.28	.35	.40
	2 “Reduced working week”	1.07	1.07	.88	.80	.73
Birth cohort 4 “1967-1976”	1 “Employed”	1.28	2.00	0.00	.42	0.00
	2 “Reduced working week”	1.14	0.00	2.00	.75	0.00
Birth cohort 5 “1977-1986”	1 “Employed”	1.62			.34	
	2 “Reduced working week”	1.75			.77	

Apart from the influence of the “birth cohort” –factor upon types of transitions from unemployment, the “entrance cohort” –factor is considered as one of the most powerful factors of transitions from unemployment (Fig. 29).

Overall analysis of entrance cohorts impartially shows that for the first two cohorts, “1952-1961” and “1962-1971”, three types of transitions from unemployment were basic. For example, for the first entrance cohort “1952-1961”, three groups were leading: “Delayed full employment” (40.5%), “Employment policy measure” (21.7%) and “Unemployment pension” (26%). Additionally, for the second entrance cohort, “1962-1971”, these three groups were also leading (“Delayed full employment” (37.3%), “Employment policy measure” (19.7%) and “Unemployment pension” (25.3%)). On the other hand, for the third and the fourth entrance cohorts, two types of transitions were typical. For the cohort “1972-1981”, two groups were leading: “Reducing employment” (45.4%) and “Delayed full employment” (17.9%). Similarly, for the fourth entrance cohort, “1982-1991”, two groups were also leading (“Reducing employment” (36.9%) and “Part-time employment” (59.7%)). Finally, for the two last entrance cohorts, only the type “Part-time employment” was the basic one. For the entrance cohort “1992-2001” one group is leading to “Part-time

employment” (94.5%), as well as for the entrance cohort “2002-2014” (“Part-time employment” (99.3%).

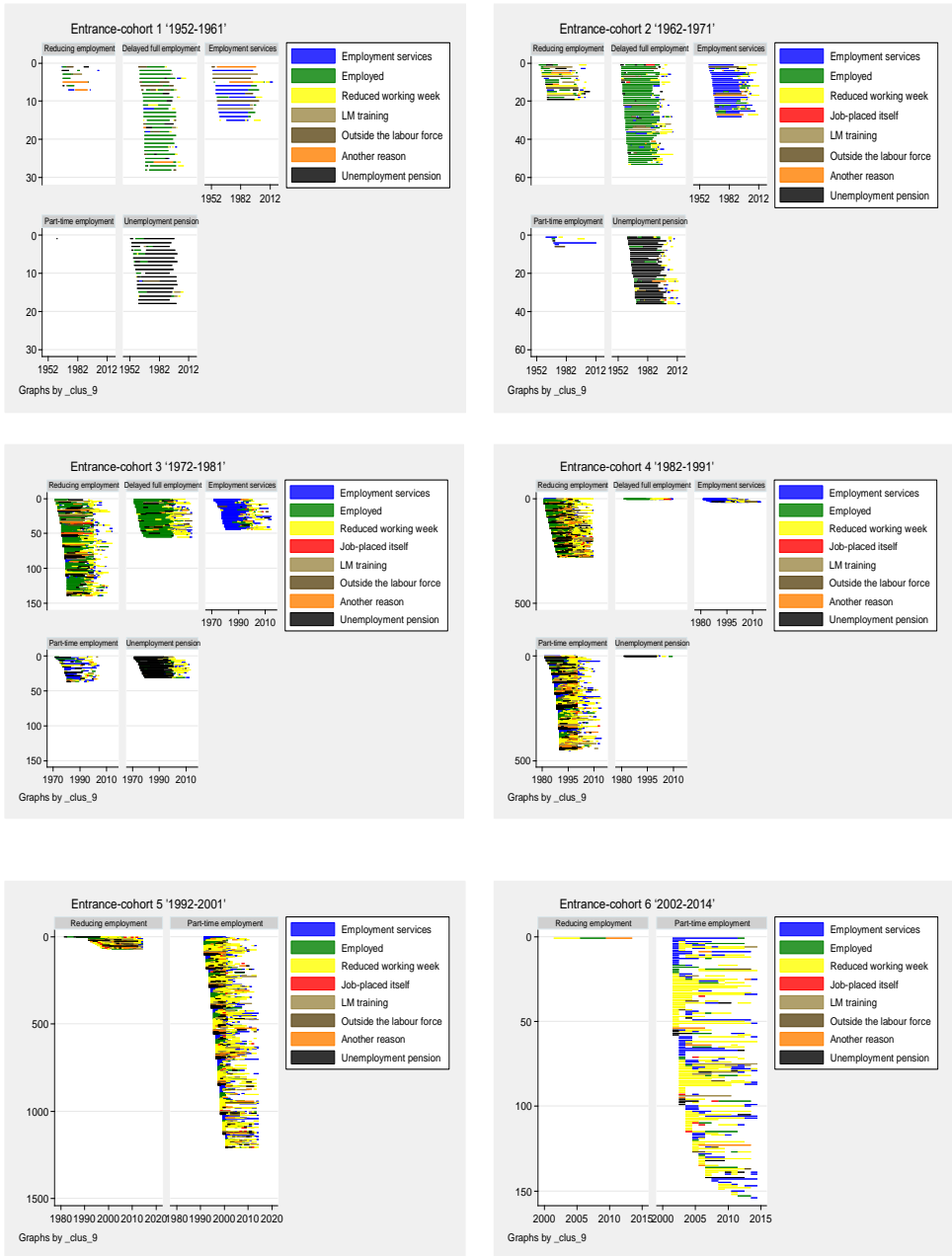


Figure 29. Sequence index plots representing sequences as classified by entrance cohorts (URA-database, period 1952-2014)

As in the case of birth cohorts, the difference between entrance cohorts is essential as earlier entrance cohorts have longer periods of unemployment until “full integration” occurs: difference comes to 7.87 times between entrance cohort 1 and entrance cohort 6. Comparatively, the difference between entrance cohorts as concerned to “reduced integration” is much smaller. For example, for the first entrance cohort, the time until which “reduced integration” occurs comes to 3.35 years, whereas for the sixth entrance cohort, it’s 2.91 years (Table 27, see also Table 15 in Appendix 8.5).

Table 27. Entrance cohorts and types of sequence transitions with regard to “full” or “reduced” integration (frequency tables) (URA–database, period 1952-2014)

	Variable	Obs	Mean	Std. Dev.	Min	Max
Entrance cohort 1 “1952–1961”	Full integration	51	16.14	13.59	1	42
	Reduced integration	20	3.35	2.84	1	13
Entrance cohort 2 “1962–1971”	Full integration	91	14.85	10.48	1	36
	Reduced integration	84	3.87	3.65	1	22
Entrance cohort 3 “1972–1981”	Full integration	217	10.21	7.31	1	29
	Reduced integration	214	3.50	2.97	1	15
Entrance cohort 4 “1982–1991”	Full integration	449	5.36	4.02	1	19
	Reduced integration	491	3.26	2.74	1	21
Entrance cohort 5 “1992–2001”	Full integration	454	2.80	1.97	1	11
	Reduced integration	831	2.62	2.08	1	19
Entrance cohort 6 “2002–2014”	Full integration	26	2.05	1.21	1	5
	Reduced integration	116	2.91	2.25	1	11

Comparatively, a detailed analysis of “intensity” of transitions as regards to entrance cohorts shows almost the same tendency as applied to birth cohorts. Thus, for three types (“Reducing employment”, “Delayed full employment” and “Part-time employment”) the tendency to increasing intensity for later entrance cohorts is obvious. As concerns the types “Reducing employment” and “Delayed full employment”, the intensity of transitions for “full integration” is higher than the intensity of transitions for “reduced integration” (except for the entrance cohort 5). On the contrary, the intensity of transitions for the type “Part-time employment” is higher as concerned to “reduced integration”. This circumstance means that immigrants realize more transitions to reduced employment. In this case, the sixth entrance cohort is exceptional, because the difference between numbers of episodes for this cohort is maximal, at 0.18 and 0.93 (Table 28).

Table 28. Average number of episodes for entrance cohorts and types of sequence transitions (URA–database, period 1952-2014)

		Reduc. empl.	Delayed full empl.	Empl. through empl. serv.	Part-time empl.	Unempl. pension
Entrance cohort 1 "1952-1961"	1 "Employed"	1.00	1.35	.60	0.00	.72
	2 "Reduced working week"	0.00	.60	.40	0.00	.33
Entrance cohort 2 "1962-1971"	1 "Employed"	.94	1.45	.64	.16	.38
	2 "Reduced working week"	.84	.71	.82	.33	.77
Entrance cohort 3 "1972-1981"	1 "Employed"	1.12	1.38	.36	.40	.45
	2 "Reduced working week"	.87	1.01	.93	.75	.90
Entrance cohort 4 "1982-1991"	1 "Employed"	1.13	1.25	0.00	.46	.33
	2 "Reduced working week"	1.08	1.25	.83	.76	.66
Entrance cohort 5 "1992-2001"	1 "Employed"	1.28			.34	
	2 "Reduced working week"	1.39			.76	
Entrance cohort 6 "2002-2014"	1 "Employed"	1.00			.18	
	2 "Reduced working week"	1.00			.93	

Cohort and period effects in transitions turn out to be significant factors, when immigrants realize transitions from unemployment to other statuses. At that, as a factor of birth cohort as a factor of entrance cohort has equal significance for achieving full integration if it occurs in the frames of the transitions “Reducing employment” or “Delayed full employment”. However, if transitions from unemployment, as concerning “Part-time employment”, “Delayed full employment” or “Reducing employment”, are peculiar to representatives of all the birth cohorts at different rates of significance, the intensity of transitions between unemployment, and other statuses changes from cohort to cohort, especially if concerning “full integration”. The same circumstance concerns, however, the intensity of transitions for the type “Part-time employment” (“reduced integration”).

On the other hand, a factor of belonging to an entrance cohort has even more radical importance for models of transitions from unemployment to other statuses. Thus, the models of transitions “Delayed full employment”, “Employment policy measure,” and “Unemployment pension” are more typical for the two earliest cohorts (“1952-1961” and “1962-1971”). On the contrary, the models “Reducing employment” and “Part-time employment” are more peculiar to the later cohorts of “1972-1981” and “1982-1991”, whereas immigrants from the two latest cohorts, “1992-2001” and “2002-2014”, realize transitions in the course of the model “Part-time employment”. A difference in achievement of full or reduced integration is even more essential considering the factor of entrance cohort, even

though the intensity of transitions from unemployment remains at the same rate as in the case of the influence of birth cohort.

Conclusions

Overall, sequence analysis revealed several general tendencies, which require additional investigations that are more detailed. Analysis of the overall structure of the database shows that an overwhelming majority of unemployed immigrants have been registered in the URA–database since the beginning of the 1990s. One can imply that the time significant mobility of foreign labor force has begun and, at the same time, the workforce had a right to participation in the integration programs in Finland. In that, this group of immigrants (more than 68%) has had shorter periods of unemployment and more intensive job-placement to reduced working regime.

On the other hand, the database contains information about unemployment periods of those immigrants who have been registered as “unemployed” much earlier, whereas unemployment periods for them were longer and transitions from unemployment were less intensive. This fact can also be explained by specificity of approach to calculation of unemployment periods in sequences. In the course of the present research, only a year of unemployment was fixed. It means that, short periods of absence of immigrants in the database (several months, for example) have not been considered as gaps. Therefore, if years of observations were sequential, the overall sequence did not include gaps. However, this disadvantage of the sequence analysis could be turned over by means of the event-history analysis, which considers every “event” (ie. an unemployment period) separately.

In that way, actually, a period in the sequence analysis can potentially contain several separate periods, whereas gaps between unemployment periods are too short to be considered as significant ones. However, even this assumption serves as evidence of radically different models of transitions from unemployment for immigrants from various generations. On one hand, relatively short periods of unemployment and transitions to reduced employment are typical for immigrants from the 1990s, whereas permanent circulation between labor market statuses, prolonged staying in unemployment, short gaps between unemployment periods, and coming back to a previous status of unemployment are typical for immigrants who came to Finland much earlier.

Considering various types of transitions from unemployment, one can contend that the type “Part-time employment” prevails (around 69%). This circumstance

means that around 69% of unemployed immigrants after relatively short staying in unemployment are employed on a reduced working regime. This type of transition prevails from the beginning of the 1990s to 2014. The second type of transitions (“Reducing employment”) represent a situation when, after a long period of staying in unemployment, immigrants are employed in the general labor market. However, a relatively short period of employment continues by the second unemployment period, which ends, in one’s turn, by job-placement on a reduced working regime. This type of transition develops in the period since the 1980s to the 2000s, while the year 2000 is observed as a year of significant decrease in unemployment periods for immigrants and starting of new periods that end on other reasons. Essentially, the last circumstance is peculiar to all the types of transitions from unemployment.

Analysis of the similarity (identity) of sequences shows that for the overwhelming majority, sequences of transitions are rather different. However, it is essential that more than 60% of unemployed immigrants repeat the same order of episodes of unemployment, which end for the same reasons (for example, after episode “employed” new episode “reduced working week” follows). It is more essential, that more than 85% of unemployed immigrants repeat the same episodes in sequences of transitions. Thus, three reasons for competing unemployment periods are crucial: “employment through employment services”, “employment in the general labor market,” and “employment on reduced working regime”. These circumstances allow for the conclusion that even though immigrants have different “histories” of unemployment in Finland as concerned, for example, continuity of staying in unemployment, the specificity of unemployment for immigrants has typical features. Likewise, there is a specificity of completion of unemployment periods and repeating the same “trajectories” of behavior in the labor market is almost identical.

One more significant research result concerns the achievement of full or reduced integration. In this case, “integration” is considered as transitions into a category of employment in the general labor market or into a category of reduced employment; this concerns the labor market attachment, not “the integration in the labor market” having a wider context. However, one can contend that a process of achievement of “full integration” has radical differences for immigrants, depending on their belonging to a birth cohort or an entrance cohort that stays in unemployment until “full integration” occurs, and proportionally decreased for every later cohort. At that, transitions from unemployment to employment in the general labor market occurred in the period since the 1970s to

2000s, whereas a culmination of this process occurred since the end of the 1980s to the end of the 1990s. On the other hand, a process of achievement of reduced integration has similar tendencies for all the unemployed immigrants, independent of belonging to a birth cohort or an entrance cohort. A process of achievement of reduced integration gains ground in the period since 1991 to 2014, whereas a culmination of this process falls from 1996-2000. It is essential, however, that “reduced integration” is achieved much faster than “full integration” and does not depend on the influence of other factors.

6 CONCLUSION AND THEORETICAL DISCOURSE

The immigrant labor force as a growing share of the Finnish labor market has a special niche within labor market integration and positions which is often conditioned and influenced by different macro and micro factors. The integrative capacity of the Finnish labor market is considered as one of these factors; however, a more important factor consists of the effect from immigration and integration policy initiated by the European Council and government of Finland. In fact, among the OECD countries, Finland has more beneficial position indicators in their labor market development, and is associated with a more effective policy for immigrant integration in comparison to the average levels in other European countries. In such policy directions as “access to the labor market” and “targeted support”, Finland has an especially high Migrant Integration Policy Index. However, concerning limitations of access to the labor market, they still exist as conditioned by the time of entrance to the labor market, specificity of Finnish immigration legislation, and the entry permit regime for immigrants from different categories of countries.

The history of integration and immigration policy in Finland is a consequence of influence of multifarious processes of economic and political restructures during its long period of development and crises, construction of a new welfare state, adaptation to new globalization processes in the world, and adaptation to internal societal restructuring. Considering the fact that, in the 1990s, Finland had to cope with exceptionally deep recessions and pressures brought about by closer integration into global financial markets, the Finnish welfare system had to respond to the challenges of an ageing population, falling birth rates, a rapidly decreasing supply of the Finnish workforce and, on the other hand, increasing immigrant inflows. In this situation, most of the changes in Finnish social policy were an attempt to maintain the basic features of the system while responding to economic and demographic pressures. In other words, restructuring was a defensive strategy and intended to carry the system over a crisis period.

From year to year, the increasing immigrant community becomes more and more an essential part of the Finnish labor force and Finnish labor market. Besides the influence of the integrative capacity of the labor market and the effects of

Finnish integration policy on the efficiency of integration for immigrants, immigrants themselves become bearers of new labor roles and new social positions, which are often conditioned by their own personal socio-economic and demographic characteristics. On the other hand, the process of labor market integration implies the existence of various mechanisms, which allow integration to be realized. Understanding a “mechanism” as a steady social relation that repeatedly materializes with maximally predicted result, the time, when labor market integration occurs, obtains new significance as a factor of restructuring systems in the “labor market”. Taking into account the context in which labor market integration occurs, “mechanisms” are already considered as time-conditioned or “time-sensitive” contextual mechanisms. Therefore, “time-sensitive” contextual mechanisms are based on the influence of a mechanism itself as a “measure” that may lead it to have a particular outcome in a given context, implying conditions that are needed for a measure to produce particular outcomes patterns, or outcome patterns imply the practical effects produced by causal mechanisms being triggered in a given context.

This research discovered a multiplicity of ambiguous labor market integration processes for immigrants in Finland. The original contribution of this research consists in its multidimensionality and original approach to analyzing labor market integration, as well as the fact that most immigrants themselves as the object of this research primordially obtain a notion of distinction during integration processes. Consequently, in implying that integration is an individual process, which is different for an every individual in an every certain case, one should distinguish the structures governing reproduction and transformation of social activities of individuals. Following the argumentation of Margaret Archer (1996, pp.692-693), an essential differentiation exists in the genesis of actions, lying in the reasons, intentions, and plans of individuals. Thus, understanding the actions of individuals requires different approaches as conditioned to their ontological and methodological nature.

The issue of ontological consideration of the role of an immigrant labor force in the Finnish labor market and a role of the labor market itself as a structure reproducing the labor force compels one to think about appropriate methodological approaches and choice of a suitable methodological solution in order to understand the inclusion of individuals (immigrants) into an existing structure (labor market). One should consider that the labor market as a structure and “emergent entity” pre-exists the actions of individuals. On the other hand, immigrants themselves as having their own emergent properties reproduce and

transform the social structure of the “labor market” but does not create it. Therefore, temporarily, the labor market exists prior to the activities of immigrants, as well as changes activities itself as a consequence of specificity of the labor market (“entailing temporality”).

The last argument becomes the basic one in this research. Implying that the Finnish labor market is a special construction of labor relations, which exists and which is regulated mostly by macro influences, furthers the logic of analysis taken into account in the thesis, entailing temporality in the development of the Finnish labor market and integration of immigrants into such. Besides the consideration of factual processes and empirical material, based on which the research is constructed, each research question implies the theoretical substantiation of empirical results as based on the specific components (Table 29).

Table 29. Basic empirical results and their specification to theoretical components

Transitional labor markets	Social and system integration	Labor market flexibility	Labor market segmentation
RQ1 What trajectories, as “paths” of labor market integration that immigrants follow over the time, are typical for their careers in Finland?			
Integrative and maintenance transitions are relatively stable ones, exclusionary transitions are more unstable and repeated ones. Risk of transitions into unemployment and apprenticeship is the highest. Outcomes of transitions: integration – 42 %, economic inactivity and unemployment – 28.6 %, withdrawal – 23.5 %	Action and functional imperatives potentially predetermine the selection of a trajectory of labor market transitions. Models of labor market behavior include more frequent transitions to the same statuses (unemployment or economic inactivity) or less frequent transitions to employment.	Labor market flexibility implies circulation of statuses (‘spin’) as active adaptation to conditions, labor market attachment, and aspiration for any employment. The next stage of the integration period leads to final employment, isolation outside the labor market, or recurrent resettlement.	Frequency of transitions between statuses decreases proportionally with the age of immigrants. Women are more vulnerable to be unemployed, partially employed or outside the labor market. Men have employment more frequently than women.
RQ2 What significance does working time flexibility have for the labor market integration of employed immigrants in Finland?			
-	Inside a particular social structure, different values obtain different significance as inside an enterprise the value of working time, value of educational and professional background, and value of working conditions are differently estimated by employees. Combinations of these values obtain different contents. Immigrants prefer job placement in sectors that potentially offer opportunities for realization of their professional activity according to their values and orientations.	Flexibility of working time represents a twofold process during which the regime of work changes depending on intentions and objective reasons of an organization in favor of deregulation of working time, and mutual (or forced) consent of personnel to the changing of working time. Working time flexibility differs for poor-skilled and high-skilled personnel, in traditional or proactive enterprises, for fixed-term or permanent employment.	Regimes of working times form depending on the economic situation at an enterprise, the character and specificity of a sector, the propensity of certain professions to corresponding regimes of work. Dual labor market allows for the differentiation of working time flexibility; sectoral differences have important implications for the opportunity structures and experiences faced by individual workers.

RQ3 How do transitions from unemployment contribute to labor market integration of unemployed immigrants in Finland?			
Unemployment has a cyclical character, transitions from participation in one measure to another complete a "cycle" as recurrent unemployment occurs. Transitions to employment have a periodic wavelike character. In time, the probability for job placement to one of the forms of employment essentially decreases. Outcomes of transitions: 80.2% of immigrants realize transitions from unemployment to one of the forms of employment.	The predominance of a specific "central" status (employment or unemployment), around which other statuses are concentrated, is obvious. The functional content of labor market behaviour obtains a dualistic character: trajectories of behaviour combine as standard as partial employment. Integration is sensitive to time as a static-dynamic phenomenon.	-	The socio-demographic characteristics of immigrants become apparent in a different way depending on a status, to which a transition is realized. Among four basic factors (gender, education, birth cohort and period effect), the time of entrance into unemployment has significant influence upon models of behavior of unemployed immigrants.
RQ4 What significance does continuity of labor market training have for labor market integration of unemployed immigrants in Finland?			
Unemployed immigrants have two to three labor market training periods and obviously realize transitions to one of the forms of employment. Immigrants with immigrants with a higher level of education more quickly interrupt labor market. Outcomes of transitions: 85% of LM training periods are completed ones.	LM training contributes to regulation of allocative processes inside the system "labor market" and allows for performance of the functions by actors in order to keep the system integrated. Completion or interruption of LM training periods may be regarded as balanced resultant of many selections of many individuals.	-	The socio-demographic characteristics of immigrants do not potentially contribute to more or, in contrast, less intensive participation in labor market training. However, completion or interruption of LM training still remains a consequence of these characteristics.
RQ5 What are typical trajectories of labor market integration for unemployed immigrants in Finland?			
Relatively short periods of unemployment and transitions to reduced employment are typical for recent immigrants. Permanent circulation between labor market statuses, short gaps between unemployment periods, and coming back to a previous status of unemployment are typical for earlier immigrants. Outcomes of transitions: around 69 % of immigrants has had shorter periods of unemployment and more intensive job-placement to reduced working regime.	The functional content of labor market behaviour obtains a dualistic character: trajectories combine as standard as partial employment. There is a delicate dynamic equilibrium between the two accommodating mechanisms, like in case of preferences to "full" or "reduced" integration. More than 60% of immigrants repeat the same order of episodes of unemployment, which end for the same reasons. More than 85% of immigrants repeat the same episodes in sequences of transitions.	-	A process of achievement of "full integration" has radical differences for immigrants, depending on their belonging to a birth cohort or an entrance cohort. Probability of transitions to full employment proportionally decreases for every later cohort. A process of achievement of reduced integration has similar tendencies for all the unemployed immigrants, independent of belonging to a birth cohort or an entrance cohort.

De facto, integration in the labor market is a time consuming process and trajectories of integration are rather multifarious. Likewise, sequences of transitions between labor market statuses differ from each other as obtaining a

simpler or more complicated form. Parallel to a general tendency of decreasing change of statuses during the first ten years of living in Finland, immigrants experience a high instability of transitions and such instability concerns mostly statuses of “unemployment” and “apprenticeship” and transitions from these statuses to employment. However, another tendency concerns transitions from unemployment to apprenticeship or to economic inactivity that leads to prolonged labor market adaptation or isolation, and social exclusion for immigrants. As employment as an economic inactivity remains the most “stable” of statuses and, consequently, transitions from this status to other ones are less frequent and the sequences of transitions have simpler forms. In explaining the mechanisms of such an affect from transitions to integration of immigrants in the labor market, one should take into account the multiplicity of contextual mechanisms contained within the specificity of the transitional labor market in Finland, within the existence of a segmented labor market, and within social-system mechanisms of integration into a social structure.

Following the arguments of Günther Schmid and Bernard Gazier (2002), one of the mechanisms of labor market integration suggests “full employment” as a “fluid equilibrium” around a standard working week over one’s life course. There could be substantial upward or downward variations from “fluid equilibrium” such as transitional employment, apprenticeship, unemployment, or “inactivity”; there is sometimes the need for adjustment to economic or technological change or simply changes in individual preferences. The transitional labor market therefore needs reliable “bridges” which would take the form of legitimized and socially protected options to choose, or negotiate career breaks, amounting in effect to the institutionalization of transitional labor markets. Additionally, integration in the labor market represents a time consuming process. Consequently, transitions between statuses occur in a dynamic way and represent an individualized character of labor careers. Looking at the modalities of coordination for all actors concerned with labor market integration, and institutions that provide such a coordination at a relatively localized level, the transitional labor market’s infrastructure predetermines all possible typologies of transitions between statuses based on institutional frames facilitating these transitions.

On the other hand, taking into account the fact that labor markets are always exposed to shocks to which workers or employees have to adjust (like in cases of economic recession, for example), mechanisms of labor market integration obtain both a contextual and “time-sensitive” character. These shocks may come from

external sources to the labor market or may also come from internal sources such as demographic ups and downs, health disasters, or family breakdowns, and therefore a need to change employer and perhaps also a job. The existence of external and internal risks that result from human intervention into the conditions of social life dictate the fluctuation of all processes in social institutions as labor markets require effective and socially legitimate institutions for adjustment.

Supposing that labor market integration implies a long-term period of adjustment to changing conditions, immigrants follow various trajectories of changing labor market statuses; this process can even have a lifelong character. Taking into account this assumption, the last status, which immigrants gain after ten years of living in Finland, is symbolically considered as a final point of integration as immigrants come to different results of integration, having obtained employment, moved from economic inactivity, or to unemployment. However, the process of labor market integration admittedly continues much longer than the first ten years of living in a country and, consequently, the situation obtains a radically different character, which the given research passes over in silence. Nevertheless, the basic argument, explaining the existence of such a mechanism as labor market integration, concerns the outcomes or quality of transitions and requires some further clarification.

After carrying out the first empirical part, the research came to the conclusion about the variability of outcomes of transitions for immigrants as leading to employment, unemployment, economic inactivity, dropping out, or other statuses (pension or apprenticeship). With respect to the outcomes of the transitions, a fruitful distinction can be made between integrative (transitions into employment), maintenance (transitions inside the employment system), and exclusionary transitions (transitions to unemployment and economic inactivity). The research proves that while integrative and maintenance transitions are relatively stable ones for immigrants, exclusionary transitions are more unstable and frequently repeated ones. In particular, transitions from “unemployment” as one of the potential “bridges” between statuses represents one of mechanisms of institutionalization of transitions for immigrants. One can imply that the effect of unemployment replacement rates and employment protection legislation are similar to each other and are opposed to the effects of passive and active labor market policies. Considering that the duality of the labor market model exists as one aspect aimed at labor market security and one aimed at labor market adjustments, institutional arrangements support labor market transitions as a strictness of employment protection is associated with more transitions between

employment and unemployment, as well as adaptation of the employed to unemployed in the institutional environment.

On the contrary, considering employment status from the position of a dynamic (longitudinal) approach as a potentially realized integration into the labor market, I looked at longitudinal employment as an attachment of the person to the labor market in a given time period (in the case of the first empirical part, that was the period between years 2000-2010). The attachment to the labor market is, of course, dependent on the timing of the labor market events that take place within that period, and these events determine the individual's employment profile over time (entailing temporality). The availability of employment during the first ten years of living in a country is evidence of a transitional state of full employment, while absence of employment becomes a state of full exclusion or full disintegration into the labor market. Following the argumentation of Ruud Muffels, Ton Wilthagen, and Nick van den Heuvel (2002), interrupted careers in the labor market might be labeled as states of partial longitudinal employment. Consequently, labor market disintegration as concerning enforced exclusion, may be especially hazardous for the long-term unemployed and underemployed.

As seen, final situations in the labor market for immigrants are rather multifarious, as well as imbalanced between integrative, maintenance, and exclusionary transitions. In fact, the current dynamics of transitions tend to lead to new forms of labor market segmentation for immigrants in Finland as many of them are stuck in exclusionary transitions, especially in unemployment and economic activity. On the other hand, in trying to associate patterns of labor market integration with "outcome" indicators of labor market performance, like employment stability, this research comes to the conclusion that there are different paths of obtaining employment, such as quick or delayed job placement. As the general thrust across transitional labor market studies was focused on transitions related to the labor market during a certain time period instead of all potential transitions that an immigrant can make during a life-course, this research also takes into account only transitions realized during a certain time period. Yet, I have chosen to focus on specificity of a "result" of transitions as leading to employment, economic inactivity, unemployment, while at the same time, rejecting a much wider range of transitions. Hypothetically, the entire multiplicity of transitions can be characterized by specific models of labor market behavior, including, more or less, frequent transitions to the same statuses (unemployment) or one more or less stable statuses (employment). Consequently, various models of behavior can be characterized by overall bifurcations of sequences of

transitions (“Entering”, “Withdrawal”, “Delayed integration”, “Quick integration”, “Exclusion”, and “Circulating”).

The basic conclusion obtained is that, despite the argument about individualism of transitions and expediency of the option for analysis of micro level transitions, and in spite of the multiplicity and diversity of individual transitions, trajectories of transitions of immigrants in Finland are, nevertheless, more or less similar; they combine maintenance, integrative, and exclusionary transitions, as well as their own potential functional meaning and value-oriented content. Following the argumentation of Talcott Parsons and Edward Shils (1951), I allow for functionalism as the basic argument for analysis of immigrants’ behavior in the labor market. Further explanation of mechanisms of integration leads to detailed investigations of action and functional imperatives, which potentially predetermine the selection of a trajectory of transitions between statuses in the labor market. The selection of a trajectory hypothetically implies that the actions of individuals, as well as selections, cannot be inter-individually random in a social system.

Looking at the typology of transitions, “Entering”, “Withdrawal”, “Delayed integration”, etc. (subchapter 5.1), the contents of these types differ from each other in having a specific functional directivity of action. Each of these types predetermines the predominance of a specific “central” status (for example, employment, or unemployment), around which other statuses are concentrated. In the case of the analysis of sequences of transitions from unemployment (subchapter 5.5), trajectories of labor behavior are conditioned by the continuity of unemployment periods and transitions to standard or partial employment and achievement of “full” or “reduced” integration (“Reducing employment”, “Part-time employment”). As in the first as was in the second cases, transitions are potentially conditioned by the functional content of activity towards obtaining job placement, while in the case of unemployment the functional content obtains a dualistic character; in fact, trajectories of behaviour combine as standard as partial employment.

Furthermore, one of the most important functional imperatives of the maintenance of social systems implies that the value-orientations of different actors in the same social system must be integrated in some measure in a common system. This is because the orientations of immigrants to the outcomes of labor market integration exist within a functioning system of employment protection and integration policy. During the process of labor market integration, the allocation of such functions to different classes or roles occurs, for example, for

immigrants with various “backgrounds” on education, profession, previous experience in employment, etc. Regulation of these processes and the performance of their function keep the system or subsystem in a sufficiently integrated manner by means of active employment policy directed toward the integration of immigrants. Considering the complexity of differentiation of roles of actors-immigrants as elements of the system known as the “labor market”, further determination of functions, allocation, and integration of roles in a social system implies a process of selection in accordance with standards of evaluation applied to characteristics of the objects by means of recruitment systems or segmentation mechanisms.

The last argument leads to more specific content of functionalism being applied to collectives, when the focus of the study concerns order in action around groups of actors. The fact that trajectories of transitions obtain more or less similar characteristics for specific groups of immigrants forces one to rethink the content of integration in the labor market from the position of collective action. Assuming that ordered systems of different personalities develop in various lines as more or less similar trajectories of labor market behavior, interacting actors with certain characteristics who deal with historically learned and transmitted types or patterns of action, or historically developed typical ways of labor market integration, do not derive characteristics directly from the actors themselves or from the situations as such. Micro and macro levels of perception of roles derive from actors in situations, but are transmitted beyond the original actors and situations, and at a given moment.

When dealing with immigrants, a somewhat different, although related, approach puts more emphasis on immigrants as particular actors in particular situations; situations are grouped, according to the regularities of action in them, into “institutions”. One can imply that immigrants follow different institutional tracks of labor market integration as many separate situations of transitions are combined into individualistic trajectories, and then into typical trajectories, which are peculiar for groups of immigrants. One should imply also that the behavior of immigrants obtains “institutionalization” as such because it contains the same or closely similar actions (or similar trajectories of labor market integration). Such similar actions are said to be institutionalized if the actors expect them to occur (so called “expectance of behavior”). Formally, one can say that the position of an actor is prescribed by his occupation. Consequently, acting as a status, one’s occupation prescribed a role. And further, consequently, institutions represent a system of roles, while larger systems are combined into a social system.

The third, and last argument, explaining the existence of different trajectories of labor market behavior lies in the notion of the importance of time with regards to the actions of immigrants. The consideration of a single action performed in a certain time period cannot be evidence of “orientation” as having a future reference. Only an empirical system of action, which has a duration in the form of trajectory and which is preferable to that point of reference (a limited observation period or cohort analysis) can be an object of scrutiny for a time-sensitive research. Therefore, the system of action is larger and more extensive in time than an action taken solely. An action performed in a certain time period has specificity differentiated from an action period of any other actor; this circumstance hypothetically explains unique sequences of transitions between labor market statuses.

Considering the labor market integration of immigrants as a long-term process, particular action in a particular point of time and in a particular situation cannot potentially signify a realized and achieved “outcome” of integration, because each action represents one of multiple steps of action being, simultaneously, a particular piece of evidence of the system of actions. Consequently, the time dimension of action lies in the mechanism, when the fundamental need for order in a system is the root of the strain, appearing when an inconsistent value system is translated into action. In relatively stable systems of action, consistent systems of value-orientations are accompanied with the process of adaptation of inconsistent subsystems into the overall structure. There is a delicate dynamic equilibrium between the two maintained by a wide variety of accommodating mechanisms, like in case of preferences to “full” or “reduced” integration. Empirically, the value-orientation is not autonomous except in the sense that it may be treated as an independent variable (a choice of trajectory of labor behavior) or interdependent with other variables in a system (employment system in a period of economic development or crisis). The basic principle of such a mechanism is that there is no priority of any factor as an initiator of change. Any change in the system can call for change in value-orientations and any “outcome” will depend on the statement of a system at a certain time.

Hypothetically, macro factors potentially obtain supreme importance especially in periods of instability of a system, for example the employment system during economic crises in Finland in 1970s or 1990s. Time-sensitive contextual mechanisms of labor market integration thus represent a strong interdependence between concrete actions of immigrants at a certain point of time, when action cannot be simply a consequence of the prevailing value system.

One should conceive, however, that immigrants experience functional integration, or integration of value-orientations, as pattern integration when an orientation to action is consistently manifested in the specific evaluative attitudes of the actors throughout the social system “employment”. The Integration of values with systems of action therefore involves priorities and allocations of diverse value components among proper occasions and relationships.

The system itself brings, however, the notion of a diversity of elements. Consequently, specific evaluative attitudes of actors differ depending on a mechanism of fragmentation of a system into segments, in which actors realize their function. At a more micro- and mesoeconomic level, the theory of transitional labor markets considers the ways individuals and social groups treat risks of transitions. Accordingly, individuals need structured opportunities, when they collide with important choices. Trajectories of labor market integration are rather multifarious for immigrants with different backgrounds and can be explained by the age pre-discrimination in the labor market especially for young and old immigrants, gender discrimination concerning mostly women, and the significance of educational background of immigrants for the Finnish labor market. All these consequences give rise to new turns of discussion about the significance of stability and heterogeneity of transitions as dependent on the significance of specific patterns of sequences of transitions especially for an immigrant population, which is initially in more marginalized position than the native population is.

The mechanism of fragmentation of the immigrant labor force is accompanied by the situation of when the boundaries of each segment of the labor market are seen to be explicable in terms of the workings of economic forces. The costs of entry to each segment may be rather different. The nature of these costs indicates that a significant amount of time is taken in overcoming or reducing the barriers against entrance to the market (see subchapter 5.3). Therefore, “time” becomes the most important measure of the costs of imperfection. However, as it is seen, other mechanisms of fragmentation of the labor market are subject to age, gender, and educational background, predetermined by the differentiation of immigrants in specific trajectories of labor market integration. Taken together, these factors turn out to be crucial for the life trajectories of immigrants.

Indeed, the mechanisms of segmentation of immigrants in the labor market lie in mechanisms of segmentally and functionally differentiated societies. Following the argumentation of Emile Durkheim (1947), these societies are constituted not by a repetition of similar homogeneous segments, but by a system

of different organs, each of which has a special role, and which are themselves formed of differentiated parts. As social elements are different by nature, they are not arranged in the same manner. Comparatively, the positions of immigrants are hypothetically coordinated and subordinated one to another inside the system known as the “labor market”, as well as the normative regulation exercises a moderating action over the structure of the labor market with existing division into sectors, occupations, types of employment, etc. Since significant influence from the mechanism of fragmented labor markets upon the specificity of integration for immigrants exists, the normative regulation is considered as an external power, which also regulates allocative and integrative functions for a specific group, “labor immigrants”. What appears from the perspective of participants to be a task-induced division of labor, represents itself from the system perspective as an increase in societal complexity. Following the argumentation of Jürgen Habermas (1987), the adaptive capacity of an action system is measured only by what the aggregate effects of actions contribute to maintaining a system in a given environment. Power and exchange relations are the dimensions in which action systems adapt themselves to the requirements of the functional specifications of social cooperation.

Talking about adaptation to the requirements of the social cooperation, I now turn to the analysis of specificity of employment systems from the mechanisms of internal coordination and flexibility. For these purposes, I examined value components, occasions, and relationships for a certain group of actors, “employed immigrants”, and working time flexibility as one more time-sensitive contextual mechanism of integration. Having analyzed the effect of the segmented Finnish labor market on the working time flexibility for immigrants, I came to a conclusion about a significant dependence of working time regimes on the character and specificity of a sector.

The basic argument explaining the differentiation of working time flexibility lies in the notion of a dualistic approach to the labor market explaining that sectoral differences have important implications for the opportunity structures and experiences faced by individual workers. Considering the labor market as a set of institutions which are, in one’s turn, subsystems of the overall system “labor market”, every institution realizes specific functions. Because each institution belongs to all societal subsystems under different aspects, none of them are suited to be the defining mark of any one of those subsystems. Rather, they have to be distinguished according to their functions. Therefore, the notion of human activity reproducing viable societal structures within a given environment, within a social

institution representing a complex of social forms that reproduce themselves, is considered as a complex of positions, roles, norms, and values in particular social structures.

Admittedly, inside a particular social structure, different values obtain different significance as, for example, inside an enterprise the value of working time, value of educational and professional background, and value of working conditions are differently estimated by employees, and combinations of these values obtain different contents. Consequently, even in combination with a negative significance of the time-factor, the significance of other factors obtains positive or negative significance, because of the proclamation of different systems of values by different groups of actors¹⁵. A similar tendency takes place, however, when the time-factor obtains positive significance in combination of positive or negative significance of other factors¹⁶.

Explaining this mechanism from the position of social-system integration, once again I turn to an argumentation of actors' orientation. Taking into account the duality of the labor market and tendencies for occupational segmentation in Finland, at the outset I mention two general features that characterize and perhaps define all such orientations concerning the choice of a flexible working time regime. The choice aspect implies that every orientation is explicitly or implicitly an orientation to alternatives and orientation involves a scanning of several possible courses of action and a choice from them. Comparatively, immigrants prefer job placement in sectors that potentially offer opportunities for realization of their professional activity according to their (immigrants') values and orientations. On the other hand, the expectancy aspect of the orientation implies that every orientation is an "expectancy" in the sense that it is an orientation to the future state of the situation and, on the other hand, is "expectancy of behavior" as well. Comparatively, this aspect of orientation is more difficult to be predicted by an "outsider" of the internal labor market, or a sector, for example. Further, the activity of an actor therefore represents flexibility of actions toward the achievement of expected orientations in a certain work environment, such as workplace flexibility, working time flexibility, flexicurity, etc.

Specifically, choice of aspects regarding the work process and working conditions is more valuable for immigrants depending on their professional or educational level. Choice of flexible working time regime refers to a motivation

¹⁵ See factor models "Dis-orientation", "Orientation to profession", "Orientation to profession and working conditions" and "Orientation to working conditions" in the subchapter 5.2.

¹⁶ See factor models "Time and working conditions", "Only time is factor", "Time and profession" and "Time, profession and working conditions" in the subchapter 5.2.

to work. Consequently, motivation is attached to an object or objects through the motivational orientation that exists in an organized system of behavior. Actors thus realize actions according to active or passive perception of alternatives. Comparatively, employed immigrants act according to their own orientations and motivations and choose to be active in flexibility or passive in perception of alternatives. Both activity and passivity share elements of “expectancy of behavior”.

The notions of duality and dualism are both indispensable if one wants to understand how immigrants as subjects orient themselves to structures of enterprise practicing flexible working time arrangements. The duality-of-structure notion is quite apposite, when one focuses on practical orientations to rules and resources, whereas another one focuses on theoretical and strategic/monitoring orientations. The idea of subject/object dualism becomes more relevant then. As one moves from the micro action to various levels of macro action, strategic/monitoring orientations become both more relevant and more instrumental in bringing about an overall transformation of structures. The duality/dualism distinction is not only relevant when one considers the way in which actors orient themselves to structures (rules and resources) in a virtual order that is timeless and spaceless. The distinction is also relevant when one looks at the relationship between situated actors and what Giddens calls, “...the structural properties of a social system” (or what to conventional sociologists are “social structures”).

Taking into account the choice aspect and the expectancy aspect of the orientation relative to employed immigrants, simultaneously with the duality-dualism of an immigrant’s subject orientation, I now move to “individual measurement” of working time flexibility in order to explain why different aspects of labor (time, profession, working conditions) are differ significantly for labor immigrants. The given research has proved that if the time factor obtains negative significance, workers and clerks have numerous combinations between flexibility of working time and preferences to have better working conditions, to get an opportunity to improve their health or to have a higher income. Thus, immigrants as actors are mostly oriented to content of work and working arrangements that prescribe their future behavior inside an enterprise and the character of their labor adaptation, while their labor integration is slowed down owing to a lower position in the labor market.

Comparatively, individual measurements of the “time-factor” are essential for employed immigrants as concerning working time arrangements in combination

with specificity of work places in various industries and occupational labor markets. However, further discussion concerning individual measurement of the time-factor leads to the next research question dealing with the contributive effect from transitions from unemployment to labor market integration of unemployed immigrants in Finland. As in the case of the analysis of trajectories of labor market integration and working time flexibility of employed immigrants, the next part of discussion is based on the contribution of three basic contextual mechanisms of integration: the transitive labor market, labor market segmentation, and particular mechanisms of social and system integration.

The basic argument that I follow in this part is the assumption that the complicated character of labor market integration for immigrants depends on the integrative capacity of the Finnish labor market. Difficulty with job placement is a complex phenomenon. Time, experience, and intentions accompany the job placement for “the hard-to-employ” unemployed immigrants without bias. The time of entrance into a labor market policy measure seems to be one of the most important factors, as well as a continuance of a measure; even uninterrupted transitions from participation to participation are significant circumstances to final job placement. Likewise, discontinued participation and recurrent long-term waiting for a new period of participation in a new measure become essential factors for future job placement.

As the research has proved, previous experience in unemployment turns out to have higher importance in multifarious alternatives of further behavior trajectories. How long has an unemployed person already been unemployed in the past? What models of behavior have become typical for him? How does he deal with economic inactivity? All of these permanently existing patterns become serious obstacles to further employment and embarrass labor behavior. And what is more important is that the intentions for job placement of the “hard-to-employ” unemployed immigrants as part of the unemployed population itself within labor market institutions turn out to be a crucial factor for the overall dynamics of the labor market.

Unemployment has a cyclical character, because it represents a process during which transitions from participation in one measure to another, combining various variants of activity with the aim of job placement, complete a “cycle” as recurrent unemployment occurs. In one’s turn, employment policy measures or training/retraining programs are effective for final job placement as constituent parts of a plan of a complex adaptation and integration of unemployed population in the labor market. The time period of unemployment and probability to stay in

this status essentially differs depending on a status, to which a transition occurs, as well as the time of completion of unemployment. Transitions to employment have a periodic wavelike character and, in time, the probability for job placement to one of the forms of employment essentially decreases.

Therefore, as in case of working time flexibility, behavior in unemployment admittedly has motivational and normative contents, when setting ends toward final job placement and choosing means (participation in employment policy measures, for example) become supreme motives to the completion of unemployment. However, having analyzed the influence of four basic factors as gender, education, age (birth cohort), and time of entrance into unemployment (period effect) to specify participation in and completion of unemployment, I came to the conclusion that there is a significant influence of period effects in models of behavior of unemployed immigrants during various periods of economic development in Finland.

Consequently, talking about the influence of the “period effect” in transitions, one should consider one important aspect as the notion of temporality in self-regulation and self-maintenance of the system “labor market” (Giddens, 1979, p.54). The analytical philosophy of action lacks a theorization of institutions, as two other considerations are vital to such a theorization. The first is the incorporation of temporality into the understanding of human agency; the second is the incorporation of power as integral to the constitution of social practices. As a fundamental theme of this dissertation, I regard the time-space intersections as essentially involved in all social existence. Thus, social activity is always constituted in three intersecting moments of difference: temporally, paradigmatically (invoking structure, which is present only in its instantiation), and spatially. All social practices are situated activities in each of these senses.

Talking about the significance of a period effect in transitions from unemployment and participation in labor market training, I came to a conclusion about the different models of behavior of unemployed immigrants during different periods of historical development in Finland (1952-2014). The research results signify that immigrants, who became unemployed during later periods of economic development of Finland, realize more transitions from unemployment to job placement through employment services, to reduced working week or to the labor market training. Such immigrants potentially interrupt their labor market training more often and start new labor market training. However, the factor of an earlier entrance into the employment system (earlier period of economic development) does not potentially have any influence on transitions from

unemployment; these immigrants will potentially interrupt labor market training because of job placement matching new or other qualifications.

Talking about recurrences of unemployment and looking more closely at temporal aspects of the constitution of social systems (like the employment system, for example), one should take into account the dual character of a system as its temporality of social conduct and spatial attributes. However, one should treat “time” and “space” as “environments” in which social conduct is enacted. Time can be treated as a sort of “boundary” to stable social orders, as, for example, various periods of economic development in Finland demonstrate different models of integration of immigrants in the labor market. Consequently, the process of labor market integration is considered as such during a certain time and it is impossible to compare this process with similar process that would occur during another period of development of a system, or would have other “boundaries” of social orders. As Anthony Giddens argues, “...the assimilation of time and change is the equation of the a-temporal or the static with stability” (1979, pp.201). However that may be, when analyzing a systems of interactions as “patterns”, it is impossible to avoid a notion of a “snapshot” of relations of social interaction, because any patterns of interaction that exist are situated in time. Only when examined over time they form “patterns” at all.

The extension of unemployment histories in time and space has been mentioned when I told about unemployment periods as events (from positions of static approach) and sequences of events (from positions of dynamic approach). Time-scales of activity of unemployed immigrants based on a dynamic approach through analysis of sequences of transitions from unemployment have allowed for estimating long-term careers of the unemployed in a life-long-perspective. The interconnection of time and space has been explored in terms of the participation of unemployed immigrants in cycles of unemployment through time, as well as at the level of the transformation of employment system in Finland itself. Thus, any social transition has also been considered as a movement through space. Social interaction from this point of view could be understood as the “coupling” of paths in social encounters; it emphasizes the co-ordination of movement in time and space in social activity, as the coupling of a multiplicity of paths or trajectories.

Based on the assumption about the dual character of the employment system as the temporality of social conduct and its spatial attributes, I analyze how individual factors, which are peculiar to individuals, are coordinated with the influence of system (macro) factors as different periods of employment systems

in Finland. Essentially, I did not find confirmations about the influence of micro factors to models of behavior in unemployment and intensity of transitions from unemployment or intensity of participation in labor market training. On the other hand, the factor of time, when unemployment has just started for immigrants in Finland, has confirmed a factor of significant differences in models of behavior among unemployed immigrants. Consequently, this last conclusion leads to an assumption about differentiation of employment systems during different periods of economic development and different models of normative regulation as concerning integration of immigrants in the labor market. Once again, analysis leads to the notion of importance of time, even though in this case time obtains factual significance.

Descriptive and dynamic approaches to investigation of social system development allow for consideration of a system of action as based on the notion of time. The complete analysis of a system of action for unemployed immigrants during the period 1952-2014 involves a description both of the state and of the changes in the system through time, involving changes in the relations of the constituent variables (continuity of unemployment periods, for example). The dynamic analysis thus represents the processes of action in a sequence analysis (subchapter 5.5). Hence, it should be understood that when I describe the orientations of action in a given system as applied to a certain period, I am describing the state of the system at a given moment. Consequently, when I talk about “period effect”, I refer to the analysis of given orientations that are also those referred to in the analysis of the processes, which maintain one system of orientation rather than another. Even though by means of the sequence analysis I show that orientations move from one period of development of employment system to another, I still refer to a period when unemployment has just started, not to a period when unemployment ended. Therefore, I consider and describe a system of orientation in a certain period as a period of beginning unemployment.

When talking about different statements of a system, one should note that a differentiation of functions within any action system always exists as functionally differentiated societies exist. Every system works in such a way that a statement of a system conditions an allocation of such functions to different classes of roles in a certain period. Comparatively, the regulation of allocative processes inside the system “labor market” and performance of the functions by actors keep the system in a sufficiently integrated manner, as operation of this system is impossible without a system of definitions of roles and sanctions for conformity or deviation, for example an unemployment policy. The structure of the system

“labor market” in this respect may be regarded as the cumulative and balanced resultant of many selections of many individuals, as stabilized and reinforced by the institutionalization of value patterns that legitimize commitment to certain directions of selection and mobilize sanctions in the support of the resultant orientations.

Orientations to and realization of allocative or integrative roles may be considered as important integrative mechanisms of the society and, consequently, the general requirement for integration of immigrants depends on the realization of these roles. Integration demands, however, that the control of allocative and integrative processes would be associated with the same, or with closely interacting, roles. The roles of actors-immigrants, however, is rather multilateral in this case, because they realize more allocative¹⁷ than integrative functions¹⁸.

As Talcott Parsons and Edward Shils argue, “...it must be recognized that no social system is ever completely integrated just as none is ever completely disintegrated” (1951, p.26). This basic argument emphasizes the basic principle of activity of every system as the permanent existence of elements that are not integrated in a certain time period. Considering immigrants as actors of the system “labor market”, one can imply that a certain niche in the labor market exists for those immigrants who could not become integrated into the system, such as economically inactive immigrants. Such a sector of “unintegratedness” potentially includes those actors whose expectations and orientations to fulfillment of institutional roles have not been realized. Consequently, the existence of such a category of actors is an inevitable phenomenon in every system as it implies imbalance in a system and its urge towards self-maintenance and new situation of equilibrium.

The existence of such a category of actors, however, gives birth to a change in the structure of the system. In the case of the coexistence of “incompatible” elements or processes within the same system, a given state of the system is mentioned and, consequently, a static descriptive approach to analysis of this system is applied. If, for example, immigrants as actors of the system “labor market” would become integrated completely, one of two variants of development of the system would be possible. On the one hand, incompatibility between immigrants and the native population in the labor market would be completely eliminated. On the other hand, in the case of appearance of new processes in the system as conditioned, for example, by new wave of economic

¹⁷ Orientations to the system “labor market” as a whole.

¹⁸ Realization of functions inside the system “labor market” as related to one another.

restructuring, new labor market relations would appear and would be maintained. Consequently, there would have to be adjustments in other parts of the system, bringing the system into a new state of equilibrium. Hypothetically, this second variant has already taken place in Finland during periods of economic restructuring in the 1970s and 1990s and, admittedly, significant differences between models of behavior of unemployed immigrants in Finland during those periods are evidence of different statements of the system “labor market”.

To conclude, integration into the labor market is more often presented from the positions of the macro approach, formulated by national authorities in the form of immigration and integration policy and legislation. Consequently, estimating the effects from these policies to real lives of immigrants are often eliminated or limited to analysis of some indicators of integration, for example access to employment. The influence from integration policy in Finland is often considered in the context of macro policy (OECD, Eurostat, MIPEX), while understanding individual measurements of integration remains outside the macro approach of the integration policy. While investigations of individual content of integration are more often based on results from qualitative interviews, this research aims to understand individual measurements of integration based on longitudinal data with usage of quantitative methods. Thus, the combination of the macro nature of phenomenon “integration” with analysis of individual measurements of integration brings new substantiation of time-sensitive contextual mechanisms of integration and innovative content. The research is based on large Finnish databases, including FLEED and URA-database, encompassing large samplings and covering large observation periods (i.e. from 1952-2014). It proposes new methodological solutions in combination with recently developed quantitative methods.

The nature of arguments for substantiation of multiple contextual mechanisms of labor market integration originates from several fundamental theories explaining the existence and operation of transitions in the labor market, segmentation, and fragmentation of labor markets, as well as specificity of processes of marginalization, pre-entry discrimination, and stigmatization. Based on the specification of the research to analyze labor market integration from the position of a time-sensitive approach, this research proves that specificity of integration is “sensitive” to time, when it is considered as a static phenomenon. It is even more sensitive to time as an instrument of adaptation to conditions of the employment system as a dynamic phenomenon.

This research is, to some extent, innovative, because it substantiates the time-sensitive approach to an analysis of contextual mechanisms of labor market integration for a specific group of working-able population specifically labeled as “immigrants”. On the other hand, the approach undertaken in this research has a dualistic “descriptive-dynamic” character, because integration is understood as a never-ending process, which is conditioned by a time period of long-term existence and a context of solitary action. As every scientific work always clashes with challenges, this research has not avoided the pre-existing challenges to be considered. The time-sensitive approach proposed as the basic one in this research is often applied to computer sciences. Applying this approach to sociological explanations of integration in the labor market, I can imagine another content of this approach. This pre-condition predetermines also the nature of methodological background for the research in usage of such “time-sensitive” methods as sequence analysis and event-history analysis.

Through this research, I argue that the nature of contextual mechanisms originates from different resources of a macro character. Based on the overall regularities of the existence of transitional labor markets, I argue that contextual mechanisms relative to an immigrant labor force can be described by institutionalization of transitions, risks, and outcomes of transitions. Specificity of transitions between statuses in many respects depends on specific integrative capacity of the Finnish labor market. On the other hand, taking into account the societal nature of labor market integration, contextual mechanisms are admittedly conditioned by function, action, orientation, and the motivation of immigrants as individuals. Finally, in many respects, normative borders of legislation in conformity with a specific immigrant labor force and the existence of labor market segmentation in the Finnish labor market condition contextual mechanisms of labor market integration. These mechanisms mainly concern marginalization, stigmatization, pre-entry discrimination, and dualism of the labor market as addressed to an immigrant labor force.

This research is significant also to a certain extent owing to a specific theoretical contribution to understanding the nature of integration as a four-element phenomenon (transitions, social and system integration, segmentation, and flexibility). Based on the theory of the transitional labor market, this research brings new evidences concerning transitions in the labor market for immigrants in Finland as one of the categories of contextual mechanisms of integration. On the other hand, recognizing the societal specificity of labor market integration, this research brings a new understanding of processes of social and system

integration for immigrants in Finland as the second category of contextual mechanisms. Finally, this research partly contributes to the discussion of contextual mechanisms of labor market segmentation and brings new evidence for the existence of tendencies for segmentation among employed and unemployed immigrants. Considering the “time-sensitive” nature of labor market integration, this research implies a special methodological solution to the analysis of long-term trajectories of labor market behavior of immigrants in Finland and brings specific methodological contribution to the understanding of labor market integration as a longitudinal long-term dynamic process.

Taking into account the importance of the inclusion of immigrants into working life and understanding of mechanisms, which contribute to successful inclusion or exclusion in the labor market, this research is valuable for the elaboration of integration programs for immigrants as such. As well, to some extent, it is worthwhile for elaboration of general integration policy in Finland. This research, to some extent, contributes to the notion of labor market integration policy and understanding of the nature and origin of integration for specific categories of immigrants in Finland by means of analysis of indicators of immigrant integration policy proposed by MIPLEX, Eurostat, and the OECD. So far, I studied the different dimensions of these integration policies and their outcomes as applied to the foreign-born population of Finland. For each of the areas of immigrant inclusion policy, I examined important dimensions of labor market statuses such as labor market inclusion, access, and eligibility, as well as security of employment status, labor market integration measures, and rights associated with labor market participation.

However, considering the mostly sociological character of the dissertation and understanding of contextual mechanisms of integration, this research omits descriptive characterization of immigrants grouped by their nationalities, occupations, sectors in which immigrants work, as well as nationalities and specificity of transitions to sectors or occupation when the matter concerns behavior in unemployment periods. Taking into account a more encompassing characteristic of the immigrant population, this research is devoid of practical examples of real “portraits” of immigrants, as many contextual mechanisms cannot be illustrated by practical evidences. Considering that the concept of labor market integration is a multidimensional concept, I interpret this concept mostly from positions of inclusion into employment as “access to employment”. Consequently, understanding of the concept “labor market integration” is to some extent limited. However, taking into account the large period of observation and

opportunities to analyze processes of labor market integration during various periods of economic development in Finland in combination with the individualistic contents of labor careers of immigrants, this research is undoubtedly innovative and beneficial owing to the many various findings concerning labor market integration of immigrants.

Despite the chosen research logic, investigation of labor integration would have even more dimensionalities if it would be based on alternative data sets, linked with other research fields, or if different methods were applied to same data. In talking about areas for further development and research, one should mention that only limited opportunities of the datasets FLEED and URA-database have been used in this research. Thus, the unemployment of immigrants would be studied by means of the FLEED-database, offering a much larger sample and opportunities for deeper research. Likewise, the URA-database would be used for carrying out research based on the time-series data and would provide an even more profound examination of periods of economic development in Finland. Finally, one of the most interesting researches could concern the link between the general integration policy and a specific labor market outcome across countries, based on a qualitative comparative analysis. This mentioned methodological approach based on new international datasets (for example, the Labor Force Survey) can better explain the nuanced links between integration policies and their societal outcomes. A new study of integration would also consider time-sensitive contextual factors and general policies across countries with different welfare models.

As Anthony Giddens said, “...neither time nor the experience of time are aggregates of ‘instants’” (Giddens, 1979, p.55). One can reformulate this expression saying that neither integration, nor the experience of integration, are aggregates of instants. Talking about the significance of time in labor market integration for immigrants, I step-by-step prove that it is one of the most powerful factors in integration. Time is decisive when integration has just started, and has supreme importance in the further working life of immigrants. Time is also decisive as a tool of flexibility for immigrants already working, and as a tool of overcoming segmentation and marginalization in the employment sphere. Finally, time is especially decisive when unemployment dictates one’s own regularities and causes more flexible and more motivated labor adaptation. As a factor of continuity in a certain moment, time nevertheless affects the future dimensions of an immigrants’ integration.

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8 APPENDIX

8.1 Appendix to 5.1 “Trajectories of labor market integration”

Figure 1. Transition rates in each year of the observation period

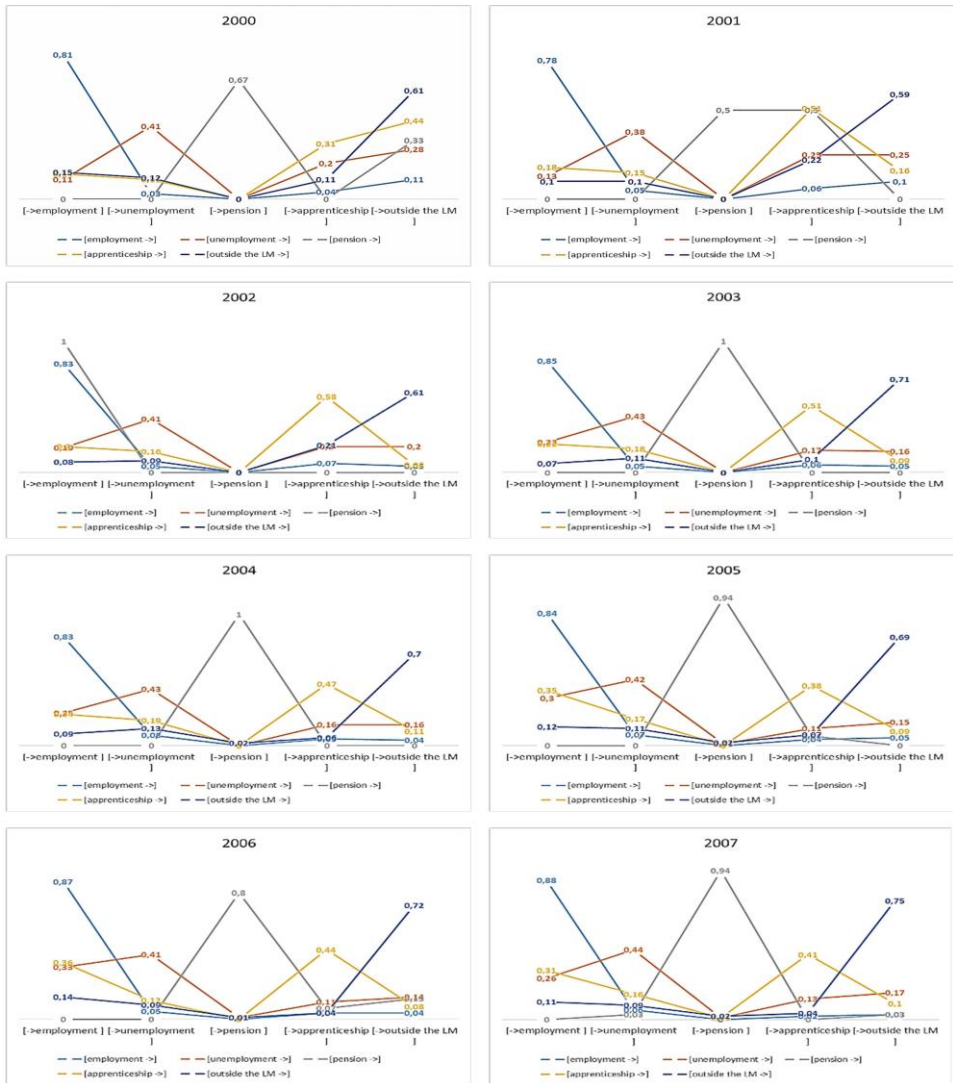


Table 1. Trajectory types according to age, gender and education (2000 and 2010 years)

	Gender	Number		%		Mean age	Std. Deviation (age)	No professional education	New educational degree (% of those, who obtain degree, in a group)	Educational code changed and appeared in the Register (% of those, who changed a code, in a group)
		2000	2010	2000	2010					
		2000	2010	2000	2010	2000	2000	2000	2000-2010	2000-2010
Type 1 "Entering"	Men	51	36	25,9	21,8	28,0	15,211	94,1	21,6	25,5
	Women	146	129	74,1	78,2	29,2	13,190	90,4	15,1	26,7
	Total	197	165	100	100	28,9	13,711	91,4	16,8	26,4
Type 2 "Withdrawal"	Men	202	88	62,5	55,4	29,8	9,471	93,1	16,8	19,3
	Women	121	71	37,5	44,6	28,5	9,133	89,3	20,7	26,4
	Total	323	159	100	100	29,3	9,354	91,6	18,3	22
Type 3 "Delayed integration from appr."	Men	93	93	51,1	51,1	17,9	6,621	97,8	65,6	66,7
	Women	89	89	48,9	48,9	21,6	9,928	93,3	78,7	79,8
	Total	182	182	100	100	19,7	8,583	95,6	72	73,1
Type 4 "Dropout"	Men	160	1	55,4	-	33,3	13,968	96,9	1,9	0
	Women	129	5	44,6	-	33,4	15,322	93	1,6	3,1
	Total	289	6	100	100	33,4	14,562	95,2	1,7	1,4
Type 5 "Quick integration"	Men	339	323	68,3	68	29,2	7,821	92	20,1	26
	Women	157	152	31,7	32	29,5	8,160	87,9	27,4	36,9
	Total	496	475	100	100	29,3	7,923	90,7	22,4	29,4
Type 6 "Circulating"	Men	138	128	40,8	40,3	32,2	12,283	84,1	16,7	21
	Women	200	190	59,2	59,7	36,4	10,745	77	17	23,5
	Total	338	318	100	100	34,7	11,567	79,9	16,9	22,5
Type 7 "Pension"	Men	23	20	57,5	58,8	44,6	15,660	82,6	0	0
	Women	17	14	42,5	41,2	46,5	13,271	88,2	0	0
	Total	40	34	100	100	45,4	14,544	85	0	0
Type 8 "Delayed integration from unemp."	Men	153	152	37,1	37,3	25,6	9,279	83,7	27,5	34
	Women	259	256	62,9	62,7	29,8	9,184	78	23,2	39,4
	Total	412	408	100	100	28,3	9,436	80,1	24,8	37,4
Type 9 "Exclusion"	Men	87	68	42	43,1	35,0	14,430	97,7	5,7	3,4
	Women	120	90	58	56,9	31,4	12,346	95	5	6,7
	Total	207	158	100	100	32,9	13,347	96,1	5,3	5,3
Type 10 "Apprenticeship"	Men	44	43	39,3	39,8	17,4	5,462	90,9	61,4	61,4
	Women	68	65	60,7	60,2	20,6	8,823	91,2	64,7	69,1
	Total	112	108	100	100	19,3	7,812	91,1	63,4	66,1
Total	Men	1290	952	49,7	47,3	29,1	11,691	91,6	21,2	24,4
	Women	1306	1061	50,3	52,7	30,3	11,823	86,4	23,4	31,3
	Total	2596	2013	100	100	29,7	11,770	89	22,3	27,9

Table 2. Trajectory types and their short description. N=2596.

	%	Typical sequences of statuses
Type 1 "Entering"	7.6	<ul style="list-style-type: none"> • outside the labor market (first half of the period) – circulation of statuses – employment (3 years) • unemployment (first 3 years of the period) – outside the labor market – circulation (unemployment and apprenticeship) – unemployment (last 3 years of the period) • apprenticeship, unemployment or outside the labor market – outside the labor market or circulation of statuses – dropout (the second half of the period) • outside the labor market or unemployment – apprenticeship, employment or unemployment (sometimes circulation) – outside the labor market
Type 2 "Withdrawal"	12.4	<ul style="list-style-type: none"> • employment (the first half of the period) – (outside the labor market or unemployment) – dropout (the first half of the period) • employment – circulation of statuses – outside the labor market (the second half of the period)
Type 3 "Delayed integration from apprenticeship"	7	<ul style="list-style-type: none"> • apprenticeship – employment – (apprenticeship, employment, outside the labor market or unemployment) – employment (3-8 years)
Type 4 "Dropout"	11.1	<ul style="list-style-type: none"> • outside the labor market or employment – (outside the labor market or circulation) – dropout (4-10 years)
Type 5 "Quick integration"	19.1	<ul style="list-style-type: none"> • short first status – (circulation of twelve months' statuses) – employment (3-10 years) • (employment) – outside the labor market, apprenticeship, unemployment or circulation of statuses – employment (3-10 years)
Type 6 "Circulating"	13	<ul style="list-style-type: none"> • first status – second longer status – circulation of statuses – unemployment (the longest status) • apprenticeship – unemployment or outside the labor market, rarely employment – circulation of statuses – outside the labor market (1 year)
Type 7 "Pension"	1.5	<ul style="list-style-type: none"> • outside the labor market – (circulation of statuses) - pension (4-7 year) • apprenticeship or unemployment – outside the labor market, apprenticeship or unemployment (1-5 years) – (circulation of statuses) – pension (3-6 years)
Type 8 "Delayed integration from unemployment and inactivity"	15.9	<ul style="list-style-type: none"> • first prolonged status – second prolonged status – circulation of short-term statuses – employment (the second half of the period)
Type 9 "Exclusion"	8	<ul style="list-style-type: none"> • outside the labor market, apprenticeship, unemployment or employment – (unemployment) – outside the labor market (6-7 years) or circulation of statuses – dropout (2-3 years) • apprenticeship, employment – (unemployment, employment or outside the labor market, sometimes circulation of statuses) – outside the labor market (1-10 years)
Type 10 "Apprenticeship"	4.3	<ul style="list-style-type: none"> • apprenticeship (1-10 years) – one of statuses – (circulation of statuses) – employment (1-3 years) • apprenticeship (first 3 years) – outside the labor market or unemployment – apprenticeship – circulation of statuses – unemployment (1-3 years) • apprenticeship (the first half of the period) – outside the labor market, unemployment or employment – (apprenticeship) – circulation of statuses – outside the labor market (last 3 years) • apprenticeship - outside the labor market, unemployment or employment – (apprenticeship) – circulation of statuses – apprenticeship (the second half of the period)

8.2 Appendix to 5.2 “Working time flexibility of employed immigrants”

Table 1. KMO and Bartlett’s Test

KMO and Bartlett’s Test		1 ESS Round	2 ESS Round	3 ESS Round	4 ESS Round	5 ESS Round
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		,607	,436	,518	,546	,596
Bartlett’s Test of Sphericity	Approx. Chi-Square	125,316	52,443	79,183	150,078	144,353
	df	21	28	21	28	36
	Sig.	,000	,003	,000	,000	,000

Table 2. Communalities^a

	1 ESS Round		2nd ESS Round		3rd ESS Round		4th ESS Round		5th ESS Round	
	Initial	Extraction	Initial	Extraction	Initial	Extraction	Initial	Extraction	Initial	Extraction
Contracted hours	0,856	0,852	0,860	0,928	0,894	0,834	0,914	0,999	0,783	0,931
Occupation	0,424	0,573	0,506	0,460	0,244	0,412	0,544	0,974	0,316	0,592
Education	0,423	0,654	0,539	0,999	0,160	0,217	0,403	0,478	0,428	0,578
Establ. size	0,149	0,307	0,452	0,435	0,202	0,999	0,243	0,363	0,294	0,425
Empl.contract	0,260	0,388	-	-	-	-	-	-	0,125	0,158
Industry	0,373	0,531	0,633	0,770	-	-	0,319	0,491	0,132	0,142
Normal hours	0,861	0,999	0,863	0,867	0,903	0,999	0,914	0,913	0,780	0,836
Health	-	-	0,589	0,999	0,270	0,165	0,156	0,285	0,317	0,999
Income	-	-	0,525	0,648	0,248	0,417	0,309	0,655	0,290	0,397

Extraction Method: Unweighted Least Squares.

a. One or more communality estimates greater than 1 were encountered during iterations. The resulting solution should be interpreted with caution.

Table 3. Total Variance Explained

1 ESS Round - Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,473	35,327	35,327	2,238	31,966	31,966	1,874	26,778	26,778
2	1,874	26,769	62,096	1,503	21,478	53,444	1,640	23,433	50,212
3	1,084	15,492	77,588	,565	8,074	61,518	,791	11,307	61,518
4	,635	9,067	86,656						
5	,472	6,738	93,394						
6	,389	5,556	98,949						
7	,074	1,051	100,000						

Extraction Method: Unweighted Least Squares.

2 ESS Round - Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,768	34,594	34,594	2,539	31,731	31,731	2,210	27,623	27,623
2	1,700	21,252	55,846	1,530	19,121	50,852	1,421	17,759	45,382
3	1,346	16,820	72,665	1,194	14,920	65,772	1,360	16,996	62,378
4	1,082	13,524	86,190	,855	10,693	76,465	1,127	14,086	76,465
5	,504	6,298	92,488						

6	,345	4,318	96,806					
7	,188	2,356	99,162					
8	,067	,838	100,000					

Extraction Method: Unweighted Least Squares.

3 ESS Round - Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,318	33,115	33,115	2,122	30,317	30,317	2,067	29,523	29,523
2	1,512	21,604	54,719	1,067	15,239	45,556	1,092	15,605	45,128
3	1,153	16,466	71,185	,878	12,548	58,104	,908	12,976	58,104
4	,887	12,665	83,851						
5	,641	9,152	93,003						
6	,438	6,253	99,256						
7	,052	,744	100,000						

Extraction Method: Unweighted Least Squares.

4 ESS Round - Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,457	30,713	30,713	2,289	28,609	28,609	1,994	24,930	24,930
2	1,809	22,609	53,322	1,549	19,359	47,968	1,451	18,136	43,066
3	1,251	15,633	68,955	,798	9,974	57,942	,889	11,109	54,175
4	1,032	12,895	81,850	,524	6,555	64,497	,826	10,322	64,497
5	,595	7,434	89,284						
6	,536	6,704	95,988						
7	,277	3,459	99,447						
8	,044	,553	100,000						

Extraction Method: Unweighted Least Squares.

5 ESS Round - Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,489	27,654	27,654	2,236	24,839	24,839	1,893	21,034	21,034
2	1,994	22,150	49,804	1,615	17,946	42,786	1,183	13,148	34,182
3	1,082	12,022	61,826	,795	8,833	51,619	1,021	11,344	45,526
4	1,022	11,360	73,186	,416	4,624	56,242	,965	10,717	56,242
5	,758	8,424	81,610						
6	,698	7,756	89,366						
7	,437	4,857	94,223						
8	,404	4,487	98,710						
9	,116	1,290	100,000						

Extraction Method: Unweighted Least Squares.

Table 4. Factor Matrix and Rotated Factor Matrix

1 ESS Round

	Factor Matrix ^a				Rotated Factor Matrix ^a		
	Factor				Factor		
	1	2	3		1	2	3
Normal hours	,905	,376	,202	Normal hours	,980		,194

Contracted hours	,856	,278	,204	Contracted hours	,903	-,119	,149
Empl.contract	-,441	-,189	,397	Education		,765	,260
Education	-,311	,731	-,154	Occupation		-,755	
Occupation	,382	-,652		Industry	-,104	,675	-,254
Industry	-,470	,481	,279	Empl.contract	-,285		-,547
Establ.size	,166	,242	-,470	Establ.size			,547
Extraction Method: Unweighted Least Squares.				Extraction Method: Unweighted Least Squares.			
a. 3 factors extracted. 6 iterations required.				Rotation Method: Varimax with Kaiser Normalization.			
				a. Rotation converged in 4 iterations.			

2 ESS Round

	Factor Matrix ^a					Rotated Factor Matrix ^a			
	Factor					Factor			
	1	2	3	4		1	2	3	4
Contracted hours	,905	,101	-,307		Contracted hours	,903	,174		,285
Normal hours	,902	-,115	-,130	-,148	Normal hours	,900	,205	-,114	
Occupation	-,594	-,220	-,215	-,113	Establ.size	-,631			,181
Establ.size	-,526	,199	,101	,329	Education		1,002		
Health		,842	,214	-,492	Occupation	-,403	-,532		
Industry	,190	-,730	,446		Health		,155	,983	-,101
Education	,448	,304	,753	,384	Industry	,131	,177	-,603	-,598
Income	,183	,289	-,463	,562	Income				,796
Extraction Method: Unweighted Least Squares.					Extraction Method: Unweighted Least Squares.				
a. 4 factors extracted. 22 iterations required.					Rotation Method: Varimax with Kaiser Normalization.				
					a. Rotation converged in 6 iterations.				

3 ESS Round

	Factor Matrix ^a				Rotated Factor Matrix ^a		
	Factor				Factor		
	1	2	3		1	2	3
Normal hours	,991	-,150	,111	Normal hours	1,007		
Contracted hours	,886	-,208		Contracted hours	,911		
Health	-,393			Health	-,375	-,155	
Establ.size	,273	,960	,103	Establ.size	,109	,997	
Occupation	,146	-,137	-,610	Occupation		-,180	-,610
Income	-,318	-,205	,524	Income	-,204	-,192	,582
Education		-,107	,448	Education	,143		,441
Extraction Method: Unweighted Least Squares.				Extraction Method: Unweighted Least Squares.			
a. 3 factors extracted. 17 iterations required.				Rotation Method: Varimax with Kaiser Normalization.			
				a. Rotation converged in 4 iterations.			

4 ESS Round

	Factor Matrix ^a					Rotated Factor Matrix ^a			
	Factor					Factor			
	1	2	3	4		1	2	3	4
Contracted hours	,894	,391	,216		Contracted hours	,992			,113
Normal hours	,880	,344	,143		Normal hours	,935		,125	,148
Occupation	-,474	,816	-,289		Occupation	-,148	-,911	-,316	,150
Education	,212	-,589		-,293	Education		,665		,178
Industry	-,317	-,259	,552	,135	Income	,181	,125	,776	

Establ.size	,187	-,338	-,463		Industry	-,198	,237	-,167	-,606
Income	,475	-,272	-,294	,518	Health	-,138	-,244		-,448
Health	-,289	,104	,203	,386	Establ.size	-,137	,215	,364	,407
Extraction Method: Unweighted Least Squares.					Extraction Method: Unweighted Least Squares. Rotation Method: Varimax with Kaiser Normalization.				
a. Attempted to extract 4 factors. More than 25 iterations required. (Convergence=.001). Extraction was terminated.					a. Rotation converged in 6 iterations.				

5 ESS Round

	Factor Matrix ^a					Rotated Factor Matrix ^a			
	Factor					Factor			
	1	2	3	4		1	2	3	4
Contracted hours	,785	,527	,193		Contracted hours	,950			-,114
Normal hours	,752	,487	,137	-,119	Normal hours	,903		,139	
Establishment size	,470	-,311		,324	Establishment size	,165	,606	,162	
Education	,395	-,639	,117		Education		,587		,475
Occupation	-,339	,535	-,112	,423	Income	,175	,500	-,236	,246
Industry		-,308		-,205	Empl.contract	,137	-,361		
Empl.contract		,295		-,248	Health	,233	,202	,943	,132
Health	,670	-,133	-,732		Occupation		-,208		-,735
Income	,317	-,331	,416	,117	Industry	-,195			,322
Extraction Method: Unweighted Least Squares.					Extraction Method: Unweighted Least Squares. Rotation Method: Varimax with Kaiser Normalization.				
a. 4 factors extracted. 14 iterations required.					a. Rotation converged in 5 iterations.				

Table 5. Reproduced Correlations

1 ESS Round - Reproduced Correlations

	Contracted hours	Occupation	Education	Establishment size	Employment contract	Industry, NACE	Normal hours
Reproduced Correlations							
Contracted hours	,851 ^a	,134	-,094	,114	-,349	-,212	,920
Occupation, ISCO88	,134	,573 ^a	-,586	-,069	-,066	-,508	,090
Education	-,094	-,586	,654 ^a	,198	-,062	,455	-,038
Establishment size	,114	-,069	,198	,307 ^a	-,306	-,092	,147
Employment contract	-,349	-,066	-,062	-,306	,388 ^a	,227	-,391
Industry, NACE rev.1	-,212	-,508	,455	-,092	,227	,531 ^a	-,189
Total normal hours	,920	,090	-,038	,147	-,391	-,189	1,000 ^a
Residual^b							
Contracted hours		-,005	,008	-,004	,008	-,015	,001
Occupation, ISCO88	-,005		-,003	,020	,021	-,002	,009
Education	,008	-,003		,010	,013	-,005	-,004
Establishment size	-,004	,020	,010		-,001	,010	,004

Employment contract	,008	,021	,013	-,001		,010	-,007
Industry, NACE rev.1	-,015	-,002	-,005	,010	,010		,016
Total normal hours	,001	,009	-,004	,004	-,007	,016	

Extraction Method: Unweighted Least Squares.

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 0 (,0%) nonredundant residuals with absolute values greater than 0.05.

2 ESS Round - Reproduced Correlations

	Contracted hours	Normal hours	Health	Occupation	Industry, NACE	Education	Income	Establishment size
Reproduced Correlation								
Contracted hours	,928 ^a	,855	-,015	-,486	-,036	,178	,298	-,509
Total normal hours	,855	,867 ^a	-,120	-,466	,205	,214	,109	-,560
Health	-,015	-,120	1,000 ^a	-,130	-,510	,194	-,146	,067
Occupation, ISCO88	-,486	-,466	-,130	,460 ^a	-,043	-,538	-,136	,210
Industry, NACE	-,036	,205	-,510	-,043	,770 ^a	,181	-,410	-,216
Education	,178	,214	,194	-,538	,181	1,000 ^a	,037	,027
Income	,298	,109	-,146	-,136	-,410	,037	,648 ^a	,100
Establishment size	-,509	-,560	,067	,210	-,216	,027	,100	,435 ^a
Residual^b								
Contracted hours		,022	,004	-,003	,006	-,009	-,004	,034
Total normal hours	,022		-,013	,049	-,022	,030	-,018	-,005
Health	,004	-,013		-,008	-,003	-,001	-,004	-,007
Occupation, ISCO88	-,003	,049	-,008		-,015	-,006	-,027	,061
Industry, NACE	,006	-,022	-,003	-,015		-,003	-,001	-,013
Education	-,009	,030	-,001	-,006	-,003		-,009	,032
Income	-,004	-,018	-,004	-,027	-,001	-,009		-,014
Establishment size	,034	-,005	-,007	,061	-,013	,032	-,014	

Extraction Method: Unweighted Least Squares.

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 1 (3,0%) nonredundant residuals with absolute values greater than 0.05.

3 ESS Round - Reproduced Correlations

	Contracted hours	Normal hours	Occupation, ISCO88	Establishment size	Income	Education	Health
Reproduced Correlation							
Contracted hours	,834 ^a	,917	,113	,050	-,200	,114	-,334
Total normal hours	,917	1,000 ^a	,098	,137	-,226	,131	-,382

Occupation, ISCO88	,113	,098	,412 ^a	-,155	-,338	-,249	-,012
Establishment size	,050	,137	-,155	1,000 ^a	-,229	-,038	-,195
Income	-,200	-,226	-,338	-,229	,417 ^a	,236	,114
Education	,114	,131	-,249	-,038	,236	,217 ^a	-,041
Health	-,334	-,382	-,012	-,195	,114	-,041	,165 ^a
Residual^b							
Contracted hours		,022	-,020	,002	,000	-,027	,044
Total normal hours	,022		-,020	-,004	,000	-,026	-,008
Occupation, ISCO88	-,020	-,020		-,017	-,001	,000	-,105
Establishment size	,002	-,004	-,017		,000	-,023	-,023
Income	,000	,000	-,001	,000		-,001	,000
Education	-,027	-,026	,000	-,023	-,001		-,144
Health	,044	-,008	-,105	-,023	,000	-,144	

Extraction Method: Unweighted Least Squares.

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 2 (9,0%) nonredundant residuals with absolute values greater than 0.05.

4 ESS Round - Reproduced Correlations

	Contracted hours	Normal hours	Health	Occupation, ISCO88	Industry, NACE	Education	Establishment size	Income
Reproduced Correlation								
Contracted hours	1,000 ^a	,953	-,189	-,167	-,270	-,025	-,064	,235
Total normal hours	,953	,913 ^a	-,192	-,178	-,290	-,011	-,017	,279
Health	-,189	-,192	,285 ^a	,152	,229	-,232	-,189	-,025
Occupation, ISCO88	-,167	-,178	,152	,974 ^a	-,225	-,578	-,230	-,377
Industry, NACE	-,270	-,290	,229	-,225	,491 ^a	,057	-,229	-,173
Education	-,025	-,011	-,232	-,578	,057	,478 ^a	,233	,103
Establishment size	-,064	-,017	-,189	-,230	-,229	,233	,363 ^a	,310
Income	,235	,279	-,025	-,377	-,173	,103	,310	,655 ^a
Residual^b								
Contracted hours		,001	,002	-,002	-,004	,000	-,003	-,001
Total normal hours	,001		-,003	,002	,004	-,001	,003	,001
Health	,002	-,003		,000	,000	,000	,000	,000
Occupation, ISCO88	-,002	,002	,000		,000	,000	-,001	,000
Industry, NACE	-,004	,004	,000	,000		,000	,000	,000
Education	,000	-,001	,000	,000	,000		-,001	,000
Establishment size	-,003	,003	,000	-,001	,000	-,001		-,001
Income	-,001	,001	,000	,000	,000	,000	-,001	

Extraction Method: Unweighted Least Squares.

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 0 (,0%) nonredundant residuals with absolute values greater than 0.05.

5 ESS Round - Reproduced Correlations

	Contracted hours	Normal hours	Health	Occupation	Education	Establishment size	Income	Employment contract	Industry, nace rev.2
Reproduced Correlation									
Contracted hours	,931 ^a	,874	,315	-,007	-,004	,213	,155	,094	-,219
Total normal hours	,874	,836 ^a	,339	-,060	-,001	,169	,121	,112	-,179
Health	,315	,339	1,000 ^a	-,217	,264	,322	-,048	-,128	,018
Occupation, isco88	-,007	-,060	-,217	,593 ^a	-,477	-,194	-,282	,079	-,226
Education	-,004	-,001	,264	-,477	,578 ^a	,399	,389	-,226	,161
Establishment size	,213	,169	,322	-,194	,399	,425 ^a	,309	-,212	-,003
Income	,155	,121	-,048	-,282	,389	,309	,397 ^a	-,138	,045
Employment contract	,094	,112	-,128	,079	-,226	-,212	-,138	,158 ^a	-,035
Industry, nace rev.2	-,219	-,179	,018	-,226	,161	-,003	,045	-,035	,142 ^a
Residual^b									
Contracted hours		-,002	,001	,007	,032	-,017	-,006	,011	-,023
Total normal hours	-,002		,002	-,008	-,019	,002	,008	-,010	,000
Health	,001	,002		,003	-,010	,017	-,004	,005	,022
Occupation, isco88	,007	-,008	,003		-,019	,009	,010	,002	,019
Education	,032	-,019	-,010	-,019		-,018	-,025	-,052	-,008
Establishment size	-,017	,002	,017	,009	-,018		,042	,029	,003
Income	-,006	,008	-,004	,010	-,025	,042		,022	,051
Employment contract	,011	-,010	,005	,002	-,052	,029	,022		,060
Industry, nace rev.2	-,023	,000	,022	,019	-,008	,003	,051	,060	

Extraction Method: Unweighted Least Squares.

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 3 (8,0%) nonredundant residuals with absolute values greater than 0.05.

Table 6. Factor Score Coefficient Matrix

		Factor			
		1	2	3	4
2002	Contracted hours	-,013	-,101	-,106	-
	Occupation, ISCO88 (com)	-,046	-,355	,015	-
	Highest level of education	-,025	,424	,294	-
	Establishment size	-,077	-,003	,353	-
	Employment contract	,092	,050	-,373	-

	Industry, NACE rev.1	,034	,296	-.276	-
	Total normal hours	1,050	,162	,054	-
2004	Contracted hours	,496	,278	-.079	,536
	Total normal hours	,452	-.345	,159	-.432
	Subjective general health	,140	-.105	1,036	-.439
	Occupation, ISCO88 (com)	-.075	,075	-.012	,035
	Industry, NACE rev.1.1	,146	-.031	-.025	-.603
	Highest level of education	-.267	1,112	-.196	,175
	Income	-.036	-.020	,078	,362
	Establishment size	-.075	-.105	,047	,029
2006	Contracted hours	-.364	-.034	-.092	-
	Total normal hours	1,374	-.063	,158	-
	Occupation, ISCO88 (com)	,032	,024	-.423	-
	Establishment size	-.029	1,027	-.011	-
	Income	,021	,016	,400	-
	Highest level of education	,043	,041	,231	-
2008	Subjective general health	,059	,043	-.007	-
	Contracted hours	1,074	-.105	-.375	-.124
	Total normal hours	-.058	,001	,249	,160
	Subjective general health	,023	-.091	,109	-.281
	Occupation, ISCO88 (com)	,005	-.929	-.174	,301
	Industry, NACE rev.1.1	,065	-.023	-.108	-.420
	Highest level of education	-.019	,126	-.149	,249
	Establishment size	-.033	,011	,120	,272
2010	Income	-.029	-.224	,691	-.031
	Contracted hours	,720	,119	-.176	-.246
	Total normal hours	,306	-.194	-.061	,183
	Subjective general health	-.107	,036	1,090	,015
	Occupation, isco88 (com)	-.085	,101	,084	-.600
	Highest level of education	-.041	,346	-.075	,215
	Establishment size	,005	,367	-.095	-.124
	Household's total net income, all sources	,013	,268	-.056	,059
2010	Employment contract	,014	-.162	,018	,088
	Industry, nace rev.2	,025	-.052	-.044	,129

Extraction Method: Unweighted Least Squares.

Rotation Method: Varimax with Kaiser Normalization.

Factor Scores Method: Regression.

Table 7. Employed persons aged 15-74 by usual weekly working hours in main job and industry (TOL 2008) in 2012 (Source: Labor Force Survey 2012. Statistics Finland)

		Employed, 1000 persons					
		Usual weekly working hours					
		Total	1-19 hours	20-34 hours	35-40 hours	41-49 hours	50+ hours
Industries total (TOL 2008)	00-99	2 483	164	314	1 634	159	199
A, B Agriculture, forestry and fishing; mining and quarrying	01-09	109	10	16	35	9	37
C-E Manufacturing; electricity, gas, steam and air conditioning and water supply; sewerage and waste management	10-39	382	8	21	303	25	24
F Construction	41-43	175	4	8	127	11	24
G Wholesale and retail trade; repair of motor vehicles and motorcycles	45-47	300	25	57	172	21	24
H Transportation and storage	49-53	144	11	17	79	11	25
I Accommodation and food service activities	55-56	86	12	19	44	3	8

J Information and communication	58-63	101	4	8	74	10	5
K,L Financial, insurance and real estate activities	64-68	74	4	7	51	7	6
M, N Professional, scientific and technical activities; administrative and support service activities	69-82	262	20	32	169	19	19
O Public administration and defence; compulsory social security	84	113	.	5	95	8	.
P Education	85	175	14	42	100	11	7
Q Human health and social work activities	86-88	409	29	55	302	13	8
R-U Arts, entertainment and recreation; other service activities	90-99	142	20	25	76	10	10

8.3 Appendix to 5.3 “From unemployment to labor market attachment”

Figure 1. Kaplan-Meier survivor curves for statuses 00-07

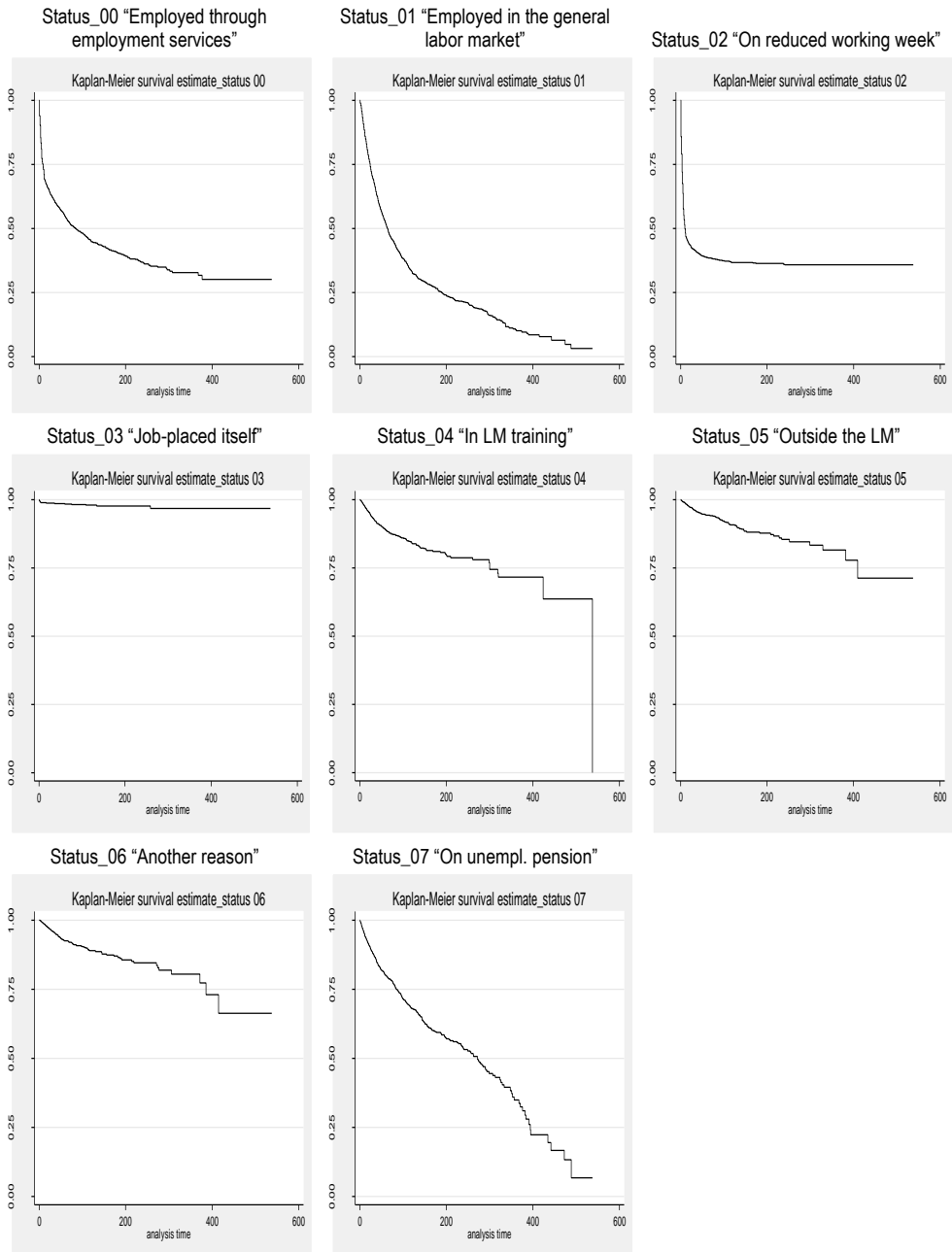


Figure 2. Kaplan-Meier survivor curves for statuses 00-07 and the 'gender'-variable

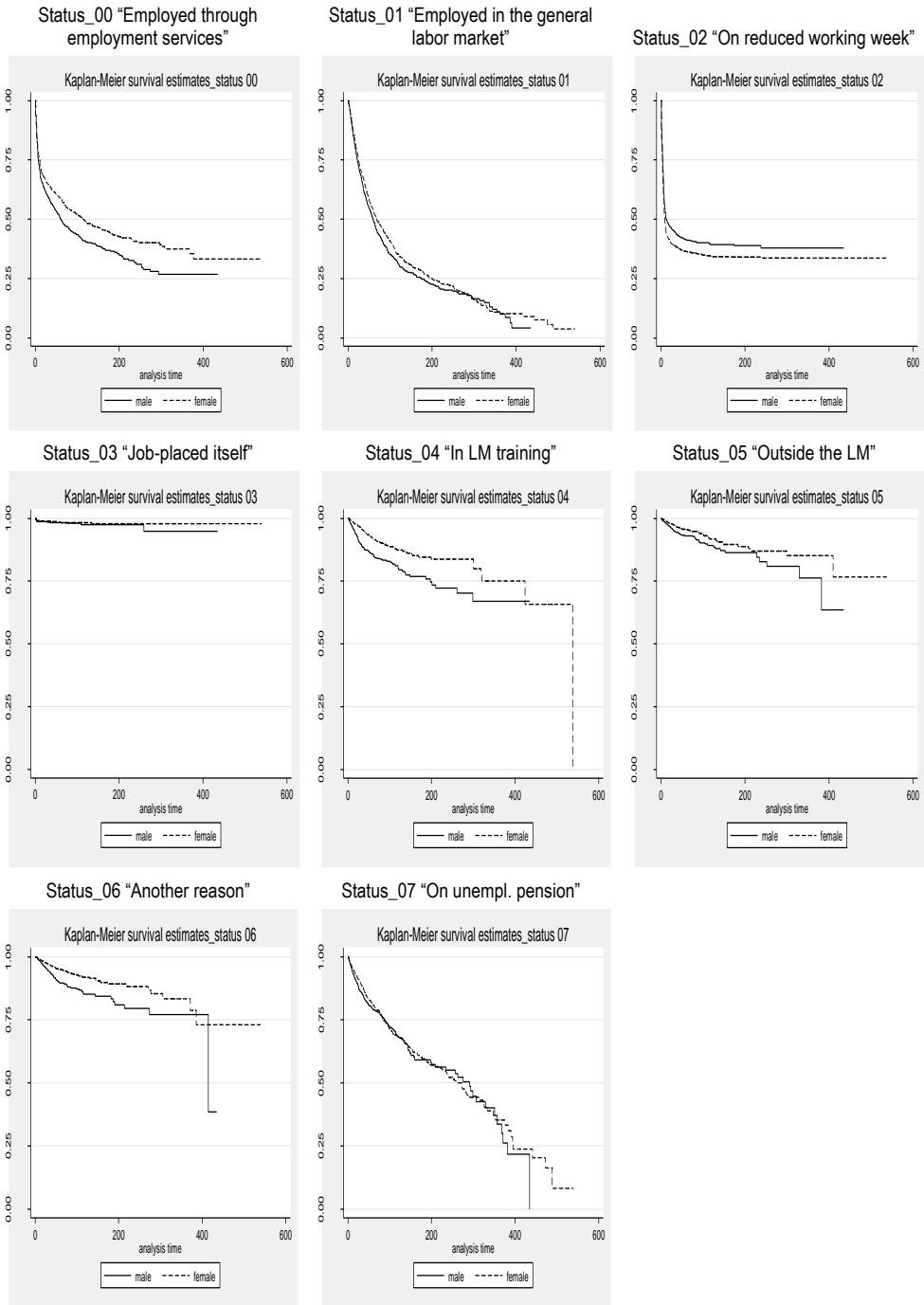


Figure 3. Kaplan-Meier survivor curves for statuses 00-07 and the ‘education’-variable

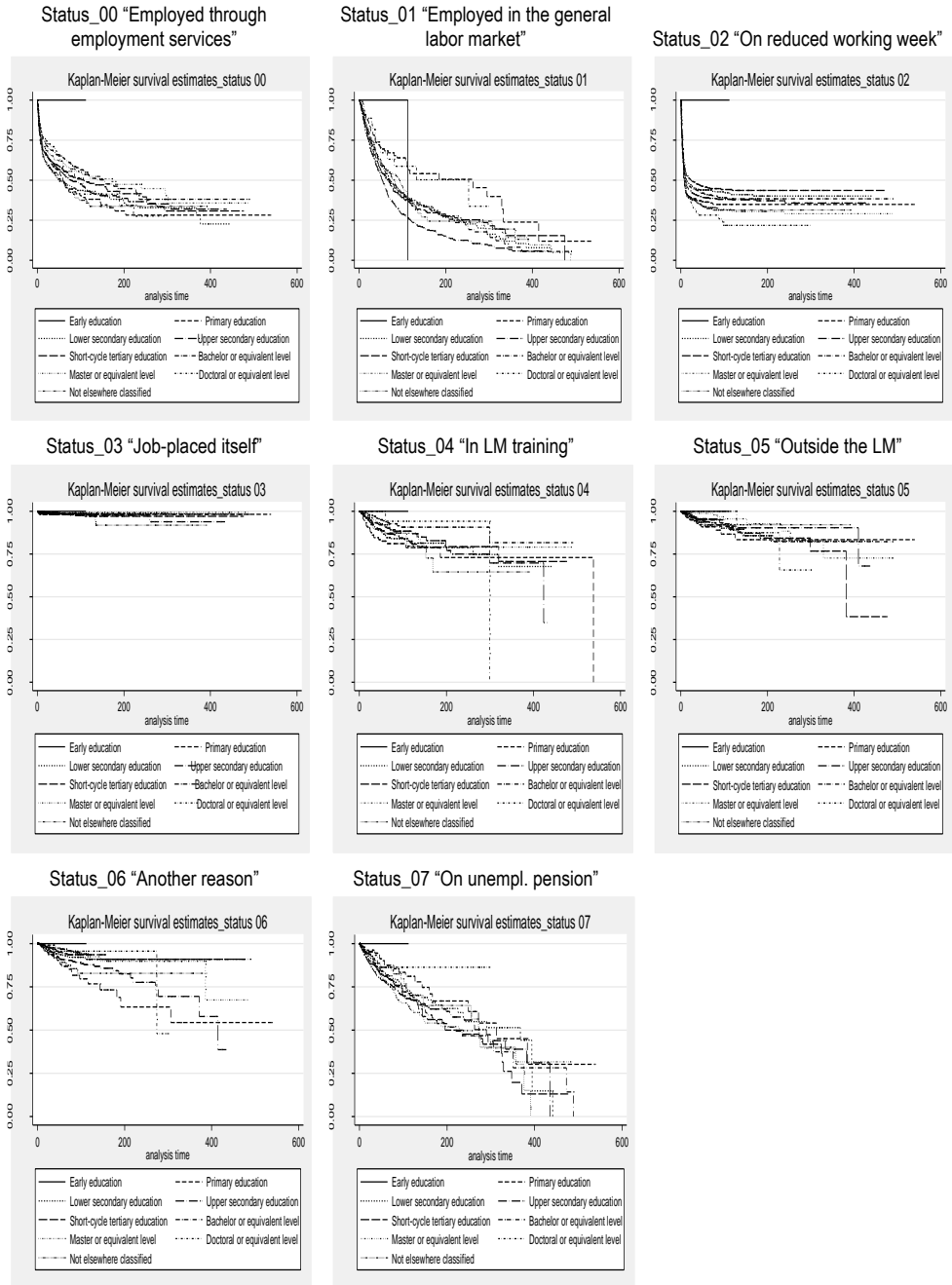


Figure 4. Kaplan-Meier survivor curves for statuses 00-07 and the ‘birth cohort’-variable

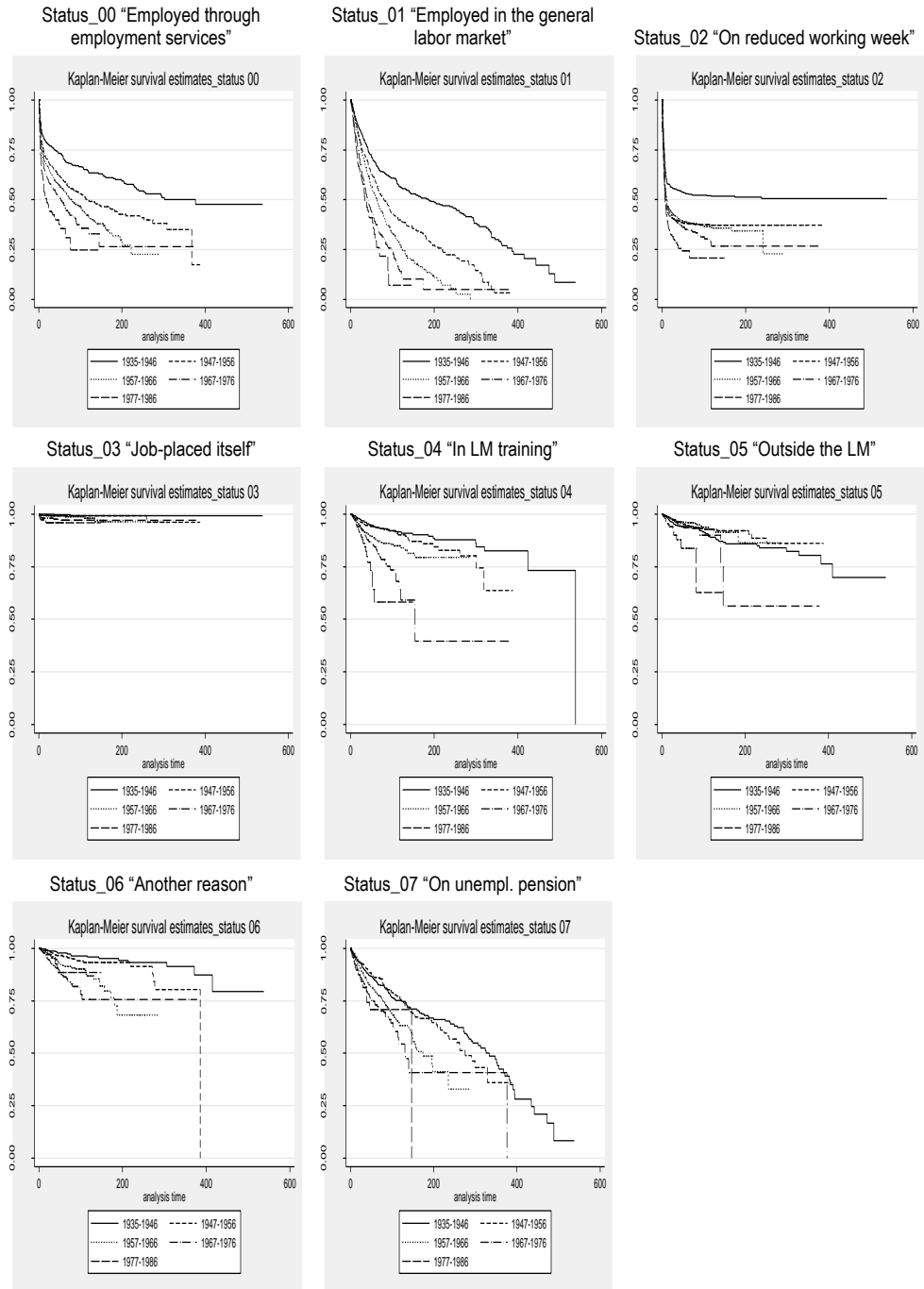


Figure 5. Kaplan-Meier survivor curves for statuses 00-07 and the ‘entrance cohort’-variable

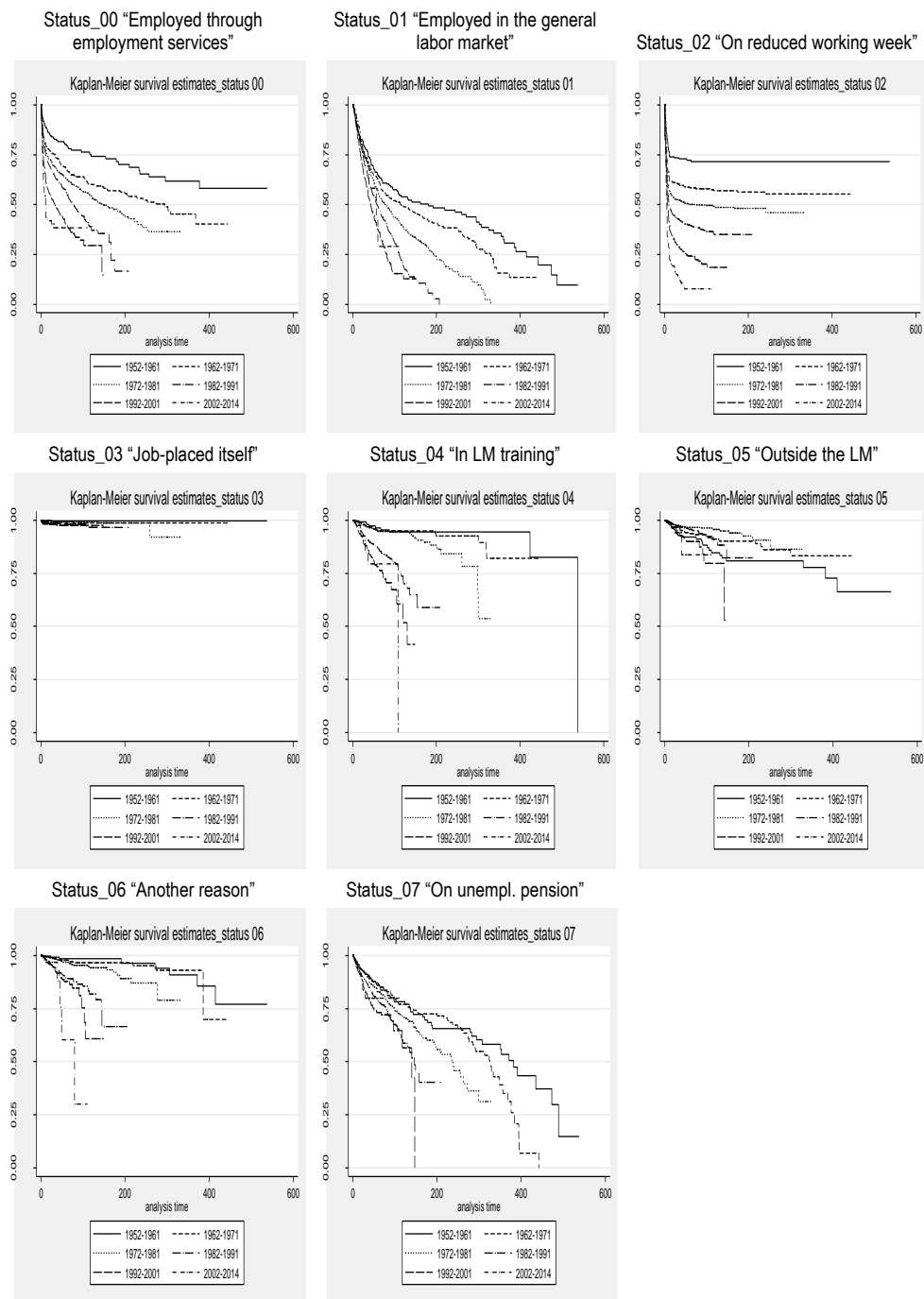


Table 1. Descriptive statistics on ‘statuses’ and main explanatory variables as applied to Survival-Time Data, Discrete-Time Data, and Count-Time Data

		Survival-Time Data, Discrete-Time Data			Count-Time Data		
		Freq.	Percent	Cum.	Freq.	Percent	Cum.
Code of a label	Status (a reason, according to which an unemployment period ended)						
0	Status_00 "Employed through employment services"	3,981	24.63	24.63	654	24.24	24.24
1	Status_01 "Employed in the general labor market"	2,587	16.00	40.63	810	30.02	54.26
2	Status_02 "On reduced working week"	7,422	45.91	86.54	700	25.95	80.21
3	Status_03 "Job-placed itself"	158	0.98	87.52	11	0.41	80.62
4	Status_04 "In LM training"	455	2.81	90.33	85	3.15	83.77
5	Status_05 "Outside the labor force"	273	1.69	92.02	53	1.96	85.73
6	Status_06 "Another reason"	282	1.74	93.76	63	2.34	88.07
7	Status_07 "On unemployment pension"	1,008	6.24	100.00	322	11.93	100.00
	Gender						
1	Male	7,669	47.44	47.44	1,350	50.04	50.04
2	Female	8,497	52.56	100.00	1,348	49.96	100.00
	Education						
0	Early education	1	0.01	0.01	1	0.04	0.04
1	Primary education	954	5.90	5.91	159	5.89	5.93
2	Lower secondary education	2,216	13.71	19.62	412	15.27	21.20
3	Upper secondary education	6,465	39.99	59.61	1,038	38.47	59.67
5	Short-cycle tertiary education	1,674	10.36	69.96	276	10.23	69.90
6	Bachelor or equivalent level	1,631	10.09	80.05	286	10.60	80.50
7	Master or equivalent level	1,837	11.36	91.41	281	10.42	90.92
8	Doctoral or equivalent level	211	1.31	92.72	33	1.22	92.14
9	Not elsewhere classified	1,177	7.28	100.00	212	7.86	100.00
	Birth cohort						
1	1935-1946	1,484	9.18	9.18	275	10.19	10.19
2	1947-1956	3,120	19.30	28.48	405	15.01	25.20
3	1957-1966	5,259	32.53	61.01	766	28.39	53.60
4	1967-1976	4,827	29.86	90.87	931	34.51	88.10
5	1977-1986	1,476	9.13	100.00	321	11.90	100.00
	Entrance cohort						
1	1952-1961	399	2.47	2.47	69	2.56	2.56
2	1962-1971	1,070	6.62	9.09	142	5.26	7.82
3	1972-1981	2,512	15.54	24.63	307	11.38	19.20
4	1982-1991	5,337	33.01	57.64	751	27.84	47.03
5	1992-2001	5,956	36.84	94.48	1,273	47.18	94.22
6	2002-2014	892	5.52	100.00	156	5.78	100.00
	Total	16,166	100.00		2,698	100.00	

Table 2. Main characteristic of the model for the carrying out the count-time analysis (unemployment periods)

failure event: obs. time interval: exit on or before: weight:	failures_number != 0 & failures_number < . (0, months_total] failure [fweight=w]
2698 0	total obs. exclusions
2698 16166 16166 2073443	physical obs. remaining, equal to weighted obs., representing failures in single record/single failure data total analysis time at risk, at risk from t = 0 earliest observed entry t = 0 last observed exit t = 812

Table 3. Specification of the model for the count-time analysis (main characteristics, unemployment periods)

failure_d:	failures_number				
analysis time_t:	months_total				
weight:	[fweight=w]				
	PER SUBJECT				
Category	unweighted total	unweighted mean	min	unweighted median	max
no. of subjects	2698				
no. of records	2698	1	1	1	1
(first) entry time		0	0	0	0
(final) exit time		96.78	1	56	812
subjects with gap	0				
time on gap if gap	0				
time at risk	261117	96.78	1	56	812
failures	2698	1	1	1	1

Table 4. Specification of the model for the Kaplan-Meier Survivor Functions (main characteristics, unemployment periods)

failure_d:	Status_00				
analysis time_t:	months				
id:	case				
	PER SUBJECT				
Category	total	mean	min	median	max
no. of subjects	16166				
no. of records	16166	1	1	1	1
(first) entry time		0	0	0	0
(final) exit time		16.13	.5	4	538
subjects with gap	0				
time on gap if gap	0
time at risk	260859.5	16.13	.5	4	538
failures	3981 (status 00)	.24	0	0	1

Table 5. Summary statistics on survival time for statuses 00-07

Status	failures	time at risk	incidence rate	no. of subj.	Survival time		
					25%	50%	75%
Status_00 "Employed through services"	3,981	260859.5	.0152611	16166	9	84	.
Status_01 "Employed in the LM"	2,587	260859.5	.0099172	16166	24	64	191
Status_02 "On reduced working week"	7,422	260859.5	.0284521	16166	3	10	.
Status_03 "Job-placed itself"	158	260859.5	.0006057	16166	.	.	.
Status_04 "In LM training"	455	260859.5	.0017442	16166	300	538	538
Status_05 "Outside the labor force"	273	260859.5	.0010465	16166	410	.	.
Status_06 "Another reason"	282	260859.5	.001081	16166	386	.	.
Status_07 "On unemployment pension"	1,008	260859.5	.0038641	16166	84	272	394

Table 6. Summary statistics on survival time for statuses 00-07 by the 'gender'-variable

Status	gender	time at risk	incidence rate	no. of subj.	Survival time (months)		
					25%	50%	75%
Status_00 "Employed through employment services"	male	113609.5	.0178506	7669	7	61	.
	female	147250	.0132632	8497	10	114	.
Status_01 "Employed in the general labor market"	male	113609.5	.010853	7669	22	60	174
	female	147250	.0091952	8497	25	68	200
Status_02 "On reduced working week"	male	113609.5	.0283427	7669	3	13	.
	female	147250	.0285365	8497	3	9	.
Status_03 "Job-placed itself"	male	113609.5	.0007746	7669	.	.	.
	female	147250	.0004754	8497	.	.	.
Status_04 "In LM training"	male	113609.5	.002579	7669	197	.	.
	female	147250	.0011002	8497	424	538	538
Status_05 "Outside the labor force"	male	113609.5	.0013819	7669	382	.	.
	female	147250	.0007878	8497	.	.	.
Status_06 "Another reason"	male	113609.5	.0014347	7669	415	415	.
	female	147250	.0008081	8497	386	.	.
Status_07 "On unemployment pension"	male	113609.5	.0042866	7669	88	291	382
	female	147250	.0035382	8497	84	272	395

Table 7. Test for the equality of survivor functions (log-rank test) for statuses 00-07 by the 'gender'-variable

Status	Gender	Events observed	Events expected	
Status_00 "Employed through employment services"	Male	2028	1871.74	chi2(1) = 25.44 Pr>chi2 = 0.0000
	Female	1953	2109.26	
	Total	3981	3981.00	
Status_01 "Employed in the general labor market"	Male	1233	1156.48	chi2(1) = 9.31 Pr>chi2 = 0.0023
	Female	1354	1430.52	
	Total	2587	2587.00	
Status_02 "On red. work. week"	Male	3220	3535.54	chi2(1) = 57.65 Pr>chi2 = 0.0000
	Female	4202	3886.46	
	Total	7422	7422.00	
Status_03 "Job-placed itself"	Male	88	74.92	chi2(1) = 4.36 Pr>chi2 = 0.0368
	Female	70	83.08	
	Total	158	158.00	
Status_04 "In LM training"	Male	293	204.73	chi2(1) = 69.84 Pr>chi2 = 0.0000
	Female	162	250.27	
	Total	455	455.00	
Status_05 "Outside the labor force"	Male	157	123.12	chi2(1) = 17.12

	Female	116	149.88	Pr>chi2 = 0.0000
	Total	273	273.00	
Status_06 "Another reason"	Male	163	125.81	chi2(1) = 20.02 Pr>chi2 = 0.0000
	Female	119	156.19	
	Total	282	282.00	
Status_07 "On unemployment pension"	Male	487	448.24	chi2(1) = 6.12 Pr>chi2 = 0.0134
	Female	521	559.76	
	Total	1008	1008.00	

Table 8. Summary statistics on survival time for statuses 00-07 by the 'education'-variable

Status	education	time at risk	incidence rate	no. of subj.	Survival time (months)		
					25%	50%	75%
Status_00 "Employed through employment services"	Early education	112	0	1	.	.	.
	Primary education	15792	.0157675	954	6	59	.
	Lower secondary	35912.5	.0169857	2216	6	49	377
	Upper secondary	88661.5	.0174935	6465	8	76	.
	Short-cycle tertiary	33523.5	.0131848	1674	9	107	.
	Bachelor or equivalent	34110.5	.0103194	1631	15	154	.
	Master or equivalent	32644.5	.0128352	1837	11	172	.
	Doctoral or equivalent	4367.5	.0109903	211	20	106	.
Not classified	15735.5	.0197007	1177	7	52	.	
Status_01 "Employed in the general labor market"	Early education	112	.0089286	1	.	.	.
	Primary education	15792	.0058891	954	37	263	333
	Lower secondary	35912.5	.010275	2216	21	66	217
	Upper secondary	88661.5	.0122376	6465	22	53	118
	Short-cycle tertiary	33523.5	.0088893	1674	28	68	286
	Bachelor or equivalent	34110.5	.0090295	1631	24	69	216
	Master or equivalent	32644.5	.0080565	1837	28	93	237
	Doctoral or equivalent	4367.5	.0048082	211	37	253	.
Not classified	15735.5	.009469	1177	23	81	157	
Status_02 "On reduced working week"	Early education	112	0	1	.	.	.
	Primary education	15792	.0295086	954	2	7	.
	Lower secondary	35912.5	.0254507	2216	3	13	.
	Upper secondary	88661.5	.0328666	6465	3	10	.
	Short-cycle tertiary	33523.5	.0212388	1674	3	23	.
	Bachelor or equivalent	34110.5	.0222219	1631	4	12	.
	Master or equivalent	32644.5	.0290707	1837	3	9	.
	Doctoral or equivalent	4367.5	.0288495	211	3	8	96
Not classified	15735.5	.03705	1177	3	7	.	
Status_03 "Job-placed itself"	Early education	112	0	1	.	.	.
	Primary education	15792	.0007599	954	.	.	.
	Lower secondary	35912.5	.0005569	2216	.	.	.
	Upper secondary	88661.5	.0009474	6465	.	.	.
	Short-cycle tertiary	33523.5	.0003878	1674	.	.	.
	Bachelor or equivalent	34110.5	.0003225	1631	.	.	.
	Master or equivalent	32644.5	.0002757	1837	.	.	.
	Doctoral or equivalent	4367.5	.0004579	211	.	.	.
Not classified	15735.5	.0004449	1177	.	.	.	
Status_04 "In LM training"	Early education	112	0	1	.	.	.
	Primary education	15792	.0027229	954	186	538	538
	Lower secondary	35912.5	.0020327	2216	261	.	.
	Upper secondary	88661.5	.0021881	6465	210	424	.
	Short-cycle tertiary	33523.5	.0013722	1674	320	.	.

	Bachelor or equivalent	34110.5	.0007622	1631	.	.	.
	Master or equivalent	32644.5	.0011947	1837	.	.	.
	Doctoral or equivalent	4367.5	.0004579	211	300	300	300
	Not classified	15735.5	.0020336	1177	153	.	.
Status_05 "Outside the labor force"	Early education	112	0	1	.	.	.
	Primary education	15792	.0016464	954	.	.	.
	Lower secondary	35912.5	.0014201	2216	.	.	.
	Upper secondary	88661.5	.0011504	6465	410	.	.
	Short-cycle tertiary	33523.5	.0009546	1674	382	382	.
	Bachelor or equivalent	34110.5	.0008209	1631	.	.	.
	Master or equivalent	32644.5	.0004901	1837	329	.	.
	Doctoral or equivalent	4367.5	.0004579	211	228	.	.
	Not classified	15735.5	.0010168	1177	.	.	.
Status_06 "Another reason"	Early education	112	0	1	.	.	.
	Primary education	15792	.001773	954	144	.	.
	Lower secondary	35912.5	.0010581	2216	.	.	.
	Upper secondary	88661.5	.0014324	6465	271	415	.
	Short-cycle tertiary	33523.5	.0006861	1674	.	.	.
	Bachelor or equivalent	34110.5	.0006156	1631	.	.	.
	Master or equivalent	32644.5	.0005208	1837	386	.	.
	Doctoral or equivalent	4367.5	.0006869	211	274	274	.
	Not classified	15735.5	.0015888	1177	.	.	.
Status_07 "On unemployment pension"	Early education	112	0	1	.	.	.
	Primary education	15792	.002343	954	143	313	.
	Lower secondary	35912.5	.0039262	2216	104	368	395
	Upper secondary	88661.5	.0046018	6465	75	290	435
	Short-cycle tertiary	33523.5	.0032216	1674	96	235	348
	Bachelor or equivalent	34110.5	.0037232	1631	90	216	473
	Master or equivalent	32644.5	.0038291	1837	72	228	.
	Doctoral or equivalent	4367.5	.0016027	211	.	.	.
	Not classified	15735.5	.0034953	1177	106	272	376

Table 9. Test for the equality of survivor functions (log-rank test) for statuses 00-07 by the 'education'-variable

Status	Education	Events observed	Events expected	
Status_00 "Employed through employment services"	Early education	0	0.76	chi2(8) = 55.35 Pr>chi2 = 0.0000
	Primary education	249	220.97	
	Lower secondary	610	534.34	
	Upper secondary	1551	1509.81	
	Short-cycle tertiary	442	458.78	
	Bachelor or equivalent	352	456.32	
	Master or equivalent	419	471.20	
	Doctoral or equivalent	48	57.68	
	Not classified	310	271.14	
	Total	3981	3981.00	
Status_01 "Employed in the general labor market"	Early education	1	1.04	chi2(8) = 79.25 Pr>chi2 = 0.0000
	Primary education	93	149.36	
	Lower secondary	369	344.15	
	Upper secondary	1085	917.42	
	Short-cycle tertiary	298	325.52	
	Bachelor or equivalent	308	329.95	
	Master or equivalent	263	318.45	
	Doctoral or equivalent	21	41.34	
	Not classified	149	159.77	
	Total	2587	2587.00	

Status_02 "On reduced working week"	Early education	0	0.96	chi2(8) = 64.43 Pr>chi2 = 0.0000
	Primary education	466	407.36	
	Lower secondary	914	995.61	
	Upper secondary	2914	2868.29	
	Short-cycle tertiary	712	833.52	
	Bachelor or equivalent	758	824.85	
	Master or equivalent	949	869.84	
	Doctoral or equivalent	126	103.83	
	Not classified	583	517.74	
Total	7422	7422.00		
Status_03 "Job-placed itself"	Early education	0	0.02	chi2(8) = 19.77 Pr>chi2 = 0.0112
	Primary education	12	8.96	
	Lower secondary	20	21.61	
	Upper secondary	84	60.95	
	Short-cycle tertiary	13	17.35	
	Bachelor or equivalent	11	17.12	
	Master or equivalent	9	18.43	
	Doctoral or equivalent	2	2.21	
	Not classified	7	11.36	
Total	158	158.00		
Status_04 "In LM training"	Early education	0	0.16	chi2(8) = 47.61 Pr>chi2 = 0.0000
	Primary education	43	26.80	
	Lower secondary	73	59.92	
	Upper secondary	194	163.16	
	Short-cycle tertiary	46	56.85	
	Bachelor or equivalent	26	57.31	
	Master or equivalent	39	55.48	
	Doctoral or equivalent	2	7.19	
	Not classified	32	28.13	
Total	455	455.00		
Status_05 "Outside the labor force"	Early education	0	0.09	chi2(8) = 23.59 Pr>chi2 = 0.0027
	Primary education	26	15.95	
	Lower secondary	51	36.62	
	Upper secondary	102	98.29	
	Short-cycle tertiary	32	33.58	
	Bachelor or equivalent	28	33.68	
	Master or equivalent	16	33.28	
	Doctoral or equivalent	2	4.30	
	Not classified	16	17.20	
Total	273	273.00		
Status_06 "Another reason"	Early education	0	0.11	chi2(8) = 39.38 Pr>chi2 = 0.0000
	Primary education	28	16.45	
	Lower secondary	38	37.41	
	Upper secondary	127	100.01	
	Short-cycle tertiary	23	35.44	
	Bachelor or equivalent	21	36.03	
	Master or equivalent	17	34.76	
	Doctoral or equivalent	3	4.51	
	Not classified	25	17.29	
Total	282	282.00		
Status_07 "On unemployment pension"	Early education	0	0.36	chi2(8) = 25.89 Pr>chi2 = 0.0011
	Primary education	37	60.00	
	Lower secondary	141	136.76	
	Upper secondary	408	354.96	
	Short-cycle tertiary	108	125.46	
	Bachelor or equivalent	127	127.62	
	Master or equivalent	125	124.22	
	Doctoral or equivalent	7	15.85	

	Not classified	55	62.76	
	Total	1008	1008.00	

Table 10. Summary statistics on survival time for statuses 00-07 by the ‘birth cohort’-variable

Status	birth cohort	time at risk	incidence rate	no. of subj.	Survival time (months)		
					25%	50%	75%
Status_00 "Employed through employment services"	1935-1946	63196	.0049845	1484	38	377	.
	1947-1956	63034.5	.0114065	3120	11	117	368
	1957-1966	76066	.0165909	5259	10	79	222
	1967-1976	49462	.02509	4827	7	53	.
	1977-1986	9101	.0487858	1476	4	19	76
Status_01 "Employed in the general labor market"	1935-1946	63196	.0046205	1484	42	186	386
	1947-1956	63034.5	.0079956	3120	28	80	216
	1957-1966	76066	.0109247	5259	25	62	124
	1967-1976	49462	.0158506	4827	18	41	98
	1977-1986	9101	.0193385	1476	14	34	69
Status_02 "On reduced working week"	1935-1946	63196	.0092094	1484	5	.	.
	1947-1956	63034.5	.0246532	3120	3	9	.
	1957-1966	76066	.0326427	5259	3	11	241
	1967-1976	49462	.0431442	4827	3	10	.
	1977-1986	9101	.0735084	1476	2	7	47
Status_03 "Job-placed itself"	1935-1946	63196	.0000633	1484	.	.	.
	1947-1956	63034.5	.0002538	3120	.	.	.
	1957-1966	76066	.0004601	5259	.	.	.
	1967-1976	49462	.0014759	4827	.	.	.
	1977-1986	9101	.0032963	1476	.	.	.
Status_04 "In LM training"	1935-1946	63196	.0007279	1484	424	538	538
	1947-1956	63034.5	.0011898	3120	300	.	.
	1957-1966	76066	.0021692	5259	.	.	.
	1967-1976	49462	.0026687	4827	95	154	.
	1977-1986	9101	.0040655	1476	47	.	.
Status_05 "Outside the labor force"	1935-1946	63196	.0009336	1484	410	.	.
	1947-1956	63034.5	.0008249	3120	.	.	.
	1957-1966	76066	.0008677	5259	.	.	.
	1967-1976	49462	.0012737	4827	141	.	.
	1977-1986	9101	.003626	1476	82	.	.
Status_06 "Another reason"	1935-1946	63196	.0003481	1484	.	.	.
	1947-1956	63034.5	.000587	3120	386	386	386
	1957-1966	76066	.0012621	5259	182	.	.
	1967-1976	49462	.0022441	4827	.	.	.
	1977-1986	9101	.001758	1476	.	.	.
Status_07 "On unemployment pension"	1935-1946	63196	.0025951	1484	124	334	435
	1947-1956	63034.5	.0025859	3120	122	276	.
	1957-1966	76066	.00422	5259	78	174	.
	1967-1976	49462	.0058429	4827	55	131	376
	1977-1986	9101	.0078013	1476	39	147	147

Table 11. Test for the equality of survivor functions (log-rank test) for statuses 00-07 by the 'birth cohort'-variable

Status	Birth cohort	Events observed	Events expected	
Status_00 "Employed through employment services"	1935-1946	315	528.62	chi2(4) = 280.39 Pr>chi2 = 0.0000
	1947-1956	719	825.86	
	1957-1966	1262	1289.65	
	1967-1976	1241	1078.65	
	1977-1986	444	258.22	
	Total	3981	3981.00	
Status_01 "Employed in the general labor market"	1935-1946	292	517.32	chi2(4) = 287.71 Pr>chi2 = 0.0000
	1947-1956	504	594.08	
	1957-1966	831	810.31	
	1967-1976	784	559.68	
	1977-1986	176	105.61	
	Total	2587	2587.00	
Status_02 "On reduced working week"	1935-1946	582	845.66	chi2(4) = 131.79 Pr>chi2 = 0.0000
	1947-1956	1554	1485.44	
	1957-1966	2483	2431.22	
	1967-1976	2134	2127.97	
	1977-1986	669	531.71	
	Total	7422	7422.00	
Status_03 "Job-placed itself"	1935-1946	4	18.26	chi2(4) = 70.43 Pr>chi2 = 0.0000
	1947-1956	16	31.97	
	1957-1966	35	50.69	
	1967-1976	73	45.07	
	1977-1986	30	12.00	
	Total	158	158.00	
Status_04 "In LM training"	1935-1946	46	86.79	chi2(4) = 60.80 Pr>chi2 = 0.0000
	1947-1956	75	102.43	
	1957-1966	165	144.32	
	1967-1976	132	101.97	
	1977-1986	37	19.49	
	Total	455	455.00	
Status_05 "Outside the labor force"	1935-1946	59	52.02	chi2(4) = 37.86 Pr>chi2 = 0.0000
	1947-1956	52	61.22	
	1957-1966	66	84.86	
	1967-1976	63	61.91	
	1977-1986	33	12.99	
	Total	273	273.00	
Status_06 "Another reason"	1935-1946	22	57.57	chi2(4) = 88.62 Pr>chi2 = 0.0000
	1947-1956	37	64.53	
	1957-1966	96	88.07	
	1967-1976	111	60.58	
	1977-1986	16	11.24	
	Total	282	282.00	
Status_07 "On unemployment pension"	1935-1946	164	213.11	chi2(4) = 82.93 Pr>chi2 = 0.0000
	1947-1956	163	228.28	
	1957-1966	321	305.94	
	1967-1976	289	217.21	
	1977-1986	71	43.46	
	Total	1008	1008.00	

Table 12. Summary statistics on survival time for statuses 00-07 by the ‘entrance cohort’-variable

Status	entrance cohort	time at risk	incidence rate	no. of subj.	Survival time (months)		
					25%	50%	75%
Status_00 "Employed through employment services"	1952-1961	27189	.0025746	399	119	.	.
	1962-1971	43795	.0056399	1070	33	294	.
	1972-1981	64460	.0092771	2512	15	146	.
	1982-1991	74522	.0159416	5337	11	76	167
	1992-2001	46422.5	.0346815	5956	6	33	145
	2002-2014	4471	.0599418	892	4	11	.
Status_01 "Employed in the general labor market"	1952-1961	27189	.0045607	399	37	181	415
	1962-1971	43795	.0060738	1070	28	114	329
	1972-1981	64460	.0086565	2512	28	78	194
	1982-1991	74522	.0120367	5337	24	58	111
	1992-2001	46422.5	.0152297	5956	18	43	81
	2002-2014	4471	.0078282	892	28	56	.
Status_02 "On reduced working week"	1952-1961	27189	.0035308	399	11	.	.
	1962-1971	43795	.008517	1070	5	.	.
	1972-1981	64460	.0158548	2512	4	71	.
	1982-1991	74522	.0333995	5337	3	11	.
	1992-2001	46422.5	.0628359	5956	3	8	51
	2002-2014	4471	.1174234	892	2	5	12
Status_03 "Job-placed itself"	1952-1961	27189	.0000368	399	.	.	.
	1962-1971	43795	.000137	1070	.	.	.
	1972-1981	64460	.0001551	2512	.	.	.
	1982-1991	74522	.0006844	5337	.	.	.
	1992-2001	46422.5	.0017233	5956	.	.	.
	2002-2014	4471	.0022366	892	.	.	.
Status_04 "In LM training"	1952-1961	27189	.0003678	399	538	538	538
	1962-1971	43795	.0005023	1070	.	.	.
	1972-1981	64460	.0008067	2512	299	.	.
	1982-1991	74522	.0024959	5337	116	.	.
	1992-2001	46422.5	.0037266	5956	72	130	.
	2002-2014	4471	.002684	892	108	108	108
Status_05 "Outside the labor force"	1952-1961	27189	.0010666	399	382	.	.
	1962-1971	43795	.0007535	1070	.	.	.
	1972-1981	64460	.000574	2512	.	.	.
	1982-1991	74522	.0009393	5337	.	.	.
	1992-2001	46422.5	.002068	5956	141	.	.
	2002-2014	4471	.0017893	892	.	.	.
Status_06 "Another reason"	1952-1961	27189	.0002942	399	.	.	.
	1962-1971	43795	.0003197	1070	386	.	.
	1972-1981	64460	.0005275	2512	.	.	.
	1982-1991	74522	.0016505	5337	144	.	.
	1992-2001	46422.5	.0020033	5956	103	.	.
	2002-2014	4471	.0022366	892	49	80	.
Status_07 "On unemployment pension"	1952-1961	27189	.0022436	399	136	382	489
	1962-1971	43795	.0024889	1070	136	326	384
	1972-1981	64460	.0031182	2512	98	235	.
	1982-1991	74522	.0044685	5337	78	146	.
	1992-2001	46422.5	.0060316	5956	50	140	147
	2002-2014	4471	.0053679	892	.	.	.

Table 13. Test for the equality of survivor functions (log-rank test) for statuses 00-07 by the 'entrance cohort'-variable

Status	Entrance cohort	Events observed	Events expected	
Status_00 "Employed through employment services"	1952-1961	70	180.12	chi2(5) = 460.27 Pr>chi2 = 0.0000
	1962-1971	247	379.84	
	1972-1981	598	760.22	
	1982-1991	1188	1325.25	
	1992-2001	1610	1188.60	
	2002-2014	268	146.97	
	Total	3981	3981.00	
Status_01 "Employed in the general labor market"	1952-1961	124	210.24	chi2(5) = 160.15 Pr>chi2 = 0.0000
	1962-1971	266	361.11	
	1972-1981	558	610.73	
	1982-1991	897	818.42	
	1992-2001	707	535.12	
	2002-2014	35	51.38	
	Total	2587	2587.00	
Status_02 "On reduced working week"	1952-1961	96	264.99	chi2(5) = 585.68 Pr>chi2 = 0.0000
	1962-1971	373	610.51	
	1972-1981	1022	1317.69	
	1982-1991	2489	2514.87	
	1992-2001	2917	2408.04	
	2002-2014	525	305.89	
	Total	7422	7422.00	
Status_03 "Job-placed itself"	1952-1961	1	5.74	chi2(5) = 36.55 Pr>chi2 = 0.0000
	1962-1971	6	13.22	
	1972-1981	10	27.47	
	1982-1991	51	51.72	
	1992-2001	80	52.47	
	2002-2014	10	7.38	
	Total	158	158.00	
Status_04 "In LM training"	1952-1961	10	35.03	chi2(5) = 161.59 Pr>chi2 = 0.0000
	1962-1971	22	60.35	
	1972-1981	52	105.09	
	1982-1991	186	146.81	
	1992-2001	173	98.31	
	2002-2014	12	9.41	
	Total	455	455.00	
Status_05 "Outside the labor force"	1952-1961	29	21.10	chi2(5) = 35.96 Pr>chi2 = 0.0000
	1962-1971	33	35.98	
	1972-1981	37	61.38	
	1982-1991	70	85.38	
	1992-2001	96	62.32	
	2002-2014	8	6.84	
	Total	273	273.00	
Status_06 "Another reason"	1952-1961	8	23.97	chi2(5) = 98.94 Pr>chi2 = 0.0000
	1962-1971	14	39.54	
	1972-1981	34	66.44	
	1982-1991	123	89.24	
	1992-2001	93	57.46	
	2002-2014	10	5.36	
	Total	282	282.00	
Status_07 "On unemployment pension"	1952-1961	61	91.70	chi2(5) = 58.96 Pr>chi2 = 0.0000
	1962-1971	109	143.65	
	1972-1981	201	229.43	

	1982-1991	333	307.10
	1992-2001	280	213.95
	2002-2014	24	22.16
	Total	1008	1008.00

Table 14. Cox Model Estimates of Proportional Hazards for statuses 00-07 (no. of subjects = 16166, number of obs. = 16,166, time at risk = 260,859.5 months)

	_t	Haz. Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
Status_00 "Employed through empl. services"	gender	.9353862	.0300748	-2.08	0.038	.8782595	.9962286
	education	.9836202	.0071677	-2.27	0.023	.9696715	.9977695
	birth cohort	1.069516	.0193991	3.71	0.000	1.032163	1.108222
	entrance cohort	1.310754	.025042	14.16	0.000	1.26258	1.360766
	LR chi2(4) = 455.84		Log likelihood = -35126.302		Prob > chi2 = 0.0000		
Status_01 "Employed in the general labor market"	gender	.9553267	.0384462	-1.14	0.256	.8828687	1.033731
	education	.9779054	.0090221	-2.42	0.015	.9603813	.9957492
	birth cohort	1.360918	.0356527	11.76	0.000	1.292804	1.432621
	entrance cohort	1.00408	.0262871	0.16	0.876	.9538573	1.056946
	LR chi2(4) = 292.18		Log likelihood = -20449.835		Prob > chi2 = 0.0000		
Status_02 "On reduced working week"	gender	1.264325	.0299325	9.91	0.000	1.206998	1.324374
	education	1.003055	.0051973	0.59	0.556	.9929201	1.013293
	birth cohort	.9171999	.0115791	-6.85	0.000	.8947837	.9401776
	entrance cohort	1.373387	.0179689	24.25	0.000	1.338616	1.40906
	LR chi2(4) = 709.11		Log likelihood = -67445.718		Prob > chi2 = 0.0000		
Status_03 "Job- placed itself"	gender	.8633142	.1401215	-0.91	0.365	.6280776	1.186655
	education	.9095444	.0373093	-2.31	0.021	.8392819	.9856891
	birth cohort	1.658008	.1665611	5.03	0.000	1.361683	2.018817
	entrance cohort	1.186268	.1301755	1.56	0.120	.9567003	1.470922
	LR chi2(4) = 75.61		Log likelihood = -1422.8892		Prob > chi2 = 0.0000		
Status_04 "In LM training"	gender	.5396144	.0537954	-6.19	0.000	.4438388	.6560572
	education	.9158573	.0209253	-3.85	0.000	.8757491	.9578024
	birth cohort	.9720837	.0518307	-0.53	0.595	.8756253	1.079168
	entrance cohort	1.774199	.1059945	9.60	0.000	1.578155	1.994596
	LR chi2(4) = 220.30		Log likelihood = -3550.5174		Prob > chi2 = 0.0000		
Status_05 "Outside the labor force"	gender	.6556926	.0818396	-3.38	0.001	.513403	.8374178
	education	.9041674	.0271122	-3.36	0.001	.8525597	.9588989
	birth cohort	1.031679	.0766975	0.42	0.675	.8917931	1.193507
	entrance cohort	1.083856	.0806178	1.08	0.279	.9368256	1.253962
	LR chi2(4) = 32.74		Log likelihood = -2213.7861		Prob > chi2 = 0.0000		
Status_06 "Another reason"	gender	.707232	.0870015	-2.82	0.005	.5557119	.9000655
	education	.9287882	.0268645	-2.55	0.011	.8775994	.9829628
	birth cohort	1.263258	.0931808	3.17	0.002	1.093215	1.459751
	entrance cohort	1.538294	.1237436	5.35	0.000	1.313914	1.800992
	LR chi2(4) = 127.81		Log likelihood = -2168.5533		Prob > chi2 = 0.0000		
Status_07 "On unemployment pension"	gender	.9117805	.0587556	-1.43	0.152	.8035973	1.034528
	education	.9934823	.0144101	-0.45	0.652	.9656367	1.022131
	birth cohort	1.217875	.0493455	4.86	0.000	1.124901	1.318535
	entrance cohort	1.098713	.0448036	2.31	0.021	1.014317	1.190131
	LR chi2(4) = 84.60		Log likelihood = -7977.476		Prob > chi2 = 0.0000		

Table 15. Exponential Model Estimates of Proportional Hazards for statuses 00-07 (no. of subjects = 16,166, number of obs. = 16,166, time at risk = 260,859.5 months)

	_t	Haz. Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
Status_00 "Employed through employment services"	gender	.9302406	.0299558	-2.25	0.025	.8733428	.9908454
	education	.9769881	.0071094	-3.20	0.001	.9631528	.9910222
	birth cohort	1.111383	.0204911	5.73	0.000	1.071938	1.15228
	entrance cohort	1.759263	.0333439	29.80	0.000	1.695109	1.825845
	_cons	.0016273	.000146	-71.54	0.000	.0013648	.0019403
	LR chi2(4) = 2180.77		Log likelihood = -13946.654		Prob > chi2 = 0.0000		
Status_01 "Employed in the general labor market"	gender	.9512938	.0382407	-1.24	0.214	.8792199	1.029276
	education	.9787272	.0089945	-2.34	0.019	.9612562	.9965158
	birth cohort	1.388299	.0362375	12.57	0.000	1.319061	1.461171
	entrance cohort	1.040271	.0260841	1.57	0.115	.990383	1.092672
	_cons	.0041063	.0004165	-54.18	0.000	.003366	.0050094
	LR chi2(4) = 467.89		Log likelihood = -7265.0329		Prob > chi2 = 0.0000		
Status_02 "On reduced working week"	gender	1.25085	.0296869	9.43	0.000	1.193997	1.31041
	education	.9953128	.0051534	-0.91	0.364	.9852634	1.005465
	birth cohort	.9610238	.012384	-3.09	0.002	.9370556	.9856051
	entrance cohort	2.031302	.0269149	53.48	0.000	1.979229	2.084745
	_cons	.0015335	.0001024	-97.05	0.000	.0013454	.0017479
	LR chi2(4) = 4504.15		Log likelihood = -24026.169		Prob > chi2 = 0.0000		
Status_03 "Job- placed itself"	gender	.8862488	.1440699	-0.74	0.458	.6444409	1.218788
	education	.8933166	.0366069	-2.75	0.006	.8243741	.9680248
	birth cohort	1.753809	.181671	5.42	0.000	1.431559	2.148598
	entrance cohort	1.694187	.187329	4.77	0.000	1.364089	2.104167
	_cons	.000024	.0000123	-20.80	0.000	8.81e-06	.0000654
	LR chi2(4) = 195.01		Log likelihood = -1119.4764		Prob > chi2 = 0.0000		
Status_04 "In LM training"	gender	.5387713	.0535103	-6.23	0.000	.4434696	.6545533
	education	.9159201	.0208684	-3.85	0.000	.8759187	.9577483
	birth cohort	.9847143	.0520895	-0.29	0.771	.887735	1.092288
	entrance cohort	1.748042	.0958048	10.19	0.000	1.570002	1.946272
	_cons	.0007855	.0002011	-27.93	0.000	.0004756	.0012973
	LR chi2(4) = 275.28		Log likelihood = -2010.6034		Prob > chi2 = 0.0000		
Status_05 "Outside the labor force"	gender	.6554689	.0817743	-3.39	0.001	.5132852	.8370386
	education	.9019079	.0269836	-3.45	0.001	.8505417	.9563762
	birth cohort	1.060726	.079126	0.79	0.429	.9164457	1.22772
	entrance cohort	1.202296	.0860863	2.57	0.010	1.044874	1.383435
	_cons	.0013344	.0004012	-22.02	0.000	.0007403	.0024056
	LR chi2(4) = 55.91		Log likelihood = -1483.8002		Prob > chi2 = 0.0000		
Status_06 "Another reason"	gender	.7074838	.0868369	-2.82	0.005	.5562111	.8998982
	education	.9298222	.0269189	-2.51	0.012	.878531	.9841079
	birth cohort	1.258471	.0918293	3.15	0.002	1.090767	1.45196
	entrance cohort	1.437664	.1065158	4.90	0.000	1.243347	1.66235
	_cons	.0003251	.0001061	-24.61	0.000	.0001715	.0006163
	LR chi2(4) = 141.68		Log likelihood = -1354.677		Prob > chi2 = 0.0000		
Status_07 "On unemployment pension"	gender	.9158788	.0588895	-1.37	0.172	.8074343	1.038888
	education	.9913018	.0144013	-0.60	0.548	.9634738	1.019933
	birth cohort	1.229915	.0497821	5.11	0.000	1.136113	1.33146

	entrance cohort	1.12591	.0435593	3.07	0.002	1.043692	1.214605
	_cons	.0017156	.0002763	-39.53	0.000	.0012512	.0023525
	LR chi2(4) = 137.87		Log likelihood = -3910.6626		Prob > chi2 = 0.0000		

Table 16. Weibull Model Estimates of Proportional Hazards for statuses 00-07 (no. of subjects = 16,166, number of obs. = 16,166, time at risk = 260,859.5 months)

	_t	Haz. Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
Status_00 "Employed through employment services"	gender	.9289689	.0298728	-2.29	0.022	.8722262	.9894029
	education	.9824472	.0071516	-2.43	0.015	.9685298	.9965646
	birth cohort	1.083667	.0197287	4.41	0.000	1.045681	1.123032
	entrance cohort	1.450612	.0278449	19.38	0.000	1.397051	1.506227
	_cons	.0105642	.00106	-45.35	0.000	.0086782	.0128601
	/ln_p	-.3843008	.0118176	-32.52	0.000	-.407463	-.3611387
	p	.6809265	.0080469			.6653361	.6968823
	1/p	1.468587	.0173552			1.434962	1.503
		LR chi2(4) = 847.42		Log likelihood = -13286.836		Prob > chi2 = 0.0000	
Status_01 "Employed in the general labor market"	gender	.9509133	.0382273	-1.25	0.211	.8788649	1.028868
	education	.9783971	.0089899	-2.38	0.017	.960935	.9961765
	birth cohort	1.392844	.03647	12.65	0.000	1.323167	1.466189
	entrance cohort	1.053809	.0274943	2.01	0.045	1.001276	1.109099
	_cons	.0035561	.0004571	-43.87	0.000	.002764	.0045751
	/ln_p	.0235844	.0127661	1.85	0.065	-.0014366	.0486054
	p	1.023865	.0130707			.9985644	1.049806
	1/p	.9766915	.0124685			.9525569	1.001438
		LR chi2(4) = 423.28		Log likelihood = -7263.3471		Prob > chi2 = 0.0000	
Status_02 "On reduced working week"	gender	1.248619	.0295741	9.37	0.000	1.191979	1.307949
	education	1.002654	.0051824	0.51	0.608	.9925477	1.012863
	birth cohort	.9373878	.0119017	-5.09	0.000	.9143487	.9610074
	entrance cohort	1.580719	.0210643	34.36	0.000	1.539968	1.622549
	_cons	.0160611	.0011701	-56.71	0.000	.013924	.0185261
	/ln_p	-.5201528	.0090603	-57.41	0.000	-.5379107	-.5023949
	p	.5944297	.0053857			.5839671	.6050798
	1/p	1.682285	.015242			1.652674	1.712425
		LR chi2(4) = 1539.72		Log likelihood = -21804.065		Prob > chi2 = 0.0000	
Status_03 "Job- placed itself"	gender	.8726562	.1416689	-0.84	0.401	.6348297	1.19958
	education	.9036954	.037168	-2.46	0.014	.8337063	.9795599
	birth cohort	1.670538	.1692031	5.07	0.000	1.369749	2.037378
	entrance cohort	1.329192	.146713	2.58	0.010	1.070617	1.650218
	_cons	.0002843	.0001557	-14.91	0.000	.0000972	.0008315
	/ln_p	-.5693682	.0637165	-8.94	0.000	-.6942502	-.4444862
	p	.5658829	.0360561			.4994488	.6411536
	1/p	1.76715	.1125966			1.559689	2.002207
		LR chi2(4) = 99.97		Log likelihood = -1064.0549		Prob > chi2 = 0.0000	
Status_04 "In LM training"	gender	.5381141	.0534683	-6.24	0.000	.4428912	.6538103
	education	.9149912	.0208373	-3.90	0.000	.8750488	.9567569
	birth cohort	.9938066	.0528776	-0.12	0.907	.8953893	1.103042

	entrance cohort	1.862242	.1092132	10.60	0.000	1.660032	2.089083
	_cons	.0004117	.0001352	-23.74	0.000	.0002163	.0007835
	/ln_p	.0987698	.0296652	3.33	0.001	.040627	.1569126
	p	1.103812	.0327448			1.041464	1.169893
	1/p	.9059512	.0268753			.8547788	.9601872
	LR chi2(4) = 270.48		Log likelihood = -2005.3472		Prob > chi2 = 0.0000		
Status_05 "Outside the labor force"	gender	.6565548	.0818854	-3.37	0.001	.5141731	.8383642
	education	.9028148	.0270575	-3.41	0.001	.8513105	.9574351
	birth cohort	1.042445	.0774532	0.56	0.576	.901175	1.20586
	entrance cohort	1.111076	.0818205	1.43	0.153	.9617464	1.283591
	_cons	.0030854	.0011311	-15.77	0.000	.001504	.0063294
	/ln_p	-.1505367	.0413843	-3.64	0.000	-	-.069425
						.2316485	
	p	.8602461	.0356007			.7932249	.9329301
	1/p	1.162458	.0481075			1.071892	1.260677
	LR chi2(4) = 36.90		Log likelihood = -1476.6247		Prob > chi2 = 0.0000		
Status_06 "Another reason"	gender	.7057219	.0866654	-2.84	0.005	.5547569	.8977688
	education	.9277366	.0268107	-2.60	0.009	.876649	.9818013
	birth cohort	1.282118	.0944073	3.37	0.001	1.109815	1.481171
	entrance cohort	1.58161	.1246659	5.82	0.000	1.355208	1.845836
	_cons	.0001169	.0000496	-21.34	0.000	.0000509	.0002686
	/ln_p	.1529851	.0371563	4.12	0.000	.0801601	.2258101
	p	1.165308	.0432985			1.083461	1.253338
	1/p	.8581425	.0318854			.7978696	.9229685
		LR chi2(4) = 154.37		Log likelihood = -1346.8525		Prob > chi2 = 0.0000	
Status_07 "On unemployment pension"	gender	.9163305	.0589167	-1.36	0.174	.8078356	1.039397
	education	.9916489	.0144135	-0.58	0.564	.9637975	1.020305
	birth cohort	1.225584	.0496559	5.02	0.000	1.132024	1.326876
	entrance cohort	1.108609	.044565	2.56	0.010	1.024616	1.199488
	_cons	.0020297	.0004088	-30.78	0.000	.0013677	.003012
	/ln_p	-.0283596	.0207479	-1.37	0.172	-	.0123055
						.0690246	
	p	.9720388	.0201677			.9333037	1.012382
	1/p	1.028766	.0213447			.9877699	1.071463
	LR chi2(4) = 101.19		Log likelihood = -3909.7145		Prob > chi2 = 0.0000		

Table 17. Estimated hazards on discrete-time survival for the status 00

Status 00 "Employed through employment services", no adjust						
Interval (months)	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
0 1	16166	0.0240	0.0012	0.0240	0.0012	0.0217 0.0264
1 2	14541	0.0613	0.0019	0.0382	0.0016	0.0351 0.0415
2 3	12521	0.0989	0.0025	0.0400	0.0018	0.0366 0.0436
3 4	10768	0.1452	0.0030	0.0514	0.0022	0.0473 0.0558
4 5	9028	0.1673	0.0033	0.0258	0.0017	0.0226 0.0292
5 6	8016	0.1909	0.0035	0.0283	0.0019	0.0248 0.0321
6 7	7163	0.2274	0.0039	0.0451	0.0025	0.0403 0.0501
7 8	5983	0.2398	0.0041	0.0160	0.0016	0.0130 0.0194
8 9	5501	0.2492	0.0042	0.0124	0.0015	0.0096 0.0155
9 10	5120	0.2610	0.0043	0.0158	0.0018	0.0126 0.0194
10 11	4734	0.2704	0.0044	0.0127	0.0016	0.0097 0.0161
11 12	4421	0.2887	0.0046	0.0251	0.0024	0.0207 0.0300
12 13	4076	0.3067	0.0048	0.0253	0.0025	0.0206 0.0304

13 14	3729	0.3123	0.0049	0.0080	0.0015	0.0054 0.0112
14 15	3586	0.3155	0.0050	0.0047	0.0011	0.0028 0.0072
15 16	3457	0.3223	0.0050	0.0098	0.0017	0.0068 0.0134
16 17	3319	0.3274	0.0051	0.0075	0.0015	0.0049 0.0108
17 18	3182	0.3305	0.0051	0.0047	0.0012	0.0026 0.0074
Rows 19-537 are omitted						
538 539	1	0.6977	0.0242	0.0000	.	.

Table 18. Estimated hazards on discrete-time survival for the status 01

Status 01 "Employed in the general labor market", no adjust						
Interval (months)	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
0 1	16166	0.0041	0.0005	0.0041	0.0005	0.0032 0.0052
1 2	14541	0.0116	0.0009	0.0075	0.0007	0.0062 0.0090
2 3	12521	0.0205	0.0012	0.0090	0.0008	0.0074 0.0108
3 4	10768	0.0315	0.0015	0.0112	0.0010	0.0093 0.0133
4 5	9028	0.0436	0.0019	0.0124	0.0012	0.0102 0.0148
5 6	8016	0.0546	0.0022	0.0116	0.0012	0.0094 0.0141
6 7	7163	0.0677	0.0025	0.0138	0.0014	0.0112 0.0167
7 8	5983	0.0802	0.0029	0.0134	0.0015	0.0106 0.0165
8 9	5501	0.0932	0.0032	0.0142	0.0016	0.0112 0.0175
9 10	5120	0.1044	0.0034	0.0123	0.0016	0.0095 0.0155
10 11	4734	0.1152	0.0037	0.0120	0.0016	0.0091 0.0154
11 12	4421	0.1266	0.0039	0.0129	0.0017	0.0098 0.0164
12 13	4076	0.1407	0.0042	0.0162	0.0020	0.0125 0.0203
13 14	3729	0.1513	0.0045	0.0123	0.0018	0.0090 0.0161
14 15	3586	0.1608	0.0047	0.0112	0.0018	0.0080 0.0149
15 16	3457	0.1710	0.0049	0.0121	0.0019	0.0088 0.0161
16 17	3319	0.1832	0.0051	0.0148	0.0021	0.0109 0.0192
17 18	3182	0.1930	0.0053	0.0119	0.0019	0.0085 0.0160
18 19	3073	0.2035	0.0055	0.0130	0.0021	0.0093 0.0173
19 20	2967	0.2129	0.0056	0.0118	0.0020	0.0082 0.0160
20 21	2865	0.2211	0.0058	0.0105	0.0019	0.0071 0.0145
21 22	2786	0.2292	0.0059	0.0104	0.0019	0.0070 0.0145
22 23	2710	0.2403	0.0061	0.0144	0.0023	0.0102 0.0192
23 24	2619	0.2461	0.0062	0.0076	0.0017	0.0047 0.0113
Rows 25-537 are omitted						
538 539	1	0.9675	0.0184	0.0000	.	.

Table 19. Estimated hazards on discrete-time survival for the status 02

Status 02 "On reduced working week", no adjust						
Interval (months)	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
0 1	16166	0.0659	0.0020	0.0659	0.0020	0.0620 0.0699
1 2	14541	0.1431	0.0028	0.0827	0.0024	0.0781 0.0874
2 3	12521	0.2102	0.0033	0.0783	0.0025	0.0735 0.0833
3 4	10768	0.2800	0.0037	0.0883	0.0029	0.0828 0.0940
4 5	9028	0.3247	0.0039	0.0621	0.0026	0.0571 0.0674
5 6	8016	0.3629	0.0041	0.0565	0.0027	0.0514 0.0618
6 7	7163	0.4237	0.0043	0.0955	0.0037	0.0885 0.1028
7 8	5983	0.4481	0.0044	0.0423	0.0027	0.0372 0.0477
8 9	5501	0.4668	0.0044	0.0338	0.0025	0.0291 0.0388
9 10	5120	0.4866	0.0045	0.0373	0.0027	0.0322 0.0428
10 11	4734	0.5028	0.0046	0.0315	0.0026	0.0266 0.0367
11 12	4421	0.5174	0.0046	0.0294	0.0026	0.0246 0.0347

12 13	4076	0.5328	0.0046	0.0319	0.0028	0.0266 0.0376
13 14	3729	0.5375	0.0047	0.0099	0.0016	0.0070 0.0134
14 15	3586	0.5429	0.0047	0.0117	0.0018	0.0084 0.0155
15 16	3457	0.5466	0.0047	0.0081	0.0015	0.0054 0.0114
16 17	3319	0.5501	0.0047	0.0078	0.0015	0.0051 0.0111
17 18	3182	0.5538	0.0047	0.0082	0.0016	0.0053 0.0116
Rows 19-537 are omitted						
538 539	1	0.6423	0.0076	0.0000	.	.

Table 20. Estimated hazards on discrete-time survival for the status 03

Status 03 "Job-placed itself", no adjust						
Interval (months)	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
0 1	16166	0.0017	0.0003	0.0017	0.0003	0.0012 0.0024
1 2	14541	0.0043	0.0005	0.0026	0.0004	0.0018 0.0035
2 3	12521	0.0070	0.0007	0.0026	0.0005	0.0018 0.0036
3 4	10768	0.0099	0.0009	0.0030	0.0005	0.0020 0.0041
4 5	9028	0.0109	0.0009	0.0010	0.0003	0.0005 0.0017
5 6	8016	0.0109	0.0009	0.0000	.	.
6 7	7163	0.0110	0.0009	0.0001	0.0001	0.0000 0.0005
7 8	5983	0.0112	0.0010	0.0002	0.0002	0.0000 0.0006
8 9	5501	0.0116	0.0010	0.0004	0.0003	0.0000 0.0010
9 10	5120	0.0116	0.0010	0.0000	.	.
10 11	4734	0.0116	0.0010	0.0000	.	.
11 12	4421	0.0116	0.0010	0.0000	.	.
Rows 13-537 are omitted						
538 539	1	0.0322	0.0101	0.0000	.	.

Table 21. Estimated hazards on discrete-time survival for the status 04

Status 04 "In LM training", no adjust						
Interval (months)	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
0 1	16166	0.0003	0.0001	0.0003	0.0001	0.0001 0.0006
1 2	14541	0.0020	0.0004	0.0017	0.0003	0.0011 0.0025
2 3	12521	0.0039	0.0005	0.0019	0.0004	0.0012 0.0028
3 4	10768	0.0051	0.0006	0.0012	0.0003	0.0006 0.0019
4 5	9028	0.0084	0.0009	0.0033	0.0006	0.0022 0.0046
5 6	8016	0.0106	0.0010	0.0021	0.0005	0.0012 0.0032
6 7	7163	0.0128	0.0011	0.0022	0.0006	0.0013 0.0035
7 8	5983	0.0154	0.0013	0.0027	0.0007	0.0015 0.0041
8 9	5501	0.0176	0.0015	0.0022	0.0006	0.0011 0.0036
9 10	5120	0.0199	0.0016	0.0023	0.0007	0.0012 0.0038
10 11	4734	0.0225	0.0018	0.0027	0.0008	0.0015 0.0044
11 12	4421	0.0248	0.0019	0.0023	0.0007	0.0011 0.0039
12 13	4076	0.0274	0.0020	0.0027	0.0008	0.0013 0.0045
13 14	3729	0.0305	0.0022	0.0032	0.0009	0.0017 0.0053
14 15	3586	0.0324	0.0023	0.0020	0.0007	0.0008 0.0036
15 16	3457	0.0344	0.0024	0.0020	0.0008	0.0008 0.0038
16 17	3319	0.0384	0.0027	0.0042	0.0011	0.0023 0.0067
17 18	3182	0.0400	0.0027	0.0016	0.0007	0.0005 0.0032
18 19	3073	0.0412	0.0028	0.0013	0.0007	0.0004 0.0029
19 20	2967	0.0435	0.0029	0.0024	0.0009	0.0009 0.0044
20 21	2865	0.0451	0.0030	0.0017	0.0008	0.0006 0.0036
21 22	2786	0.0465	0.0031	0.0014	0.0007	0.0004 0.0031
22 23	2710	0.0490	0.0032	0.0026	0.0010	0.0010 0.0048

23 24	2619	0.0526	0.0034	0.0038	0.0012	0.0018	0.0065
24 25	2542	0.0560	0.0036	0.0035	0.0012	0.0016	0.0062
25 26	2423	0.0583	0.0037	0.0025	0.0010	0.0009	0.0048
26 27	2343	0.0611	0.0038	0.0030	0.0011	0.0012	0.0056
27 28	2263	0.0628	0.0039	0.0018	0.0009	0.0005	0.0039
28 29	2206	0.0645	0.0040	0.0018	0.0009	0.0005	0.0040
29 30	2149	0.0662	0.0041	0.0019	0.0009	0.0005	0.0041
30 31	2102	0.0684	0.0042	0.0024	0.0011	0.0008	0.0049
31 32	2053	0.0702	0.0043	0.0019	0.0010	0.0005	0.0043
32 33	2000	0.0721	0.0044	0.0020	0.0010	0.0005	0.0044
33 34	1943	0.0754	0.0045	0.0036	0.0014	0.0014	0.0067
34 35	1899	0.0769	0.0046	0.0016	0.0009	0.0003	0.0038
35 36	1852	0.0784	0.0047	0.0016	0.0009	0.0003	0.0039
36 37	1794	0.0799	0.0048	0.0017	0.0010	0.0003	0.0040
37 38	1731	0.0805	0.0048	0.0006	0.0006	0.0000	0.0021
38 39	1685	0.0827	0.0049	0.0024	0.0012	0.0006	0.0052
39 40	1631	0.0872	0.0051	0.0049	0.0017	0.0021	0.0088
40 41	1592	0.0877	0.0052	0.0006	0.0006	0.0000	0.0023
Rows 41-299 are omitted							
299 300	69	0.2316	0.0210	0.0145	0.0145	0.0004	0.0535
300 301	66	0.2549	0.0260	0.0303	0.0214	0.0037	0.0844
Rows 302-317 are omitted							
319 320	52	0.2692	0.0292	0.0192	0.0192	0.0005	0.0709
320 321	51	0.2836	0.0320	0.0196	0.0196	0.0005	0.0723
Rows 324-416 are omitted							
424 425	9	0.3632	0.0803	0.1111	0.1111	0.0028	0.4099
Rows 442-490 are omitted							
538 539	1	1.0000	.	1.0000	1.0000	0.0253	3.6889

Table 22. Estimated hazards on discrete-time survival for the status 05

Status 05 "Outside the labor force", no adjust						
Interval (months)	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
0 1	16166	0.0013	0.0003	0.0013	0.0003	0.0008 0.0019
1 2	14541	0.0028	0.0004	0.0015	0.0003	0.0009 0.0022
2 3	12521	0.0046	0.0006	0.0018	0.0004	0.0011 0.0026
3 4	10768	0.0061	0.0007	0.0016	0.0004	0.0009 0.0024
4 5	9028	0.0072	0.0008	0.0011	0.0004	0.0005 0.0019
5 6	8016	0.0079	0.0008	0.0006	0.0003	0.0002 0.0013
6 7	7163	0.0088	0.0009	0.0010	0.0004	0.0004 0.0018
7 8	5983	0.0097	0.0010	0.0008	0.0004	0.0003 0.0017
8 9	5501	0.0104	0.0010	0.0007	0.0004	0.0002 0.0016
9 10	5120	0.0115	0.0011	0.0012	0.0005	0.0004 0.0023
10 11	4734	0.0128	0.0012	0.0013	0.0005	0.0005 0.0025
11 12	4421	0.0141	0.0014	0.0014	0.0006	0.0005 0.0026
12 13	4076	0.0161	0.0015	0.0020	0.0007	0.0008 0.0035
13 14	3729	0.0166	0.0016	0.0005	0.0004	0.0001 0.0015
14 15	3586	0.0177	0.0017	0.0011	0.0006	0.0003 0.0024
15 16	3457	0.0194	0.0018	0.0017	0.0007	0.0006 0.0034
16 17	3319	0.0212	0.0019	0.0018	0.0007	0.0007 0.0035
17 18	3182	0.0227	0.0020	0.0016	0.0007	0.0005 0.0032
18 19	3073	0.0237	0.0021	0.0010	0.0006	0.0002 0.0024
19 20	2967	0.0250	0.0022	0.0013	0.0007	0.0004 0.0030
20 21	2865	0.0263	0.0023	0.0014	0.0007	0.0004 0.0031
21 22	2786	0.0267	0.0023	0.0004	0.0004	0.0000 0.0013
22 23	2710	0.0281	0.0024	0.0015	0.0007	0.0004 0.0032

23 24	2619	0.0285	0.0025	0.0004	0.0004	0.0000	0.0014
24 25	2542	0.0296	0.0026	0.0012	0.0007	0.0002	0.0028
25 26	2423	0.0296	0.0026	0.0000	.	.	.
26 27	2343	0.0313	0.0027	0.0017	0.0009	0.0005	0.0037
27 28	2263	0.0326	0.0028	0.0013	0.0008	0.0003	0.0032
28 29	2206	0.0348	0.0029	0.0023	0.0010	0.0007	0.0046
29 30	2149	0.0357	0.0030	0.0009	0.0007	0.0001	0.0026
30 31	2102	0.0370	0.0031	0.0014	0.0008	0.0003	0.0034
31 32	2053	0.0385	0.0032	0.0015	0.0008	0.0003	0.0035
32 33	2000	0.0394	0.0033	0.0010	0.0007	0.0001	0.0028
33 34	1943	0.0394	0.0033	0.0000	.	.	.
34 35	1899	0.0409	0.0034	0.0016	0.0009	0.0003	0.0038
35 36	1852	0.0414	0.0034	0.0005	0.0005	0.0000	0.0020
36 37	1794	0.0447	0.0036	0.0033	0.0014	0.0012	0.0065
Rows 38-299 are omitted							
299 300	69	0.1663	0.0219	0.0145	0.0145	0.0004	0.0535
Rows 301-327 are omitted							
329 330	47	0.1841	0.0277	0.0213	0.0213	0.0005	0.0785
Rows 331-378 are omitted							
382 383	21	0.2229	0.0462	0.0476	0.0476	0.0012	0.1757
Rows 384-396 are omitted							
410 411	12	0.2877	0.0751	0.0833	0.0833	0.0021	0.3074
Rows 415-490 are omitted							
538 539	1	0.2877	0.0751	0.0000	.	.	.

Table 23. Estimated hazards on discrete-time survival for the status 06

Status 06 "Another reason", no adjust						
Interval (months)	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
0 1	16166	0.0003	0.0001	0.0003	0.0001	0.0001 0.0006
1 2	14541	0.0013	0.0003	0.0010	0.0003	0.0005 0.0015
2 3	12521	0.0021	0.0004	0.0008	0.0003	0.0004 0.0014
3 4	10768	0.0026	0.0004	0.0006	0.0002	0.0002 0.0011
4 5	9028	0.0036	0.0006	0.0010	0.0003	0.0005 0.0017
5 6	8016	0.0056	0.0007	0.0020	0.0005	0.0011 0.0031
6 7	7163	0.0084	0.0010	0.0028	0.0006	0.0017 0.0041
7 8	5983	0.0095	0.0011	0.0012	0.0004	0.0005 0.0022
8 9	5501	0.0103	0.0011	0.0007	0.0004	0.0002 0.0016
9 10	5120	0.0110	0.0012	0.0008	0.0004	0.0002 0.0017
10 11	4734	0.0123	0.0013	0.0013	0.0005	0.0005 0.0025
11 12	4421	0.0136	0.0014	0.0014	0.0006	0.0005 0.0026
12 13	4076	0.0153	0.0015	0.0017	0.0006	0.0007 0.0032
13 14	3729	0.0169	0.0017	0.0016	0.0007	0.0006 0.0031
14 15	3586	0.0186	0.0018	0.0017	0.0007	0.0006 0.0033
15 16	3457	0.0197	0.0019	0.0012	0.0006	0.0003 0.0025
16 17	3319	0.0212	0.0020	0.0015	0.0007	0.0005 0.0031
17 18	3182	0.0227	0.0021	0.0016	0.0007	0.0005 0.0032
18 19	3073	0.0240	0.0022	0.0013	0.0007	0.0004 0.0029
19 20	2967	0.0250	0.0023	0.0010	0.0006	0.0002 0.0024
20 21	2865	0.0267	0.0024	0.0017	0.0008	0.0006 0.0036
21 22	2786	0.0281	0.0025	0.0014	0.0007	0.0004 0.0031
22 23	2710	0.0299	0.0026	0.0018	0.0008	0.0006 0.0038
23 24	2619	0.0306	0.0027	0.0008	0.0005	0.0001 0.0021
24 25	2542	0.0321	0.0028	0.0016	0.0008	0.0004 0.0034
25 26	2423	0.0329	0.0028	0.0008	0.0006	0.0001 0.0023
26 27	2343	0.0337	0.0029	0.0009	0.0006	0.0001 0.0024

27 28	2263	0.0359	0.0030	0.0022	0.0010	0.0007	0.0045
28 29	2206	0.0372	0.0031	0.0014	0.0008	0.0003	0.0033
29 30	2149	0.0390	0.0032	0.0019	0.0009	0.0005	0.0041
30 31	2102	0.0399	0.0033	0.0010	0.0007	0.0001	0.0027
31 32	2053	0.0408	0.0033	0.0010	0.0007	0.0001	0.0027
32 33	2000	0.0418	0.0034	0.0010	0.0007	0.0001	0.0028
33 34	1943	0.0433	0.0035	0.0015	0.0009	0.0003	0.0037
34 35	1899	0.0448	0.0036	0.0016	0.0009	0.0003	0.0038
35 36	1852	0.0458	0.0037	0.0011	0.0008	0.0001	0.0030
36 37	1794	0.0463	0.0037	0.0006	0.0006	0.0000	0.0021
37 38	1731	0.0480	0.0038	0.0017	0.0010	0.0004	0.0042
38 39	1685	0.0503	0.0040	0.0024	0.0012	0.0006	0.0052
39 40	1631	0.0514	0.0041	0.0012	0.0009	0.0001	0.0034
40 41	1592	0.0520	0.0041	0.0006	0.0006	0.0000	0.0023
41 42	1557	0.0526	0.0042	0.0006	0.0006	0.0000	0.0024
42 43	1516	0.0539	0.0042	0.0013	0.0009	0.0002	0.0037
43 44	1476	0.0545	0.0043	0.0007	0.0007	0.0000	0.0025
44 45	1440	0.0585	0.0046	0.0042	0.0017	0.0015	0.0081
45 46	1403	0.0591	0.0046	0.0007	0.0007	0.0000	0.0026
46 47	1373	0.0605	0.0047	0.0015	0.0010	0.0002	0.0041
47 48	1346	0.0612	0.0047	0.0007	0.0007	0.0000	0.0027
48 49	1313	0.0626	0.0048	0.0015	0.0011	0.0002	0.0042
49 50	1282	0.0648	0.0050	0.0023	0.0014	0.0005	0.0056
50 51	1257	0.0671	0.0051	0.0024	0.0014	0.0005	0.0057
51 52	1230	0.0678	0.0052	0.0028	0.0008	0.0000	0.0030
52 53	1204	0.0694	0.0053	0.0017	0.0012	0.0002	0.0046
Rows 54-276 are omitted							
277 278	89	0.1816	0.0217	0.0112	0.0112	0.0003	0.0414
Rows 279-303							
306 307	62	0.1948	0.0250	0.0161	0.0161	0.0004	0.0595
Rows 308-371 are omitted							
372 373	25	0.2270	0.0397	0.0400	0.0400	0.0010	0.1476
Rows 374-385 are omitted							
386 387	18	0.2700	0.0561	0.0556	0.0556	0.0014	0.2049
Rows 390-411 are omitted							
415 416	11	0.3363	0.0813	0.0909	0.0909	0.0023	0.3354
Rows 424-490 are omitted							
538 539	1	0.3363	0.0813	0.0000	.	.	.

Table 24. Estimated hazards on discrete-time survival for the status 07

Status 07 "On unemployment pension", no adjust						
Interval (months)	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
0 1	16166	0.0028	0.0004	0.0028	0.0004	0.0021 0.0037
1 2	14541	0.0065	0.0007	0.0037	0.0005	0.0028 0.0048
2 3	12521	0.0120	0.0009	0.0055	0.0007	0.0043 0.0069
3 4	10768	0.0162	0.0011	0.0043	0.0006	0.0031 0.0056
4 5	9028	0.0215	0.0013	0.0053	0.0008	0.0039 0.0069
5 6	8016	0.0266	0.0015	0.0052	0.0008	0.0038 0.0069
6 7	7163	0.0307	0.0017	0.0042	0.0008	0.0028 0.0058
7 8	5983	0.0346	0.0019	0.0040	0.0008	0.0026 0.0058
8 9	5501	0.0393	0.0021	0.0049	0.0009	0.0032 0.0069
9 10	5120	0.0447	0.0023	0.0057	0.0011	0.0038 0.0079
10 11	4734	0.0492	0.0025	0.0046	0.0010	0.0029 0.0068
11 12	4421	0.0546	0.0027	0.0057	0.0011	0.0037 0.0081
12 13	4076	0.0594	0.0029	0.0052	0.0011	0.0032 0.0076

13 14	3729	0.0620	0.0030	0.0027	0.0008	0.0013	0.0046
14 15	3586	0.0654	0.0031	0.0036	0.0010	0.0019	0.0058
15 16	3457	0.0700	0.0033	0.0049	0.0012	0.0029	0.0075
16 17	3319	0.0733	0.0034	0.0036	0.0010	0.0019	0.0059
17 18	3182	0.0771	0.0036	0.0041	0.0011	0.0022	0.0066
18 19	3073	0.0813	0.0037	0.0046	0.0012	0.0025	0.0072
19 20	2967	0.0841	0.0038	0.0030	0.0010	0.0014	0.0053
20 21	2865	0.0870	0.0039	0.0031	0.0010	0.0014	0.0055
21 22	2786	0.0912	0.0041	0.0047	0.0013	0.0025	0.0075
22 23	2710	0.0939	0.0042	0.0030	0.0010	0.0013	0.0053
23 24	2619	0.0963	0.0043	0.0027	0.0010	0.0011	0.0050
24 25	2542	0.1017	0.0045	0.0059	0.0015	0.0033	0.0092
25 26	2423	0.1069	0.0046	0.0058	0.0015	0.0032	0.0092
26 27	2343	0.1095	0.0047	0.0030	0.0011	0.0012	0.0056
27 28	2263	0.1123	0.0048	0.0031	0.0012	0.0012	0.0058
28 29	2206	0.1143	0.0049	0.0023	0.0010	0.0007	0.0046
29 30	2149	0.1184	0.0051	0.0047	0.0015	0.0022	0.0080
30 31	2102	0.1209	0.0051	0.0029	0.0012	0.0010	0.0056
31 32	2053	0.1235	0.0052	0.0029	0.0012	0.0011	0.0057
32 33	2000	0.1283	0.0054	0.0055	0.0017	0.0027	0.0092
33 34	1943	0.1301	0.0055	0.0021	0.0010	0.0006	0.0045
34 35	1899	0.1333	0.0056	0.0037	0.0014	0.0015	0.0069
35 36	1852	0.1352	0.0056	0.0022	0.0011	0.0006	0.0047
36 37	1794	0.1376	0.0057	0.0028	0.0012	0.0009	0.0057
37 38	1731	0.1426	0.0059	0.0058	0.0018	0.0028	0.0099
38 39	1685	0.1482	0.0061	0.0065	0.0020	0.0033	0.0109
39 40	1631	0.1524	0.0063	0.0049	0.0017	0.0021	0.0088
40 41	1592	0.1556	0.0064	0.0038	0.0015	0.0014	0.0073
41 42	1557	0.1583	0.0065	0.0032	0.0014	0.0010	0.0066
42 43	1516	0.1627	0.0066	0.0053	0.0019	0.0023	0.0095
Rows 44-271 are omitted							
272 273	96	0.5034	0.0236	0.0208	0.0147	0.0025	0.0580
274 275	94	0.5087	0.0239	0.0106	0.0106	0.0003	0.0392
275 276	91	0.5087	0.0239	0.0000	.	..	
276 277	90	0.5141	0.0243	0.0111	0.0111	0.0003	0.0410
Rows 278-378 are omitted							
382 383	21	0.7052	0.0385	0.0476	0.0476	0.0012	0.1757
384 385	19	0.7207	0.0395	0.0526	0.0526	0.0013	0.1942
Rows 386-390 are omitted							
391 392	15	0.7393	0.0410	0.0667	0.0667	0.0017	0.2459
394 395	14	0.7579	0.0421	0.0714	0.0714	0.0018	0.2635
395 396	13	0.7766	0.0428	0.0769	0.0769	0.0019	0.2838
Rows 410-425 are omitted							
435 436	8	0.8045	0.0456	0.1250	0.1250	0.0032	0.4611
442 443	7	0.8324	0.0469	0.1429	0.1429	0.0036	0.5270
443 444	6	0.8324	0.0469	0.0000	.	..	
473 474	5	0.8659	0.0480	0.2000	0.2000	0.0051	0.7378
Rows 475-488 are omitted							
489 490	2	0.9330	0.0531	0.5000	0.5000	0.0127	1.8444
538 539	1	0.9330	0.0531	0.0000	.	..	

Table 25. Cumulative failures on discrete-time survival after 3, 6, 12 and 24 months in unemployment

Status	Unemployment period ended after:			
	3 months	6 months	12 months	24 months

Status_00 "Employed through employment services"	0.5036	0.5625	0.6848	0.6915
Status_01 "Employed in the general labor market"	0.1257	0.2090	0.4518	0.7664
Status_02 "On reduced working week"	0.7830	0.8603	0.8814	0.8408
Status_03 "Job-placed itself"	0.0382	0.0225	0.0203	0.0201
Status_04 "In LM training"	0.0194	0.0409	0.0988	0.2512
Status_05 "Outside the labor force"	0.0228	0.0230	0.0588	0.1126
Status_06 "Another reason"	0.0095	0.0323	0.0566	0.1379
Status_07 "On unemployment pension"	0.0611	0.0894	0.1970	0.3711

Table 26. Cumulative failures on discrete-time survival after 3, 6, 12 and 24 months in unemployment (by birth cohort)

Cumulative failure	Birth cohort	Unemployment period ended after:			
		3 months	6 months	12 months	24 months
Status_00 "Employed through employment services"	1935-1946	0.4275	0.5385	0.5763	0.6166
	1947-1956	0.4623	0.5238	0.6749	0.7173
	1957-1966	0.4942	0.5522	0.6805	0.6618
	1967-1976	0.5232	0.5749	0.6931	0.6870
	1977-1986	0.5866	0.6430	0.7546	0.8934
Status_01 "Employed in the general labor market"	1935-1946	0.0996	0.2324	0.4693	0.7162
	1947-1956	0.0933	0.1779	0.3851	0.8506
	1957-1966	0.1151	0.1687	0.4555	0.7341
	1967-1976	0.1534	0.2476	0.4758	0.7855
	1977-1986	0.1473	0.2601	0.4688	0.6354
Status_02 "On reduced working week"	1935-1946	0.7986	0.8670	0.9097	0.8522
	1947-1956	0.8313	0.8834	0.9204	0.8450
	1957-1966	0.8106	0.8732	0.8720	0.8320
	1967-1976	0.7351	0.8382	0.8671	0.8353
	1977-1986	0.7285	0.8221	0.8411	0.8809
Status_03 "Job-placed itself"	1935-1946	0.0021	0.0060	0.0034	0.0028
	1947-1956	0.0166	0.0101	0.0105	0.0084
	1957-1966	0.0256	0.0150	0.0106	0.0194
	1967-1976	0.0583	0.0352	0.0276	0.0227
	1977-1986	0.0758	0.0428	0.0607	0.0626
Status_04 "In LM training"	1935-1946	0.0062	0.0244	0.0454	0.2606
	1947-1956	0.0203	0.0380	0.0586	0.1672
	1957-1966	0.0286	0.0452	0.1345	0.3099
	1967-1976	0.0164	0.0398	0.0895	0.2157
	1977-1986	0.0108	0.0512	0.1123	0.2841
Status_05 "Outside the labor force"	1935-1946	0.0385	0.0322	0.1499	0.2947
	1947-1956	0.0140	0.0260	0.0404	0.1521
	1957-1966	0.0149	0.0170	0.0428	0.0747
	1967-1976	0.0258	0.0182	0.0579	0.0856
	1977-1986	0.0392	0.0453	0.0946	0.0967
Status_06 "Another reason"	1935-1946	0.0072	0.0086	0.0098	0.1393
	1947-1956	0.0049	0.0128	0.0512	0.0796
	1957-1966	0.0094	0.0348	0.0627	0.1795
	1967-1976	0.0134	0.0445	0.0670	0.1349
	1977-1986	0.0076	0.0429	0.0448	0.0442
Status_07 "On unemployment pension"	1935-1946	0.0889	0.0906	0.2128	0.3874
	1947-1956	0.0275	0.0620	0.1636	0.3313
	1957-1966	0.0706	0.0999	0.1634	0.4000
	1967-1976	0.0598	0.0989	0.2546	0.3472
	1977-1986	0.0771	0.0760	0.1971	0.4262

Table 27. Cumulative failures on discrete-time survival after 3, 6, 12 and 24 months in unemployment (by entrance cohort)

Cumulative failure	Entrance cohort	Unemployment period ended after:			
		3 months	6 months	12 months	24 months
Status_00 "Employed through employment services"	1952-1961	0.4318	0.4473	0.4241	0.5832
	1962-1971	0.4620	0.5377	0.6069	0.5333
	1972-1981	0.4761	0.5354	0.6778	0.6572
	1982-1991	0.4531	0.5486	0.6812	0.7048
	1992-2001	0.5489	0.5789	0.6977	0.7140
Status_01 "Employed in the general labor market"	2002-2014	0.5307	0.6153	0.7918	0.6657
	1952-1961	0.2126	0.5555	0.6680	0.8032
	1962-1971	0.1741	0.2547	0.5707	1.0000
	1972-1981	0.1477	0.2237	0.5266	0.8378
	1982-1991	0.1159	0.2205	0.4744	0.7426
Status_02 "On reduced working week"	1992-2001	0.1333	0.2019	0.3929	0.7069
	2002-2014	0.0419	0.0422	0.1834	0.4764
	1952-1961	0.6475	0.7842	0.8164	0.6132
	1962-1971	0.7447	0.8330	0.8606	0.6792
	1972-1981	0.8008	0.8769	0.8593	0.7985
Status_03 "Job-placed itself"	1982-1991	0.8197	0.8587	0.8677	0.8153
	1992-2001	0.7537	0.8520	0.8975	0.8845
	2002-2014	0.7885	0.9103	0.9294	1.0000
	1952-1961	0.0200	0.0111	0.0068	0.0053
	1962-1971	0.0141	0.0085	0.0067	0.0059
Status_04 "In LM training"	1972-1981	0.0070	0.0064	0.0089	0.0205
	1982-1991	0.0390	0.0212	0.0179	0.0175
	1992-2001	0.0537	0.0322	0.0301	0.0257
	2002-2014	0.0321	0.0185	0.0157	0.0150
	1952-1961	0.0200	0.0111	0.0068	0.0374
Status_05 "Outside the labor force"	1962-1971	0.0000	0.0349	0.0320	0.1336
	1972-1981	0.0243	0.0236	0.0543	0.1398
	1982-1991	0.0242	0.0482	0.1021	0.2764
	1992-2001	0.0211	0.0449	0.1365	0.3198
	2002-2014	0.0023	0.0325	0.0448	0.1805
Status_06 "Another reason"	1952-1961	0.0505	0.0694	0.1341	0.4629
	1962-1971	0.0155	0.0216	0.0584	0.2354
	1972-1981	0.0137	0.0108	0.0508	0.1174
	1982-1991	0.0167	0.0222	0.0620	0.0880
	1992-2001	0.0334	0.0294	0.0598	0.0711
Status_07 "On unemployment pension"	2002-2014	0.0117	0.0069	0.0271	0.1320
	1952-1961	0.0200	0.0111	0.0068	0.1474
	1962-1971	0.0047	0.0236	0.0476	0.0803
	1972-1981	0.0090	0.0161	0.0236	0.0609
	1982-1991	0.0109	0.0352	0.0758	0.1992
Status_07 "On unemployment pension"	1992-2001	0.0104	0.0386	0.0584	0.1115
	2002-2014	0.0032	0.0279	0.0536	0.0382
	1952-1961	0.2525	0.1814	0.3534	0.5344
	1962-1971	0.0611	0.0986	0.1830	0.3249
	1972-1981	0.0590	0.0792	0.2045	0.4097
Status_07 "On unemployment pension"	1982-1991	0.0687	0.0966	0.2263	0.3379
	1992-2001	0.0573	0.0877	0.1716	0.3776
	2002-2014	0.0231	0.0598	0.1272	0.4217

8.4 Appendix to 5.4 “Integrative capacity of labor market training”

Figure 1. Kaplan-Meier survivor curves for statuses 00-10

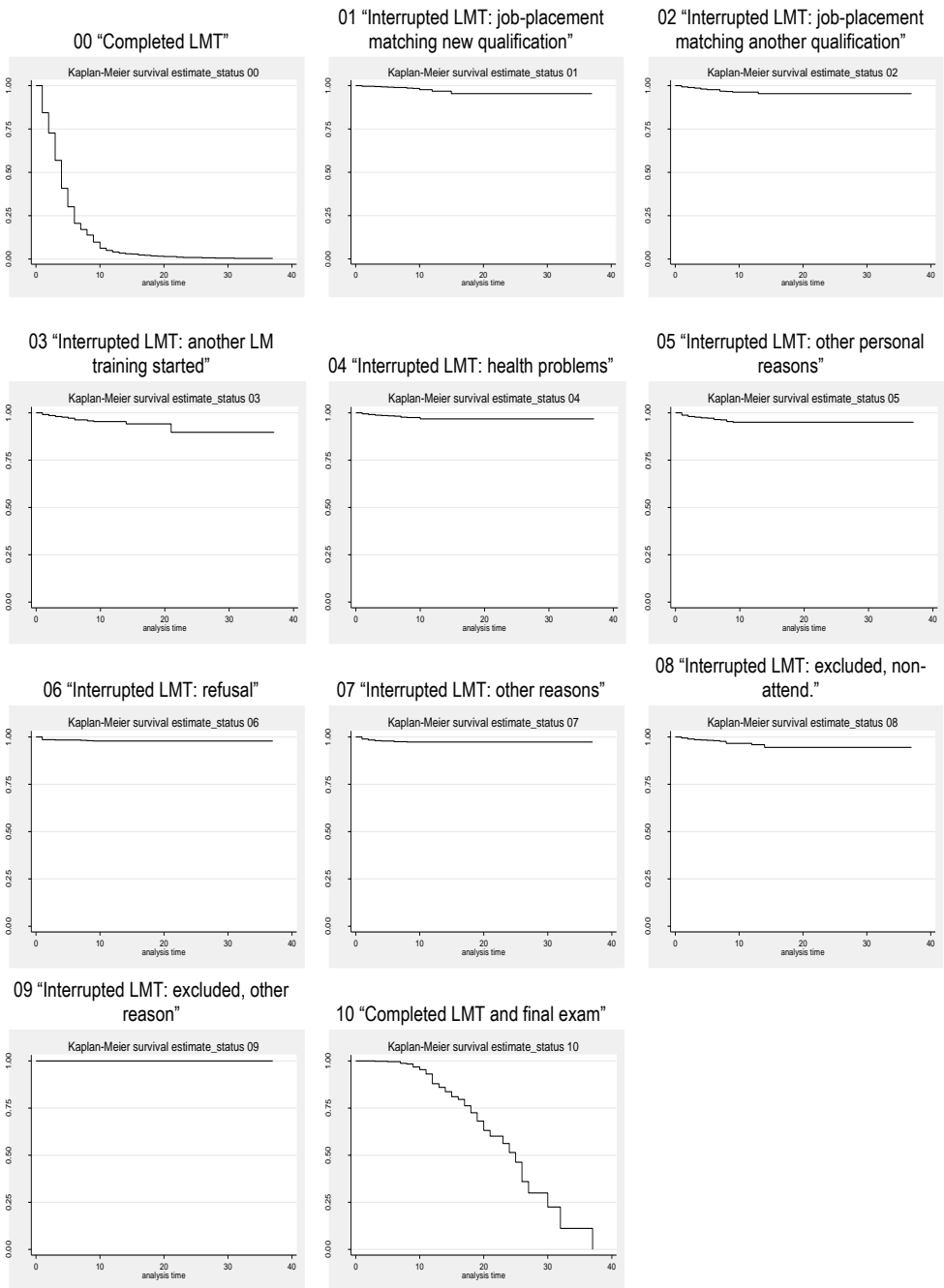


Figure 2. Kaplan-Meier survivor curves for statuses 00-10 and the ‘gender’-variable

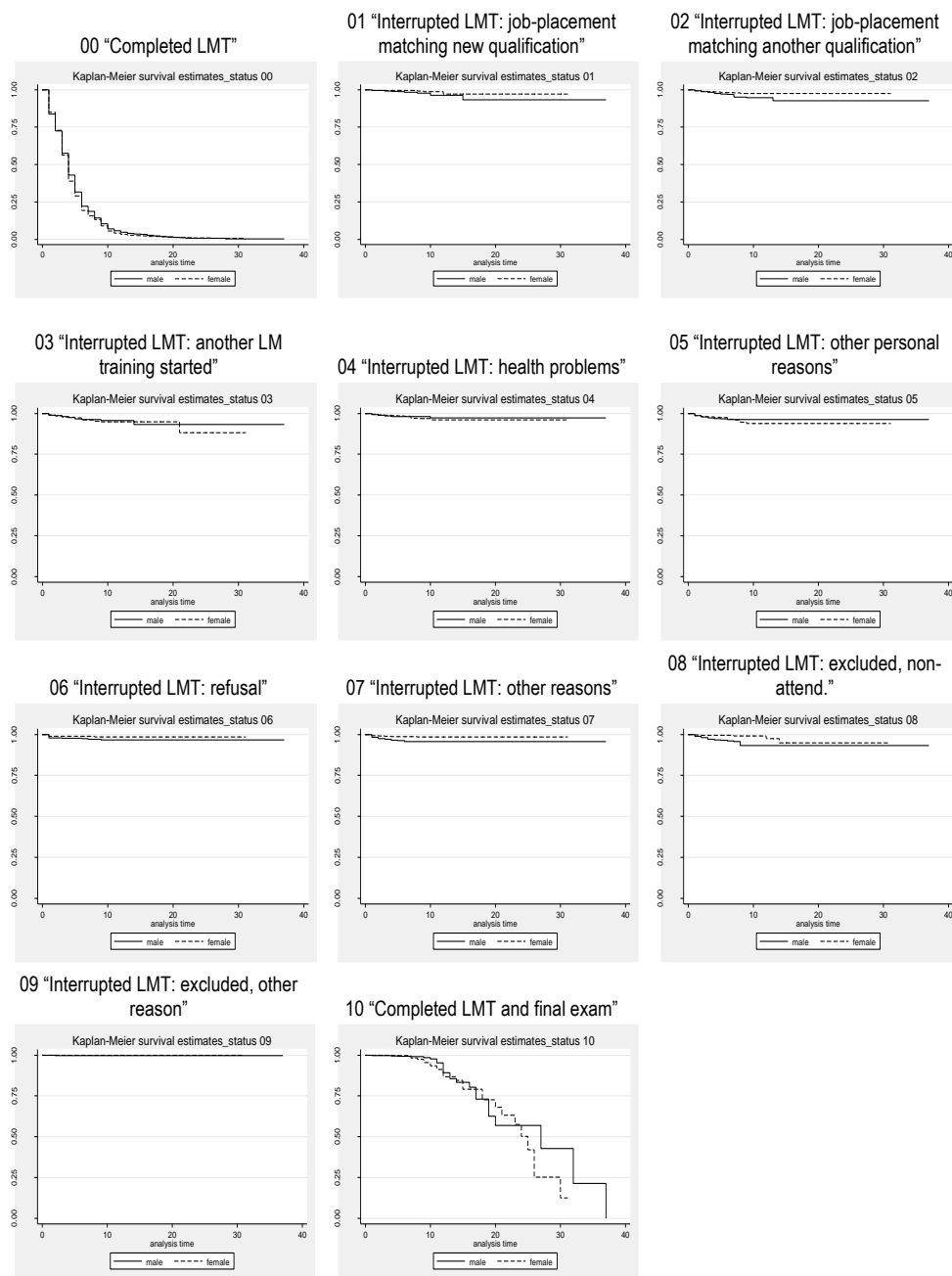


Figure 3. Kaplan-Meier survivor curves for statuses 00-10 and the 'education'-variable

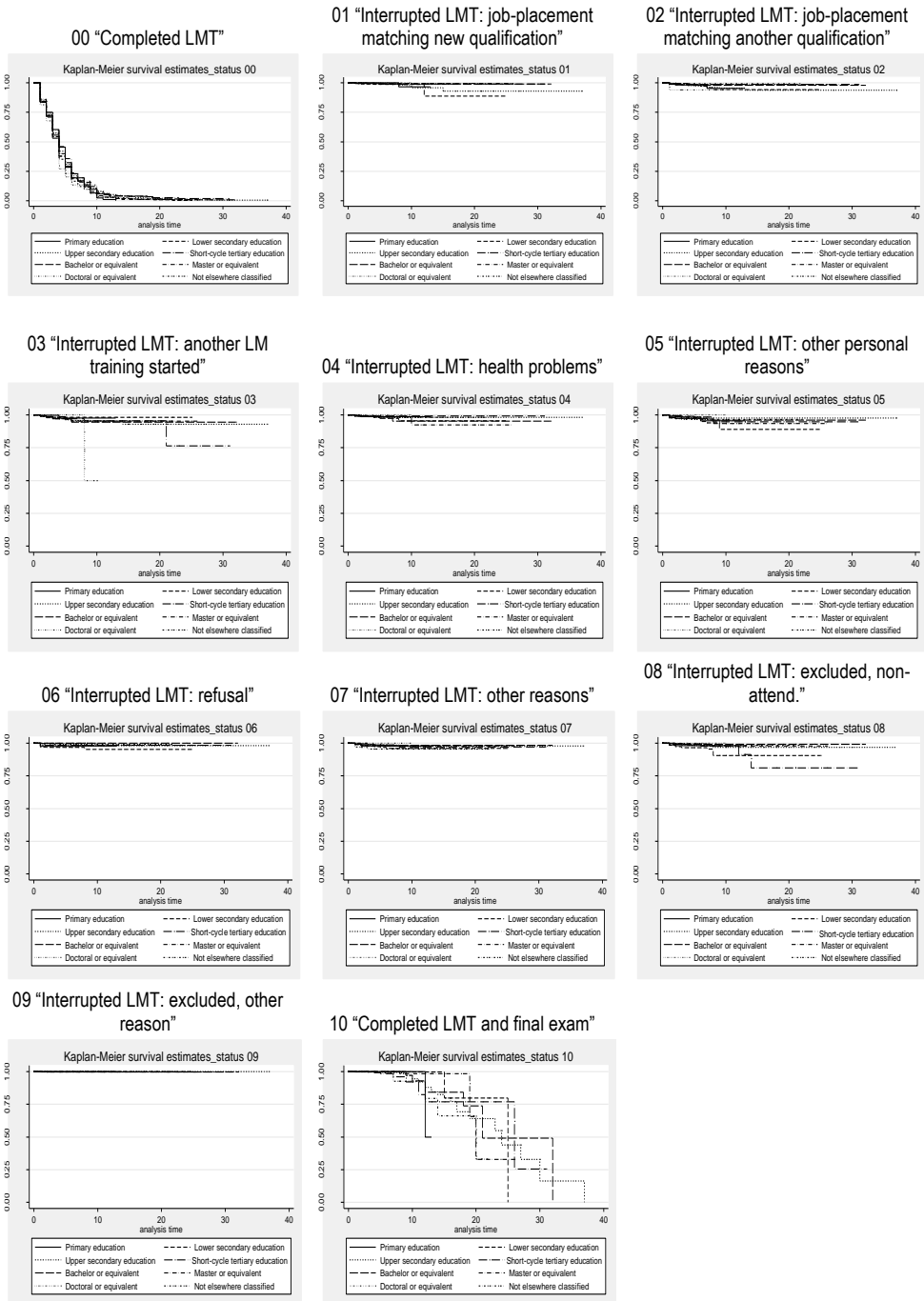


Figure 4. Kaplan-Meier survivor curves for statuses 00-10 and the ‘birth cohort’-variable

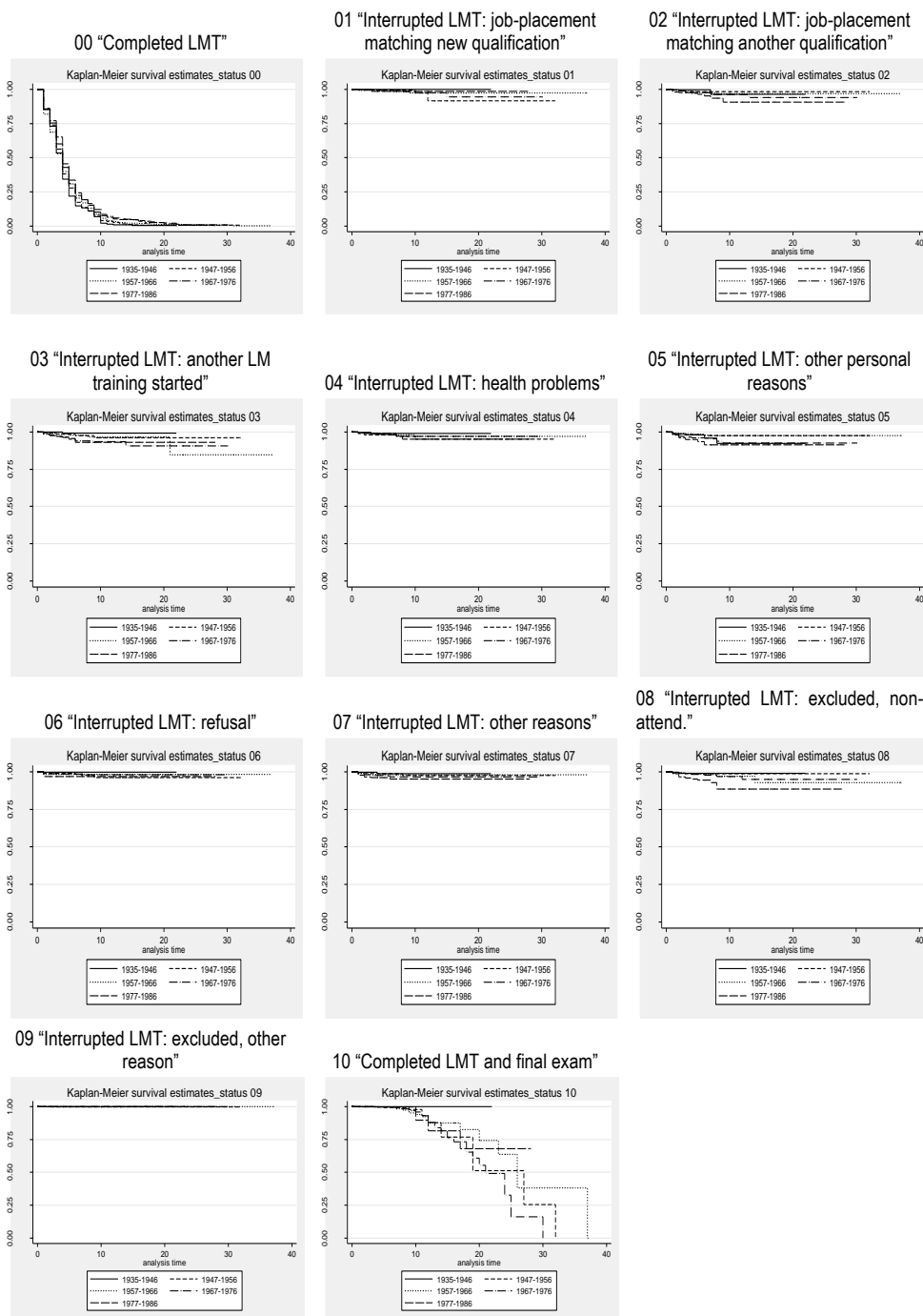


Figure 5. Kaplan-Meier survivor curves for statuses 00-10 and the ‘entrance cohort’-variable

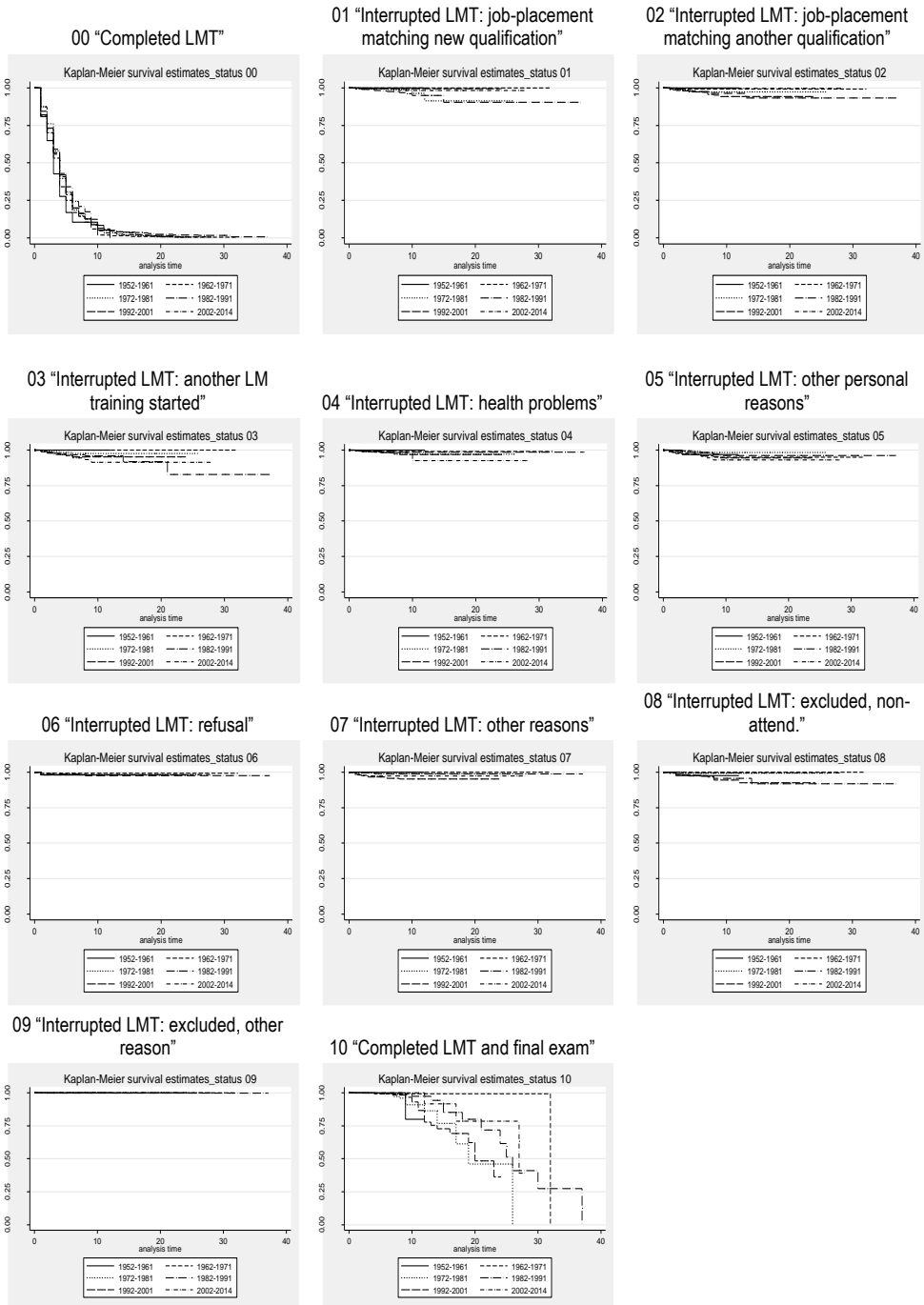


Table 1. Descriptive statistics on ‘statuses’ and main explanatory variables as applied to Survival-Time Data, Discrete-Time Data, and Count-Time Data

Code of a label	A reason, why LM training ended	Survival-Time Data, Discrete-Time Data			Count-Time Data			Cox, exponential and Weibull
		Freq.	Percent	Cum.	Freq.	Percent	Cum.	
00	Completed LMT	3,422	83.65	83.65	1,318	90.27	90.27	3228
01	Interrupted LMT: job-placement matching new qualification	36	0.88	84.53	7	0.48	90.75	36
02	Interrupted LMT: job-placement matching another qualification	76	1.86	86.38	31	2.12	92.88	70
03	Interrupted LMT: another LM training started	100	2.44	88.83	9	0.62	93.49	96
04	Interrupted LMT: health problems	59	1.44	90.27	14	0.96	94.45	49
05	Interrupted LMT: other personal reasons	110	2.69	92.96	32	2.19	96.64	90
06	Interrupted LMT: refusal	68	1.66	94.62	5	0.34	96.99	64
07	Interrupted LMT: other reasons	81	1.98	96.60	23	1.58	98.56	74
08	Interrupted LMT: excluded, non-attendance	69	1.69	98.29	15	1.03	99.59	62
09	Interrupted LMT: excluded, other reason	5	0.12	98.41	1	0.07	99.66	4
10	Completed LMT and final exam	65	1.59	100.00	5	0.34	100.00	64
	Total	4,091	100.00		1,460	100.00		3837
	Gender							
1	male	1,816	44.39	44.39	679	46.51	46.51	
2	female	2,275	55.61	100.00	781	53.49	100.00	
	Education							
1	Primary education	222	5.79	5.79	69	5.23	5.23	
2	Lower secondary education	562	14.65	20.43	192	14.56	19.79	
3	Upper secondary education	1,549	40.37	60.80	531	40.26	60.05	
5	Short-cycle tertiary education	417	10.87	71.67	140	10.61	70.66	
6	Bachelor or equivalent	324	8.44	80.11	126	9.55	80.21	
7	Master or equivalent	369	9.62	89.73	130	9.86	90.07	
8	Doctoral or equivalent	16	0.42	90.15	6	0.45	90.52	
9	Not elsewhere classified	378	9.85	100.00	125	9.48	100.00	
	Total	3,837	100.00		1,319	100.00		
	Birth cohort							
1	1935-1946	230	5.62	5.62	110	7.53	7.53	
2	1947-1956	787	19.24	24.86	267	18.29	25.82	
3	1957-1966	1,398	34.17	59.03	444	30.41	56.23	
4	1967-1976	1,290	31.53	90.56	486	33.29	89.52	
5	1977-1986	386	9.44	100.00	153	10.48	100.00	
	Total	4,091	100.00		1,460	100.00		
	Entrance cohort							
1	1952-1961	52	1.36	1.36	22	1.67	1.67	
2	1962-1971	223	5.81	7.17	77	5.84	7.51	
3	1972-1981	598	15.59	22.75	186	14.10	21.61	
4	1982-1991	924	24.08	46.83	351	26.61	48.22	
5	1992-2001	1,491	38.86	85.69	551	41.77	89.99	
6	2002-2014	549	14.31	100.00	132	10.01	100.00	

	Total	3,837	100.00		1,319	100.00		
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Table 2. Main characteristic of the model for the carrying out the event-history analysis (LM training periods)

failure event: obs. time interval: exit on or before: weight:	failures_number != 0 & failures_number < . (0, counttime) failure [fweight=w]
1460 0	total obs. exclusions
1460 4091 4091 74788	physical obs. remaining, equal to weighted obs., representing failures in single record/single failure data total analysis time at risk, at risk from t = 0 earliest observed entry t = 0 last observed exit t = 70

Table 3. Specification of the model for the count-time analysis (main characteristics, LM training periods)

failure_d:	failures_number				
analysis time_t:	counttime				
weight:	[fweight=w]				
		PER SUBJECT			
Category	unweighted total	unweighted mean	min	unweighted median	max
no. of subjects	1460				
no. of records	1460	1	1	1	1
(first) entry time		0	0	0	0
(final) exit time		11.55	1	9	70
subjects with gap	0				
time on gap if gap	0				
time at risk	16874	11.55	1	9	70
failures	1460	1	1	1	1

Table 4. Specification of the model for the Kaplan-Meier Survivor Functions (main characteristics, LM training periods)

failure_d:	kouslyy0				
analysis time_t:	overall_months				
id:	case				
		PER SUBJECT			
Category	total	mean	min	median	max
no. of subjects	4091				
no. of records	4091	1	1	1	1
(first) entry time		0	0	0	0
(final) exit time		4.12	1	3	37
subjects with gap	0				
time on gap if gap	0
time at risk	16874	4.12	1	3	37
failures	3422 (status 00)	.83	0	1	1

Table 5. Summary statistics on survival time for statuses 00-10

Status	failures	time at risk	incidence rate	no. of subj.	Survival time		
					25%	50%	75%
00_Completed LMT	3,422	16874	.2027972	4091	2	4	6
01_Interrupted LMT: job-placement matching new qualification	36	16874	.0021335	4091	.	.	.
02_Interrupted LMT: job-placement matching another qualification	76	16874	.004504	4091	.	.	.
03_Interrupted LMT: another LM training started	100	16874	.0059263	4091	.	.	.
04_Interrupted LMT: health problems	59	16874	.0034965	4091	.	.	.
05_Interrupted LMT: other personal reasons	110	16874	.0065189	4091	.	.	.
06_Interrupted LMT: refusal	68	16874	.0040299	4091	.	.	.
07_Interrupted LMT: other reasons	81	16874	.0048003	4091	.	.	.
08_Interrupted LMT: excluded, non-attendance	69	16874	.0040891	4091	.	.	.
09_Interrupted LMT: excluded, other reasons	5	16874	.0002963	4091	.	.	.
10_Completed LMT and final exam	65	16874	.0038521	4091	18	25	30

Table 6. Summary statistics on survival time for statuses 00-10 by the 'gender'-variable

Status	gender	time at risk	incidence rate	no. of subj.	Survival time		
					25%	50%	75%
00_Completed LMT	male	7377	.1962858	1816	2	4	6
	female	9497	.2078551	2275	2	4	6
01_Interrupted LMT: job-placement matching new qualification	male	7377	.0029822	1816	.	.	.
	female	9497	.0014741	2275	.	.	.
02_Interrupted LMT: job-placement matching another qualification	male	7377	.0058289	1816	.	.	.
	female	9497	.0034748	2275	.	.	.
03_Interrupted LMT: another LM training started	male	7377	.0058289	1816	.	.	.
	female	9497	.0060019	2275	.	.	.
04_Interrupted LMT: health problems	male	7377	.0035245	1816	.	.	.
	female	9497	.0034748	2275	.	.	.
05_Interrupted LMT: other personal reasons	male	7377	.0066423	1816	.	.	.
	female	9497	.0064231	2275	.	.	.
06_Interrupted LMT: refusal	male	7377	.0058289	1816	.	.	.
	female	9497	.0026324	2275	.	.	.
07_Interrupted LMT: other reasons	male	7377	.0075912	1816	.	.	.
	female	9497	.0026324	2275	.	.	.
08_Interrupted LMT: excluded, non-attendance	male	7377	.0074556	1816	.	.	.
	female	9497	.0014741	2275	.	.	.
09_Interrupted LMT: excluded, other reasons	male	7377	.0004067	1816	.	.	.
	female	9497	.0002106	2275	.	.	.
10_Completed LMT and final exam	male	7377	.0037956	1816	17	27	32
	female	9497	.003896	2275	18	25	30

Table 7. Test for the equality of survivor functions (log-rank test) for statuses 00-10 by the 'gender'-variable

Status	Gender	Events observed	Events expected	
00_Completed LMT	Male	1448	1491.56	chi2(1) = 2.90 Pr>chi2 = 0.0885
	Female	1974	1930.44	
	Total	3422	3422.00	
01_Interrupted LMT: job-placement matching new qualification	Male	22	15.93	chi2(1) = 4.16 Pr>chi2 = 0.0415
	Female	14	20.07	
	Total	36	36.00	
02_Interrupted LMT: job-placement matching another qualification	Male	43	33.25	chi2(1) = 5.12 Pr>chi2 = 0.0237
	Female	33	42.75	
	Total	76	76.00	
03_Interrupted LMT: another LM training started	Male	43	43.57	chi2(1) = 0.01 Pr>chi2 = 0.9076
	Female	57	56.43	
	Total	100	100.00	
04_Interrupted LMT: health problems	Male	26	25.80	chi2(1) = 0.00 Pr>chi2 = 0.9589
	Female	33	33.20	
	Total	59	59.00	
05_Interrupted LMT: other personal reasons	Male	49	48.15	chi2(1) = 0.03 Pr>chi2 = 0.8699
	Female	61	61.85	
	Total	110	110.00	
06_Interrupted LMT: refusal	Male	43	30.14	chi2(1) = 9.99 Pr>chi2 = 0.0016
	Female	25	37.86	
	Total	68	68.00	
07_Interrupted LMT: other reasons	Male	56	35.47	chi2(1) = 21.32 Pr>chi2 = 0.0000
	Female	25	45.53	
	Total	81	81.00	
08_Interrupted LMT: excluded, non-attendance	Male	55	30.29	chi2(1) = 36.14 Pr>chi2 = 0.0000
	Female	14	38.71	
	Total	69	69.00	
09_Interrupted LMT: excluded, other reasons	Male	3	2.19	chi2(1) = 0.53 Pr>chi2 = 0.4660
	Female	2	2.81	
	Total	5	5.00	
10_Completed LMT and final exam	Male	28	30.69	chi2(1) = 0.48 Pr>chi2 = 0.4893
	Female	37	34.31	
	Total	65	65.00	

Table 8. Summary statistics on survival time for statuses 00-10 by the 'education'-variable

Status	education	time at risk	incidence rate	no. of subj.	Survival time		
					25%	50%	75%
00_Completed LMT	Primary education	884	.2138009	222	3	4	6
	Lower secondary	2088	.2150383	562	2	4	6
	Upper secondary	6617	.196917	1549	2	4	6
	Short-cycle tertiary	1807	.1953514	417	2	4	6
	Bachelor or equivalent	1381	.2034757	324	2	4	6
	Master or equivalent	1639	.1964613	369	2	4	6
	Doctoral or equivalent	59	.2372881	16	2	4	5
	Not elsewhere classified	1443	.2196812	378	2	4	5
	Primary education	884	.0011312	222	.	.	.
	Lower secondary	2088	.0033525	562	.	.	.

01_ Interrupted LMT: job-placement matching new qualification	Upper secondary	6617	.0027203	1549	.	.	.
	Short-cycle tertiary	1807	.0016602	417	.	.	.
	Bachelor or equivalent	1381	.0014482	324	.	.	.
	Master or equivalent	1639	.0012203	369	.	.	.
	Doctoral or equivalent	59	0	16	.	.	.
02_ Interrupted LMT: job-placement matching another qualification	Not elsewhere classified	1443	.002079	378	.	.	.
	Primary education	884	.0056561	222	.	.	.
	Lower secondary	2088	.0062261	562	.	.	.
	Upper secondary	6617	.0051383	1549	.	.	.
	Short-cycle tertiary	1807	.002767	417	.	.	.
	Bachelor or equivalent	1381	.0028965	324	.	.	.
	Master or equivalent	1639	.0030506	369	.	.	.
	Doctoral or equivalent	59	.0169492	16	.	.	.
03_ Interrupted LMT: another LM training started	Not elsewhere classified	1443	.002079	378	.	.	.
	Primary education	884	.0033937	222	.	.	.
	Lower secondary	2088	.0043103	562	.	.	.
	Upper secondary	6617	.0061962	1549	.	.	.
	Short-cycle tertiary	1807	.0060874	417	.	.	.
	Bachelor or equivalent	1381	.0072411	324	.	.	.
	Master or equivalent	1639	.0067114	369	.	.	.
	Doctoral or equivalent	59	.0169492	16	8	8	.
04_ Interrupted LMT: health problems	Not elsewhere classified	1443	.00693	378	.	.	.
	Primary education	884	.0033937	222	.	.	.
	Lower secondary	2088	.0043103	562	.	.	.
	Upper secondary	6617	.002418	1549	.	.	.
	Short-cycle tertiary	1807	.0016602	417	.	.	.
	Bachelor or equivalent	1381	.0050688	324	.	.	.
	Master or equivalent	1639	.0036608	369	.	.	.
	Doctoral or equivalent	59	0	16	.	.	.
05_ Interrupted LMT: other personal reasons	Not elsewhere classified	1443	.003465	378	.	.	.
	Primary education	884	.0079186	222	.	.	.
	Lower secondary	2088	.0086207	562	.	.	.
	Upper secondary	6617	.0043827	1549	.	.	.
	Short-cycle tertiary	1807	.0044272	417	.	.	.
	Bachelor or equivalent	1381	.0043447	324	.	.	.
	Master or equivalent	1639	.0061013	369	.	.	.
	Doctoral or equivalent	59	0	16	.	.	.
06_ Interrupted LMT: refusal	Not elsewhere classified	1443	.008316	378	.	.	.
	Primary education	884	.0056561	222	.	.	.
	Lower secondary	2088	.0090996	562	.	.	.
	Upper secondary	6617	.0042315	1549	.	.	.
	Short-cycle tertiary	1807	.0038738	417	.	.	.
	Bachelor or equivalent	1381	0	324	.	.	.
	Master or equivalent	1639	.0012203	369	.	.	.
	Doctoral or equivalent	59	0	16	.	.	.
07_ Interrupted LMT: other reasons	Not elsewhere classified	1443	.002079	378	.	.	.
	Primary education	884	.0045249	222	.	.	.
	Lower secondary	2088	.006705	562	.	.	.
	Upper secondary	6617	.0039293	1549	.	.	.
	Short-cycle tertiary	1807	.0038738	417	.	.	.
	Bachelor or equivalent	1381	.0028965	324	.	.	.
	Master or equivalent	1639	.0024405	369	.	.	.
	Doctoral or equivalent	59	0	16	.	.	.
08_ Interrupted LMT: excluded, non-attendance	Not elsewhere classified	1443	.010395	378	.	.	.
	Primary education	884	.0045249	222	.	.	.
	Lower secondary	2088	.0095785	562	.	.	.
	Upper secondary	6617	.0034759	1549	.	.	.
08_ Interrupted LMT: excluded, non-attendance	Short-cycle tertiary	1807	.0038738	417	.	.	.

	Bachelor or equivalent	1381	.0021723	324	.	.	.
	Master or equivalent	1639	.0018304	369	.	.	.
	Doctoral or equivalent	59	0	16	.	.	.
	Not elsewhere classified	1443	.001386	378	.	.	.
09_ Interrupted LMT: excluded, other reasons	Primary education	884	0	222	.	.	.
	Lower secondary	2088	0	562	.	.	.
	Upper secondary	6617	.0001511	1549	.	.	.
	Short-cycle tertiary	1807	.0005534	417	.	.	.
	Bachelor or equivalent	1381	.0007241	324	.	.	.
	Master or equivalent	1639	.0006101	369	.	.	.
	Doctoral or equivalent	59	0	16	.	.	.
	Not elsewhere classified	1443	0	378	.	.	.
10_ Completed LMT and final exam	Primary education	884	.0011312	222	12	12	.
	Lower secondary	2088	.0019157	562	25	25	25
	Upper secondary	6617	.0045338	1549	17	24	30
	Short-cycle tertiary	1807	.0066408	417	26	26	.
	Bachelor or equivalent	1381	.0043447	324	18	21	32
	Master or equivalent	1639	.0018304	369	19	20	.
	Doctoral or equivalent	59	0	16	.	.	.
	Not elsewhere classified	1443	.005544	378	14	20	.

Table 9. Test for the equality of survivor functions (log-rank test) for statuses 00-10 by the 'education'-variable

Status	Education	Events observed	Events expected	
00_ Completed LMT	Primary education	189	182.76	chi2(7) = 10.00 Pr>chi2 = 0.1885
	Lower secondary	449	420.11	
	Upper secondary	1303	1341.63	
	Short-cycle tertiary	353	364.92	
	Bachelor or equivalent	281	277.41	
	Master or equivalent	322	340.14	
	Doctoral or equivalent	14	11.98	
	Not elsewhere classified	317	289.05	
	Total	3228	3228.00	
01_ Interrupted LMT: job- placement matching new qualification	Primary education	1	1.96	chi2(7) = 3.71 Pr>chi2 = 0.8120
	Lower secondary	7	4.76	
	Upper secondary	18	15.03	
	Short-cycle tertiary	3	4.06	
	Bachelor or equivalent	2	3.12	
	Master or equivalent	2	3.67	
	Doctoral or equivalent	0	0.14	
	Not elsewhere classified	3	3.26	
	Total	36	36.00	
02_ Interrupted LMT: job- placement matching another qualification	Primary education	5	4.02	chi2(7) = 8.61 Pr>chi2 = 0.2822
	Lower secondary	13	9.55	
	Upper secondary	34	28.74	
	Short-cycle tertiary	5	7.76	
	Bachelor or equivalent	4	5.95	
	Master or equivalent	5	7.09	
	Doctoral or equivalent	1	0.28	
	Not elsewhere classified	3	6.61	
	Total	70	70.00	
03_ Interrupted LMT: another LM training started	Primary education	3	5.49	chi2(7) = 4.26
	Lower secondary	9	13.09	
	Upper secondary	41	39.41	

	Short-cycle tertiary	11	10.74	Pr>chi2 = 0.7497
	Bachelor or equivalent	10	8.21	
	Master or equivalent	11	9.70	
	Doctoral or equivalent	1	0.37	
	Not elsewhere classified	10	8.99	
	Total	96	96.00	
04_ Interrupted LMT: health problems	Primary education	3	2.82	chi2(7) = 5.12 Pr>chi2 = 0.6451
	Lower secondary	9	6.67	
	Upper secondary	16	20.08	
	Short-cycle tertiary	3	5.45	
	Bachelor or equivalent	7	4.17	
	Master or equivalent	6	5.03	
	Doctoral or equivalent	0	0.20	
	Not elsewhere classified	5	4.60	
	Total	49	49.00	
05_ Interrupted LMT: other personal reasons	Primary education	7	5.20	chi2(7) = 7.44 Pr>chi2 = 0.3841
	Lower secondary	18	12.48	
	Upper secondary	29	36.72	
	Short-cycle tertiary	8	10.04	
	Bachelor or equivalent	6	7.63	
	Master or equivalent	10	9.11	
	Doctoral or equivalent	0	0.36	
	Not elsewhere classified	12	8.46	
	Total	90	90.00	
06_ Interrupted LMT: refusal	Primary education	5	3.70	chi2(7) = 21.26 Pr>chi2 = 0.0034
	Lower secondary	19	9.30	
	Upper secondary	28	25.88	
	Short-cycle tertiary	7	6.99	
	Bachelor or equivalent	0	5.41	
	Master or equivalent	2	6.20	
	Doctoral or equivalent	0	0.27	
	Not elsewhere classified	3	6.25	
	Total	64	64.00	
07_ Interrupted LMT: other reasons	Primary education	4	4.27	chi2(7) = 13.24 Pr>chi2 = 0.0665
	Lower secondary	14	10.46	
	Upper secondary	26	30.07	
	Short-cycle tertiary	7	8.12	
	Bachelor or equivalent	4	6.28	
	Master or equivalent	4	7.33	
	Doctoral or equivalent	0	0.30	
	Not elsewhere classified	15	7.17	
	Total	74	74.00	
08_ Interrupted LMT: excluded, non-attendance	Primary education	4	3.48	chi2(7) = 21.98 Pr>chi2 = 0.0026
	Lower secondary	20	8.38	
	Upper secondary	23	25.62	
	Short-cycle tertiary	7	6.96	
	Bachelor or equivalent	3	5.30	
	Master or equivalent	3	6.27	
	Doctoral or equivalent	0	0.24	
	Not elsewhere classified	2	5.74	
	Total	62	62.00	
09_ Interrupted LMT: excluded, other reasons	Primary education	0	0.23	chi2(7) = 4.38 Pr>chi2 = 0.7347
	Lower secondary	0	0.57	
	Upper secondary	1	1.62	
	Short-cycle tertiary	1	0.44	
	Bachelor or equivalent	1	0.34	
	Master or equivalent	1	0.39	
	Doctoral or equivalent	0	0.02	

	Not elsewhere classified	0	0.39	chi2(7) = 7.93 Pr>chi2 = 0.3390
	Total	4	4.00	
10_Completed LMT and final exam	Primary education	1	1.84	
	Lower secondary	4	5.81	
	Upper secondary	30	30.10	
	Short-cycle tertiary	12	9.01	
	Bachelor or equivalent	6	7.08	
	Master or equivalent	3	6.05	
	Doctoral or equivalent	0	0.10	
	Not elsewhere classified	8	4.00	
Total	64	64.00		

Table 10. Summary statistics on survival time for statuses 00-10 by the ‘birth cohort’-variable

Status	birth cohort	time at risk	incidence rate	no. of subj.	Survival time		
					25%	50%	75%
00_Completed LMT	1935-1946	922	.2321041	230	2	4	5
	1947-1956	3181	.2156555	787	2	4	6
	1957-1966	5741	.211113	1398	2	4	6
	1967-1976	5501	.1872387	1290	3	4	6
	1977-1986	1529	.1831262	386	3	4	6
01_Interrupted LMT: job-placement matching new qualification	1935-1946	922	0	230	.	.	.
	1947-1956	3181	.0018862	787	.	.	.
	1957-1966	5741	.002787	1398	.	.	.
	1967-1976	5501	.0018179	1290	.	.	.
	1977-1986	1529	.0026161	386	.	.	.
02_Interrupted LMT: job-placement matching another qualification	1935-1946	922	.0021692	230	.	.	.
	1947-1956	3181	.003458	787	.	.	.
	1957-1966	5741	.0036579	1398	.	.	.
	1967-1976	5501	.00509	1290	.	.	.
	1977-1986	1529	.0091563	386	.	.	.
03_Interrupted LMT: another LM training started	1935-1946	922	.0010846	230	.	.	.
	1947-1956	3181	.0037724	787	.	.	.
	1957-1966	5741	.0040063	1398	.	.	.
	1967-1976	5501	.0090893	1290	.	.	.
	1977-1986	1529	.0091563	386	.	.	.
04_Interrupted LMT: health problems	1935-1946	922	.0021692	230	.	.	.
	1947-1956	3181	.0050299	787	.	.	.
	1957-1966	5741	.002787	1398	.	.	.
	1967-1976	5501	.0036357	1290	.	.	.
	1977-1986	1529	.0032701	386	.	.	.
05_Interrupted LMT: other personal reasons	1935-1946	922	.0065076	230	.	.	.
	1947-1956	3181	.0044011	787	.	.	.
	1957-1966	5741	.0036579	1398	.	.	.
	1967-1976	5501	.0089075	1290	.	.	.
	1977-1986	1529	.0130804	386	.	.	.
06_Interrupted LMT: refusal	1935-1946	922	.0010846	230	.	.	.
	1947-1956	3181	.0037724	787	.	.	.
	1957-1966	5741	.0041805	1398	.	.	.
	1967-1976	5501	.0034539	1290	.	.	.
	1977-1986	1529	.0078483	386	.	.	.
07_Interrupted LMT: other reasons	1935-1946	922	.0021692	230	.	.	.
	1947-1956	3181	.0028293	787	.	.	.
	1957-1966	5741	.0041805	1398	.	.	.

	1967-1976	5501	.0058171	1290	.	.	.
	1977-1986	1529	.0091563	386	.	.	.
08_ Interrupted LMT: excluded, non-attendance	1935-1946	922	.0021692	230	.	.	.
	1947-1956	3181	.0028293	787	.	.	.
	1957-1966	5741	.0031353	1398	.	.	.
	1967-1976	5501	.0039993	1290	.	.	.
	1977-1986	1529	.0117724	386	.	.	.
09_ Interrupted LMT: excluded, other reasons	1935-1946	922	0	230	.	.	.
	1947-1956	3181	.0006287	787	.	.	.
	1957-1966	5741	.0001742	1398	.	.	.
	1967-1976	5501	.0003636	1290	.	.	.
	1977-1986	1529	0	386	.	.	.
10_ Completed LMT and final exam	1935-1946	922	0	230	.	.	.
	1947-1956	3181	.0031437	787	19	27	32
	1957-1966	5741	.0038321	1398	20	26	37
	1967-1976	5501	.00509	1290	16	21	25
	1977-1986	1529	.0032701	386	17	.	.

Table 11. Test for the equality of survivor functions (log-rank test) for statuses 00-10 by the ‘birth cohort’-variable

Status	Birth cohort	Events observed	Events expected	
00_ Completed LMT	1935-1946	214	186.77	chi2(4) = 22.74 Pr>chi2 = 0.0001
	1947-1956	686	647.48	
	1957-1966	1212	1162.97	
	1967-1976	1030	1115.93	
	1977-1986	280	308.85	
	Total	3422	3422.00	
01_ Interrupted LMT: job-placement matching new qualification	1935-1946	0	1.95	chi2(4) = 3.70 Pr>chi2 = 0.4488
	1947-1956	6	6.70	
	1957-1966	16	12.18	
	1967-1976	10	11.90	
	1977-1986	4	3.27	
	Total	36	36.00	
02_ Interrupted LMT: job-placement matching another qualification	1935-1946	2	4.25	chi2(4) = 10.68 Pr>chi2 = 0.0304
	1947-1956	11	14.56	
	1957-1966	21	25.81	
	1967-1976	28	24.41	
	1977-1986	14	6.96	
	Total	76	76.00	
03_ Interrupted LMT: another LM training started	1935-1946	1	5.59	chi2(4) = 22.77 Pr>chi2 = 0.0001
	1947-1956	12	19.12	
	1957-1966	23	34.06	
	1967-1976	50	32.09	
	1977-1986	14	9.14	
	Total	100	100.00	
04_ Interrupted LMT: health problems	1935-1946	2	3.32	chi2(4) = 3.36 Pr>chi2 = 0.4999
	1947-1956	16	11.34	
	1957-1966	16	20.04	
	1967-1976	20	18.91	
	1977-1986	5	5.38	
	Total	59	59.00	
05_ Interrupted LMT: other personal reasons	1935-1946	6	6.20	chi2(4) = 25.32
	1947-1956	14	21.17	
	1957-1966	21	37.53	

	1967-1976	49	35.04	Pr>chi2 = 0.0000
	1977-1986	20	10.06	
	Total	110	110.00	
06_Interrupted LMT: refusal	1935-1946	1	3.80	chi2(4) = 7.56 Pr>chi2 = 0.1093
	1947-1956	12	13.03	
	1957-1966	24	23.28	
	1967-1976	19	21.53	
	1977-1986	12	6.37	
	Total	68	68.00	
07_Interrupted LMT: other reasons	1935-1946	2	4.62	chi2(4) = 12.15 Pr>chi2 = 0.0163
	1947-1956	9	15.71	
	1957-1966	24	27.51	
	1967-1976	32	25.68	
	1977-1986	14	7.48	
	Total	81	81.00	
08_Interrupted LMT: excluded, non-attendance	1935-1946	2	3.86	chi2(4) = 25.62 Pr>chi2 = 0.0000
	1947-1956	9	13.12	
	1957-1966	18	23.44	
	1967-1976	22	22.33	
	1977-1986	18	6.26	
	Total	69	69.00	
09_Interrupted LMT: excluded, other reasons	1935-1946	0	0.29	chi2(4) = 2.23 Pr>chi2 = 0.6934
	1947-1956	2	0.97	
	1957-1966	1	1.70	
	1967-1976	2	1.58	
	1977-1986	0	0.46	
	Total	5	5.00	
10_Completed LMT and final exam	1935-1946	0	2.22	chi2(4) = 3.59 Pr>chi2 = 0.4638
	1947-1956	10	10.16	
	1957-1966	22	23.86	
	1967-1976	28	23.10	
	1977-1986	5	5.66	
	Total	65	65.00	

Table 12. Summary statistics on survival time for statuses 00-10 by the ‘entrance cohort’-variable

Status	entrance cohort	time at risk	incidence rate	no. of subj.	Survival time		
					25%	50%	75%
00_Completed LMT	1952-1961	189	.2539683	52	2	3	5
	1962-1971	925	.2291892	223	2	4	6
	1972-1981	2550	.205098	598	3	4	6
	1982-1991	4053	.1914631	924	2	4	6
	1992-2001	5893	.203292	1491	2	4	6
	2002-2014	2308	.2040728	549	2	4	6
01_Interrupted LMT: job-placement matching new qualification	1952-1961	189	0	52	.	.	.
	1962-1971	925	0	223	.	.	.
	1972-1981	2550	.0027451	598	.	.	.
	1982-1991	4053	.0044412	924	.	.	.
	1992-2001	5893	.0015272	1491	.	.	.
	2002-2014	2308	.0008666	549	.	.	.
02_Interrupted LMT: job-placement matching another qualification	1952-1961	189	0	52	.	.	.
	1962-1971	925	.0021622	223	.	.	.
	1972-1981	2550	.0039216	598	.	.	.
	1982-1991	4053	.0044412	924	.	.	.

	1992-2001	5893	.0064483	1491	.	.	.
	2002-2014	2308	.0008666	549	.	.	.
03_ Interrupted LMT: another LM training started	1952-1961	189	0	52	.	.	.
	1962-1971	925	0	223	.	.	.
	1972-1981	2550	.0035294	598	.	.	.
	1982-1991	4053	.0066617	924	.	.	.
	1992-2001	5893	.0067877	1491	.	.	.
	2002-2014	2308	.0086655	549	.	.	.
04_ Interrupted LMT: health problems	1952-1961	189	0	52	.	.	.
	1962-1971	925	.0021622	223	.	.	.
	1972-1981	2550	.0035294	598	.	.	.
	1982-1991	4053	.0017271	924	.	.	.
	1992-2001	5893	.0039029	1491	.	.	.
	2002-2014	2308	.0034662	549	.	.	.
05_ Interrupted LMT: other personal reasons	1952-1961	189	.005291	52	.	.	.
	1962-1971	925	.0032432	223	.	.	.
	1972-1981	2550	.0027451	598	.	.	.
	1982-1991	4053	.0039477	924	.	.	.
	1992-2001	5893	.0078059	1491	.	.	.
	2002-2014	2308	.0073657	549	.	.	.
06_ Interrupted LMT: refusal	1952-1961	189	.005291	52	.	.	.
	1962-1971	925	.0021622	223	.	.	.
	1972-1981	2550	.0039216	598	.	.	.
	1982-1991	4053	.0032075	924	.	.	.
	1992-2001	5893	.0047514	1491	.	.	.
	2002-2014	2308	.0043328	549	.	.	.
07_ Interrupted LMT: other reasons	1952-1961	189	0	52	.	.	.
	1962-1971	925	0	223	.	.	.
	1972-1981	2550	.0019608	598	.	.	.
	1982-1991	4053	.0019738	924	.	.	.
	1992-2001	5893	.0081453	1491	.	.	.
	2002-2014	2308	.0056326	549	.	.	.
08_ Interrupted LMT: excluded, non-attendance	1952-1961	189	.005291	52	.	.	.
	1962-1971	925	0	223	.	.	.
	1972-1981	2550	.0015686	598	.	.	.
	1982-1991	4053	.0054281	924	.	.	.
	1992-2001	5893	.0055999	1491	.	.	.
	2002-2014	2308	.0008666	549	.	.	.
09_ Interrupted LMT: excluded, other reasons	1952-1961	189	0	52	.	.	.
	1962-1971	925	0	223	.	.	.
	1972-1981	2550	.0003922	598	.	.	.
	1982-1991	4053	.0007402	924	.	.	.
	1992-2001	5893	0	1491	.	.	.
	2002-2014	2308	0	549	.	.	.
10_ Completed LMT and final exam	1952-1961	189	.005291	52	.	.	.
	1962-1971	925	.0021622	223	32	32	32
	1972-1981	2550	.005098	598	17	19	26
	1982-1991	4053	.0039477	924	21	26	37
	1992-2001	5893	.0047514	1491	14	20	.
	2002-2014	2308	.0017331	549	27	27	.

Table 13. Test for the equality of survivor functions (log-rank test) for statuses 00-10 by the 'entrance cohort'-variable

Status	Entrance cohort	Events observed	Events expected	
00_Completed LMT	1952-1961	48	37.84	chi2(5) = 11.20 Pr>chi2 = 0.0475
	1962-1971	212	186.73	
	1972-1981	523	522.07	
	1982-1991	776	821.45	
	1992-2001	1198	1190.59	
	2002-2014	471	469.32	
	Total	3228	3228.00	
01_Interrupted LMT: job-placement matching new qualification	1952-1961	0	0.45	chi2(5) = 14.71 Pr>chi2 = 0.0117
	1962-1971	0	2.05	
	1972-1981	7	5.69	
	1982-1991	18	9.20	
	1992-2001	9	13.48	
	2002-2014	2	5.12	
	Total	36	36.00	
02_Interrupted LMT: job-placement matching another qualification	1952-1961	0	0.86	chi2(5) = 13.92 Pr>chi2 = 0.0161
	1962-1971	2	4.09	
	1972-1981	10	11.25	
	1982-1991	18	17.28	
	1992-2001	38	26.33	
	2002-2014	2	10.19	
	Total	70	70.00	
03_Interrupted LMT: another LM training started	1952-1961	0	1.18	chi2(5) = 13.02 Pr>chi2 = 0.0232
	1962-1971	0	5.64	
	1972-1981	9	15.38	
	1982-1991	27	23.72	
	1992-2001	40	36.12	
	2002-2014	20	13.97	
	Total	96	96.00	
04_Interrupted LMT: health problems	1952-1961	0	0.62	chi2(5) = 4.51 Pr>chi2 = 0.4790
	1962-1971	2	2.85	
	1972-1981	9	7.88	
	1982-1991	7	12.14	
	1992-2001	23	18.37	
	2002-2014	8	7.13	
	Total	49	49.00	
05_Interrupted LMT: other personal reasons	1952-1961	1	1.14	chi2(5) = 12.14 Pr>chi2 = 0.0329
	1962-1971	3	5.27	
	1972-1981	7	14.39	
	1982-1991	16	22.24	
	1992-2001	46	33.93	
	2002-2014	17	13.03	
	Total	90	90.00	
06_Interrupted LMT: refusal	1952-1961	1	0.86	chi2(5) = 1.76 Pr>chi2 = 0.8817
	1962-1971	2	3.72	
	1972-1981	10	9.98	
	1982-1991	13	15.52	
	1992-2001	28	24.76	
	2002-2014	10	9.16	
	Total	64	64.00	
07_Interrupted LMT: other reasons	1952-1961	0	0.97	chi2(5) = 29.32
	1962-1971	0	4.34	
	1972-1981	5	11.86	

	1982-1991	8	17.88	Pr>chi2 = 0.0000
	1992-2001	48	28.22	
	2002-2014	13	10.74	
	Total	74	74.00	
08_Interrupted LMT: excluded, non-attendance	1952-1961	1	0.77	chi2(5) = 19.54 Pr>chi2 = 0.0015
	1962-1971	0	3.62	
	1972-1981	4	9.91	
	1982-1991	22	15.50	
	1992-2001	33	23.24	
	2002-2014	2	8.96	
Total	62	62.00		
09_Interrupted LMT: excluded, other reasons	1952-1961	0	0.05	chi2(5) = 6.97 Pr>chi2 = 0.2231
	1962-1971	0	0.23	
	1972-1981	1	0.65	
	1982-1991	3	0.96	
	1992-2001	0	1.52	
	2002-2014	0	0.59	
Total	4	4.00		
10_Completed LMT and final exam	1952-1961	1	0.51	chi2(5) = 13.00 Pr>chi2 = 0.0234
	1962-1971	2	4.14	
	1972-1981	13	8.36	
	1982-1991	16	22.56	
	1992-2001	28	20.01	
	2002-2014	4	8.42	
Total	64	64.00		

Table 14. Cox Model Estimates of Proportional Hazards for statuses 00-10 (no. of subjects = 3,837, number of obs. = 3,837, time at risk = 15,918 months)

	_t	Haz. Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
00_Completed LMT	gender	1.057741	.0380607	1.56	0.119	.9857132	1.135032
	education	.9971737	.0078852	-0.36	0.720	.9818381	1.012749
	birth cohort	.9266011	.0187206	-3.77	0.000	.8906263	.964029
	entrance cohort	1.018469	.0176529	1.06	0.291	.9844512	1.053663
	LR chi2(4) = 17.96		Log likelihood = -23772.976		Prob > chi2 = 0.0013		
01_Interrupted LMT: job-placement matching new qualification	gender	.5170139	.1796209	-1.90	0.058	.2616844	1.021472
	education	.9399814	.080167	-0.73	0.468	.7952872	1.111001
	birth cohort	1.274553	.2695972	1.15	0.251	.8419948	1.929331
	entrance cohort	.7421857	.1383683	-1.60	0.110	.5150153	1.06956
	LR chi2(4) = 7.44		Log likelihood = -265.32397		Prob > chi2 = 0.1142		
02_Interrupted LMT: job-plac. -another qualification	gender	.7326418	.1783208	-1.28	0.201	.4546887	1.180509
	education	.8978832	.0562375	-1.72	0.085	.7941567	1.015158
	birth cohort	1.442246	.2166724	2.44	0.015	1.074388	1.936054
	entrance cohort	.8455263	.1150143	-1.23	0.217	.6476506	1.103859
	LR chi2(4) = 14.01		Log likelihood = -535.06486		Prob > chi2 = 0.0073		
03_Interrupted LMT: another LM training started	gender	.9850788	.2059437	-0.07	0.943	.6539071	1.483973
	education	1.079663	.0455094	1.82	0.069	.9940512	1.172648
	birth cohort	1.42598	.1741127	2.91	0.004	1.122487	1.811529
	entrance cohort	1.206786	.1407331	1.61	0.107	.9602071	1.516687
	LR chi2(4) = 22.54		Log likelihood = -729.92287		Prob > chi2 = 0.0002		
04_Interrupted LMT: health problems	gender	.8176034	.2365726	-0.70	0.486	.4637122	1.441574
	education	1.033176	.0637973	0.53	0.597	.9154054	1.166097
	birth cohort	1.000945	.1608097	0.01	0.995	.7305636	1.371395

	entrance cohort	1.148427	.1673338	0.95	0.342	.8631322	1.528021
	LR chi2(4) = 1.89		Log likelihood = -377.83507		Prob > chi2 = 0.7555		
05_Interrupted LMT: other personal reasons	gender	1.183816	.2573584	0.78	0.438	.7730996	1.81273
	education	1.021441	.0459115	0.47	0.637	.9353054	1.115508
	birth cohort	1.264728	.1552964	1.91	0.056	.994209	1.608853
	entrance cohort	1.23689	.1431577	1.84	0.066	.9858551	1.551848
	LR chi2(4) = 13.66		Log likelihood = -697.62497		Prob > chi2 = 0.0085		
06_Interrupted LMT: refusal	gender	.5176711	.1359031	-2.51	0.012	.3094495	.8660004
	education	.7963258	.060473	-3.00	0.003	.6861997	.9241256
	birth cohort	1.164544	.1693113	1.05	0.295	.875792	1.548499
	entrance cohort	.9793427	.1336486	-0.15	0.878	.7495027	1.279665
	LR chi2(4) = 23.61		Log likelihood = -511.77075		Prob > chi2 = 0.0001		
07_Interrupted LMT: other reasons	gender	.329243	.0850364	-4.30	0.000	.1984583	.546215
	education	1.102341	.052404	2.05	0.040	1.004271	1.209988
	birth cohort	1.28777	.166857	1.95	0.051	.9989587	1.660079
	entrance cohort	1.545984	.2179729	3.09	0.002	1.172713	2.038067
	LR chi2(4) = 47.20		Log likelihood = -569.91286		Prob > chi2 = 0.0000		
08_Interrupted LMT: excluded, non- attendance	gender	.2633557	.080772	-4.35	0.000	.1443698	.4804066
	education	.8497132	.0655717	-2.11	0.035	.730442	.9884597
	birth cohort	1.477742	.2360856	2.44	0.015	1.080463	2.021099
	entrance cohort	.8547436	.1306789	-1.03	0.305	.6334298	1.153382
	LR chi2(4) = 42.67		Log likelihood = -452.541		Prob > chi2 = 0.0000		
09_Interrupted LMT: excluded, other reasons	gender	.1983165	.2321346	-1.38	0.167	.0199989	1.966583
	education	1.272428	.2631689	1.16	0.244	.8483674	1.908457
	birth cohort	1.35629	.9116387	0.45	0.650	.3632555	5.063991
	entrance cohort	.536555	.3161247	-1.06	0.291	.1690861	1.702632
	LR chi2(4) = 4.13		Log likelihood = -30.427772		Prob > chi2 = 0.3882		
10_Completed LMT and final exam	gender	1.107105	.2943811	0.38	0.702	.6574354	1.864338
	education	1.084794	.0682107	1.29	0.196	.9590127	1.227071
	birth cohort	1.29444	.2267907	1.47	0.141	.9182228	1.824801
	entrance cohort	.8879993	.131541	-0.80	0.423	.6642362	1.187142
	LR chi2(4) = 3.76		Log likelihood = -320.52704		Prob > chi2 = 0.4390		

Table 15. Exponential Model Estimates of Proportional Hazards for statuses 00-10 (no. of subjects = 3,837, number of obs. = 3,837, time at risk = 15,918 months)

	_t	Haz. Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
00_Completed LMT	gender	1.061964	.0381983	1.67	0.095	.989675	1.139534
	education	.9966791	.0078824	-0.42	0.674	.9813491	1.012249
	birth cohort	.9262679	.0186896	-3.80	0.000	.8903518	.9636328
	entrance cohort	1.01798	.0176445	1.03	0.304	.9839784	1.053157
	_cons	.2211922	.0222543	-15.00	0.000	.1816058	.2694075
	LR chi2(4) = 18.59		Log likelihood = -4524.6192		Prob > chi2 = 0.0009		
01_Interrupted LMT: job-placement matching new qualification	gender	.5081231	.1762494	-1.95	0.051	.2574649	1.002813
	education	.9381691	.0801163	-0.75	0.455	.7935815	1.1091
	birth cohort	1.286188	.2717496	1.19	0.234	.8500802	1.946026
	entrance cohort	.739433	.1381088	-1.62	0.106	.5127601	1.06631
	_cons	.0125158	.0116349	-4.71	0.000	.0020238	.0774016

	LR chi2(4) = 7.84		Log likelihood = -219.4021		Prob > chi2 = 0.0977		
02_ Interrupted LMT: job-placement matching another qualification	gender	.7305684	.1777811	-1.29	0.197	.4534445	1.177057
	education	.8942653	.056862	-1.76	0.079	.7894826	1.012955
	birth cohort	1.422183	.2140638	2.34	0.019	1.05885	1.91019
	entrance cohort	.8513283	.1156135	-1.19	0.236	.6523802	1.110947
	_cons	.0067102	.0048703	-6.89	0.000	.0016178	.0278316
	LR chi2(4) = 13.63		Log likelihood = -388.89406		Prob > chi2 = 0.0086		
03_ Interrupted LMT: another LM training started	gender	.9963552	.2082647	-0.02	0.986	.6614401	1.500852
	education	1.080845	.0459019	1.83	0.067	.9945214	1.174661
	birth cohort	1.408727	.1722093	2.80	0.005	1.108592	1.790118
	entrance cohort	1.224293	.1423374	1.74	0.082	.9748188	1.537612
	_cons	.0005305	.0003553	-11.26	0.000	.0001428	.0019716
	LR chi2(4) = 22.35		Log likelihood = -499.12687		Prob > chi2 = 0.0002		
04_ Interrupted LMT: health problems	gender	.8212144	.2375247	-0.68	0.496	.4658633	1.44762
	education	1.033848	.0644289	0.53	0.593	.9149775	1.168162
	birth cohort	.9877137	.1585489	-0.08	0.939	.7210997	1.352904
	entrance cohort	1.158753	.1686584	1.01	0.311	.8711583	1.541291
	_cons	.0019543	.0016572	-7.36	0.000	.0003708	.0102992
	LR chi2(4) = 1.94		Log likelihood = -293.60975		Prob > chi2 = 0.7465		
05_ Interrupted LMT: other personal reasons	gender	1.188292	.2581954	0.79	0.427	.7761964	1.819175
	education	1.022349	.0464097	0.49	0.626	.9353165	1.117479
	birth cohort	1.24537	.1531543	1.78	0.074	.9786299	1.584814
	entrance cohort	1.253671	.1447078	1.96	0.050	.9998431	1.571938
	_cons	.0006693	.0004607	-10.62	0.000	.0001737	.0025796
	LR chi2(4) = 13.49		Log likelihood = -491.82712		Prob > chi2 = 0.0091		
06_ Interrupted LMT: refusal	gender	.5003456	.1312024	-2.64	0.008	.2992713	.8365177
	education	.7804841	.0615167	-3.14	0.002	.6687649	.9108663
	birth cohort	1.146103	.1664381	0.94	0.348	.8622069	1.523477
	entrance cohort	.9769924	.1323879	-0.17	0.864	.7491152	1.274189
	_cons	.0190674	.0146597	-5.15	0.000	.0042253	.0860453
	LR chi2(4) = 25.04		Log likelihood = -398.70708		Prob > chi2 = 0.0000		
07_ Interrupted LMT: other reasons	gender	.3339719	.0862569	-4.25	0.000	.2013099	.5540573
	education	1.109335	.0535067	2.15	0.031	1.009268	1.219323
	birth cohort	1.273354	.1644427	1.87	0.061	.9886072	1.640116
	entrance cohort	1.559372	.2175236	3.18	0.001	1.186347	2.049687
	_cons	.0007701	.0006199	-8.91	0.000	.000159	.0037304
	LR chi2(4) = 47.07		Log likelihood = -415.51967		Prob > chi2 = 0.0000		
08_ Interrupted LMT: excluded, non- attendance	gender	.2615515	.0801981	-4.37	0.000	.1434029	.477042
	education	.8446433	.0660657	-2.16	0.031	.7245938	.9845824
	birth cohort	1.465208	.2341959	2.39	0.017	1.071137	2.004258
	entrance cohort	.8534597	.1302965	-1.04	0.299	.6327487	1.151158
	_cons	.0253314	.0204593	-4.55	0.000	.005202	.1233519
	LR chi2(4) = 42.89		Log likelihood = -332.71141		Prob > chi2 = 0.0000		
09_ Interrupted LMT: excluded, other reasons	gender	.2044646	.2387354	-1.36	0.174	.020737	2.016005
	education	1.262916	.2667767	1.11	0.269	.8347714	1.91065
	birth cohort	1.330067	.8966595	0.42	0.672	.3548453	4.985489
	entrance cohort	.5498003	.3248137	-1.01	0.311	.1727142	1.750177
	_cons	.0035442	.0088688	-2.25	0.024	.0000263	.4781123
	LR chi2(4) = 4.00		Log likelihood = -33.76869		Prob > chi2 = 0.4058		

10_Completed LMT and final exam	gender	.972715	.2498292	-0.11	0.914	.5879841	1.609184
	education	1.075867	.0591578	1.33	0.184	.9659496	1.198293
	birth cohort	1.482514	.2421214	2.41	0.016	1.076421	2.04181
	entrance cohort	.7678659	.1089888	-1.86	0.063	.5813909	1.014151
	_cons	.0025608	.0018582	-8.22	0.000	.0006176	.0106182
LR chi2(4) = 7.61		Log likelihood = -267.93649		Prob > chi2 = 0.1070			

Table 16. Weibull Model Estimates of Proportional Hazards for statuses 00-10 (no. of subjects = 3,837, number of obs. = 3,837, time at risk = 15,918 months)

	_t	Haz. Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
00_Completed LMT	gender	1.078371	.0387918	2.10	0.036	1.004959	1.157146
	education	.9948004	.0079822	-0.65	0.516	.9792781	1.010569
	birth cohort	.9031078	.0182715	-5.04	0.000	.8679971	.9396388
	entrance cohort	1.032196	.0178956	1.83	0.068	.9977104	1.067873
	_cons	.1057547	.0113721	-20.89	0.000	.085658	.1305664
	/ln_p	.3452156	.012613	27.37	0.000	.3204946	.3699366
	p	1.412294	.0178133			1.377809	1.447643
	1/p	.7080677	.0089308			.6907781	.72579
	LR chi2(4) = 30.29		Log likelihood = -4219.2359		Prob > chi2 = 0.0000		
01_Interrupted LMT: job-placement matching new qualification	gender	.5082268	.1762653	-1.95	0.051	.2575374	1.00294
	education	.9363843	.080404	-0.77	0.444	.7913424	1.10801
	birth cohort	1.277816	.2702098	1.16	0.246	.8442505	1.934039
	entrance cohort	.7411008	.1383528	-1.60	0.109	.5140085	1.068524
	_cons	.0102002	.0098296	-4.76	0.000	.0015429	.0674346
	/ln_p	.1210094	.1293697	0.94	0.350	.1325505	.3745693
	p	1.128635	.1460112			.8758587	1.454365
	1/p	.8860256	.1146248			.6875854	1.141737
	LR chi2(4) = 7.76		Log likelihood = -218.99322		Prob > chi2 = 0.1010		
02_Interrupted LMT: job-placement matching another qualification	gender	.7306534	.1778053	-1.29	0.197	.453493	1.177205
	education	.8938109	.0569489	-1.76	0.078	.7888812	1.012697
	birth cohort	1.419383	.2137819	2.33	0.020	1.056562	1.906796
	entrance cohort	.8521197	.115715	-1.18	0.239	.6529957	1.111965
	_cons	.0062547	.0046582	-6.81	0.000	.001453	.0269241
	/ln_p	.0425727	.0952248	0.45	0.655	.1440644	.2292098
	p	1.043492	.0993663			.865832	1.257606
	1/p	.9583208	.0912559			.7951617	1.154958
	LR chi2(4) = 13.56		Log likelihood = -388.79642		Prob > chi2 = 0.0088		
03_Interrupted LMT: another LM training started	gender	.9980251	.2086416	-0.01	0.992	.6625124	1.50345
	education	1.081448	.0460175	1.84	0.066	.9949141	1.175509
	birth cohort	1.405613	.171949	2.78	0.005	1.105956	1.786461
	entrance cohort	1.227722	.1427793	1.76	0.078	.9774819	1.542025
	_cons	.0004695	.0003242	-11.10	0.000	.0001213	.0018173
	/ln_p	.0630911	.0811276	0.78	0.437	-.095916	.2220983
	p	1.065124	.0864109			.9085403	1.248694
	1/p	.9388579	.0761673			.8008367	1.100667
	LR chi2(4) = 22.33		Log likelihood = -498.83473		Prob > chi2 = 0.0002		
04_Interrupted LMT: health problems	gender	.8224321	.2378877	-0.68	0.499	.466542	1.449804
	education	1.033938	.0645319	0.53	0.593	.9148878	1.16848
	birth cohort	.9857231	.1583009	-0.09	0.929	.7195439	1.350369

	entrance cohort	1.160535	.1689402	1.02	0.306	.8724648	1.54372
	_cons	.0017877	.0015657	-7.22	0.000	.0003212	.0099498
	/ln_p	.0491218	.1141773	0.43	0.667	-	.2729051
	p	1.050348	.1199259			.8397412	1.313776
	1/p	.9520651	.1087042			.761165	1.190843
	LR chi2(4) = 1.95		Log likelihood = -		Prob > chi2 = 0.7451		
			293.51964				
05_ Interrupted LMT: other personal reasons	gender	1.187091	.2579433	0.79	0.430	.7754009	1.817364
	education	1.022146	.0463485	0.48	0.629	.9352239	1.117146
	birth cohort	1.247208	.1533923	1.80	0.072	.9800554	1.587182
	entrance cohort	1.251674	.1445547	1.94	0.052	.9981293	1.569624
	_cons	.0007202	.0005067	-10.29	0.000	.0001814	.0028597
	/ln_p	-.0414445	.0866319	-0.48	0.632	-	.128351
	p	.9594026	.0831149			.8095798	1.136952
	1/p	1.042315	.0902978			.8795446	1.235209
	LR chi2(4) = 13.49		Log likelihood = -		Prob > chi2 = 0.0091		
			491.71014				
06_ Interrupted LMT: refusal	gender	.5014646	.1315109	-2.63	0.008	.2999229	.8384379
	education	.7859234	.0611095	-3.10	0.002	.674831	.915304
	birth cohort	1.157237	.1681997	1.00	0.315	.8703695	1.538654
	entrance cohort	.977504	.1327943	-0.17	0.867	.7490011	1.275718
	_cons	.0293514	.0225431	-4.59	0.000	.0065143	.1322478
	/ln_p	-.3635749	.1106269	-3.29	0.001	-	.1467501
	p	.6951867	.0769064			.5596747	.8635097
	1/p	1.438463	.1591327			1.158065	1.786752
	LR chi2(4) = 24.88		Log likelihood = -		Prob > chi2 = 0.0001		
			392.25092				
07_ Interrupted LMT: other reasons	gender	.3323814	.0858395	-4.27	0.000	.200359	.5513974
	education	1.107331	.0532236	2.12	0.034	1.007777	1.216719
	birth cohort	1.27709	.1650893	1.89	0.058	.9912578	1.645342
	entrance cohort	1.555936	.2175979	3.16	0.002	1.182908	2.046597
	_cons	.0010087	.0008241	-8.44	0.000	.0002034	.0050028
	/ln_p	-.1668829	.098337	-1.70	0.090	-	.0258541
	p	.8462987	.0832225			.6979416	1.026191
	1/p	1.181616	.1161966			.9744772	1.432785
	LR chi2(4) = 47.13		Log likelihood = -		Prob > chi2 = 0.0000		
			413.94996				
08_ Interrupted LMT: excluded, non- attendance	gender	.2615997	.0802185	-4.37	0.000	.1434233	.4771499
	education	.843111	.0662996	-2.17	0.030	.7226848	.9836046
	birth cohort	1.460797	.2336085	2.37	0.018	1.067744	1.99854
	entrance cohort	.8531911	.1301616	-1.04	0.298	.6326861	1.150547
	_cons	.0221614	.0183325	-4.61	0.000	.0043799	.1121335
	/ln_p	.0840496	.0992933	0.85	0.397	-	.2786608
	p	1.087683	.1079996			.8953311	1.321359
	1/p	.9193857	.0912888			.7567966	1.116905
	LR chi2(4) = 42.78		Log likelihood = -		Prob > chi2 = 0.0000		
			332.36942				
09_ Interrupted LMT: excluded, other reasons	gender	.2028497	.2370164	-1.37	0.172	.0205401	2.003304
	education	1.265717	.2655236	1.12	0.261	.8390167	1.909425
	birth cohort	1.33484	.8982685	0.43	0.668	.3569614	4.991574
	entrance cohort	.5462425	.3223461	-1.02	0.306	.1718219	1.736571
	_cons	.0050775	.0129197	-2.08	0.038	.0000347	.7439562
	/ln_p	-.2338342	.4306675	-0.54	0.587	-	.6102587

	p	.791493	.3408704			.3403002	1.840908
	1/p	1.263435	.5441204			.5432103	2.938582
	LR chi2(4) = 4.04		Log likelihood = -33.602555		Prob > chi2 = 0.4008		
10_Completed LMT and final exam	gender	1.038847	.2678385	0.15	0.882	.6267476	1.721912
	education	1.086453	.0676664	1.33	0.183	.9616042	1.227511
	birth cohort	1.304896	.2264928	1.53	0.125	.9286057	1.833666
	entrance cohort	.8683761	.1282657	-0.96	0.339	.6500982	1.159943
	_cons	.0000269	.0000254	-11.16	0.000	4.23e-06	.0001708
	/ln_p	1.092381	.0600379	18.19	0.000	.974709	1.210053
	p	2.981365	.1789949			2.650396	3.353663
	1/p	.3354169	.0201377			.2981814	.3773021
	LR chi2(4) = 3.81		Log likelihood = -186.8108		Prob > chi2 = 0.4330		

Table 17. Estimated hazards on discrete-time survival for the status 00

Status 00 "Completed LM training", no adjust						
Interval	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
1 2	4091	0.1557	0.0057	0.1557	0.0062	0.1438 0.1680
2 3	3150	0.2728	0.0071	0.1387	0.0066	0.1260 0.1520
3 4	2613	0.4312	0.0081	0.2178	0.0091	0.2002 0.2360
4 5	1975	0.5930	0.0082	0.2846	0.0120	0.2615 0.3086
5 6	1373	0.6983	0.0077	0.2586	0.0137	0.2324 0.2861
6 7	993	0.7946	0.0069	0.3192	0.0179	0.2851 0.3553
7 8	650	0.8290	0.0065	0.1677	0.0161	0.1377 0.2006
8 9	520	0.8622	0.0060	0.1942	0.0193	0.1582 0.2339
9 10	399	0.9030	0.0053	0.2957	0.0272	0.2448 0.3514
10 11	268	0.9377	0.0044	0.3582	0.0366	0.2902 0.4333
11 12	164	0.9506	0.0040	0.2073	0.0356	0.1436 0.2826
12 13	126	0.9597	0.0037	0.1825	0.0381	0.1157 0.2644
13 14	94	0.9665	0.0034	0.1702	0.0426	0.0973 0.2632
14 15	75	0.9696	0.0033	0.0933	0.0353	0.0375 0.1741
15 16	64	0.9720	0.0032	0.0781	0.0349	0.0254 0.1600
16 17	56	0.9765	0.0030	0.1607	0.0536	0.0735 0.2815
17 18	46	0.9780	0.0030	0.0652	0.0377	0.0134 0.1571
18 19	41	0.9813	0.0028	0.1463	0.0597	0.0537 0.2846
19 20	33	0.9835	0.0027	0.1212	0.0606	0.0330 0.2657
20 21	27	0.9854	0.0026	0.1111	0.0642	0.0229 0.2676
21 22	22	0.9860	0.0026	0.0455	0.0455	0.0012 0.1677
22 23	19	0.9890	0.0024	0.2105	0.1053	0.0574 0.4614
23 24	15	0.9904	0.0023	0.1333	0.0943	0.0161 0.3714
24 25	12	0.9912	0.0022	0.0833	0.0833	0.0021 0.3074
25 26	10	0.9912	0.0022	0.0000	.	.
26 27	9	0.9922	0.0022	0.1111	0.1111	0.0028 0.4099
27 28	6	0.9922	0.0022	0.0000	.	.
28 29	5	0.9938	0.0022	0.2000	0.2000	0.0051 0.7378
30 31	4	0.9938	0.0022	0.0000	.	.
31 32	3	0.9958	0.0023	0.3333	0.3333	0.0084 1.2296
32 33	2	0.9958	0.0023	0.0000	.	.
37 38	1	0.9958	0.0023	0.0000	.	.

Table 18. Estimated hazards on discrete-time survival for the status 01

Status 01 "Interrupted LMT: job-placement matching new qualification", no adjust						
Interval	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
1 2	4091	0.0039	0.0010	0.0039	0.0010	0.0022 0.0060
2 3	3150	0.0049	0.0011	0.0010	0.0005	0.0002 0.0023
3 4	2613	0.0064	0.0014	0.0015	0.0008	0.0004 0.0034
4 5	1975	0.0079	0.0016	0.0015	0.0009	0.0003 0.0037
5 6	1373	0.0086	0.0018	0.0007	0.0007	0.0000 0.0027
6 7	993	0.0106	0.0023	0.0020	0.0014	0.0002 0.0056
7 8	650	0.0106	0.0023	0.0000	.	.
8 9	520	0.0144	0.0035	0.0038	0.0027	0.0005 0.0107
9 10	399	0.0169	0.0043	0.0025	0.0025	0.0001 0.0092
10 11	268	0.0242	0.0067	0.0075	0.0053	0.0009 0.0208
11 12	164	0.0242	0.0067	0.0000	.	.
12 13	126	0.0320	0.0102	0.0079	0.0079	0.0002 0.0293
13 14	94	0.0320	0.0102	0.0000	.	.
14 15	75	0.0320	0.0102	0.0000	.	.
15 16	64	0.0471	0.0180	0.0156	0.0156	0.0004 0.0576
Rows 16-37 are omitted						
37 38	1	0.0471	0.0180	0.0000	.	.

Table 19. Estimated hazards on discrete-time survival for the status 02

Status 02 "Interrupted LMT: job-placement matching another qualification", no adjust						
Interval	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
1 2	4091	0.0071	0.0013	0.0071	0.0013	0.0047 0.0099
2 3	3150	0.0115	0.0018	0.0044	0.0012	0.0024 0.0071
3 4	2613	0.0149	0.0021	0.0034	0.0011	0.0016 0.0060
4 5	1975	0.0194	0.0026	0.0046	0.0015	0.0021 0.0080
5 6	1373	0.0230	0.0030	0.0036	0.0016	0.0012 0.0075
6 7	993	0.0240	0.0032	0.0010	0.0010	0.0000 0.0037
7 8	650	0.0330	0.0048	0.0092	0.0038	0.0034 0.0180
8 9	520	0.0348	0.0052	0.0019	0.0019	0.0000 0.0071
9 10	399	0.0372	0.0057	0.0025	0.0025	0.0001 0.0092
Rows 10-13 are omitted						
13 14	94	0.0475	0.0116	0.0106	0.0106	0.0003 0.0392
Rows 14-37 are omitted						
37 38	1	0.0475	0.0116	0.0000	.	.

Table 20. Estimated hazards on discrete-time survival for the status 03

Status 03 "Interrupted LMT: another LM training started", no adjust						
Interval	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
1 2	4091	0.0093	0.0015	0.0093	0.0015	0.0066 0.0125
2 3	3150	0.0143	0.0019	0.0051	0.0013	0.0029 0.0079
3 4	2613	0.0200	0.0024	0.0057	0.0015	0.0032 0.0090
4 5	1975	0.0235	0.0027	0.0035	0.0013	0.0014 0.0066
5 6	1373	0.0299	0.0035	0.0066	0.0022	0.0030 0.0115
6 7	993	0.0386	0.0045	0.0091	0.0030	0.0041 0.0159
7 8	650	0.0386	0.0045	0.0000	.	.
8 9	520	0.0423	0.0052	0.0038	0.0027	0.0005 0.0107

9 10	399	0.0471	0.0062	0.0050	0.0035	0.0006 0.0140
Rows 10-14 are omitted						
14 15	75	0.0598	0.0140	0.0133	0.0133	0.0003 0.0492
Rows 15-21 are omitted						
21 22	22	0.1026	0.0438	0.0455	0.0455	0.0012 0.1677
Rows 22-37 are omitted						
37 38	1	0.1026	0.0438	0.0000	.	.

Table 21. Estimated hazards on discrete-time survival for the status 04

Status 04 "Interrupted LMT: health problems", no adjust						
Interval	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
1 2	4091	0.0059	0.0012	0.0059	0.0012	0.0038 0.0084
2 3	3150	0.0097	0.0016	0.0038	0.0011	0.0020 0.0062
3 4	2613	0.0123	0.0019	0.0027	0.0010	0.0011 0.0050
4 5	1975	0.0148	0.0022	0.0025	0.0011	0.0008 0.0052
5 6	1373	0.0170	0.0025	0.0022	0.0013	0.0005 0.0053
6 7	993	0.0179	0.0027	0.0010	0.0010	0.0000 0.0037
7 8	650	0.0240	0.0040	0.0062	0.0031	0.0017 0.0135
8 9	520	0.0259	0.0044	0.0019	0.0019	0.0000 0.0071
9 10	399	0.0259	0.0044	0.0000	.	.
10 11	268	0.0331	0.0068	0.0075	0.0053	0.0009 0.0208
Rows 11-37 are omitted						
37 38	1	0.0331	0.0068	0.0000	.	.

Table 22. Estimated hazards on discrete-time survival for the status 05

Status 05 "Interrupted LMT: other personal reasons", no adjust						
Interval	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
1 2	4091	0.0134	0.0018	0.0134	0.0018	0.0101 0.0172
2 3	3150	0.0197	0.0023	0.0063	0.0014	0.0039 0.0094
3 4	2613	0.0242	0.0026	0.0046	0.0013	0.0024 0.0075
4 5	1975	0.0267	0.0028	0.0025	0.0011	0.0008 0.0052
5 6	1373	0.0288	0.0031	0.0022	0.0013	0.0005 0.0053
6 7	993	0.0357	0.0040	0.0070	0.0027	0.0028 0.0132
7 8	650	0.0386	0.0045	0.0031	0.0022	0.0004 0.0086
8 9	520	0.0460	0.0058	0.0077	0.0038	0.0021 0.0169
9 10	399	0.0508	0.0067	0.0050	0.0035	0.0006 0.0140
Rows 10-37 are omitted						
37 38	1	0.0508	0.0067	0.0000	.	.

Table 23. Estimated hazards on discrete-time survival for the status 06

Status 06 "Interrupted LMT: refusal", no adjust						
Interval	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
1 2	4091	0.0152	0.0019	0.0152	0.0019	0.0116 0.0192
2 3	3150	0.0155	0.0019	0.0003	0.0003	0.0000 0.0012
3 4	2613	0.0158	0.0020	0.0004	0.0004	0.0000 0.0014
4 5	1975	0.0158	0.0020	0.0000	.	.
5 6	1373	0.0158	0.0020	0.0000	.	.
6 7	993	0.0168	0.0022	0.0010	0.0010	0.0000 0.0037

7 8	650	0.0183	0.0027	0.0015	0.0015	0.0000 0.0057
8 9	520	0.0202	0.0033	0.0019	0.0019	0.0000 0.0071
9 10	399	0.0227	0.0041	0.0025	0.0025	0.0001 0.0092
Rows 10-37 are omitted						
37 38	1	0.0227	0.0041	0.0000	.	.

Table 24. Estimated hazards on discrete-time survival for the status 07

Status 07 "Interrupted LMT: other reasons", no adjust						
Interval	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
1 2	4091	0.0115	0.0017	0.0115	0.0017	0.0084 0.0150
2 3	3150	0.0165	0.0021	0.0051	0.0013	0.0029 0.0079
3 4	2613	0.0195	0.0023	0.0031	0.0011	0.0013 0.0055
4 5	1975	0.0220	0.0026	0.0025	0.0011	0.0008 0.0052
5 6	1373	0.0227	0.0027	0.0007	0.0007	0.0000 0.0027
6 7	993	0.0257	0.0032	0.0030	0.0017	0.0006 0.0073
7 8	650	0.0257	0.0032	0.0000	.	.
8 9	520	0.0275	0.0037	0.0019	0.0019	0.0000 0.0071
Rows 9-37 are omitted						
37 38	1	0.0275	0.0037	0.0000	.	.

Table 25. Estimated hazards on discrete-time survival for the status 08

Status 08 "Interrupted LMT: excluded, non-attendance", no adjust						
Interval	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
1 2	4091	0.0061	0.0012	0.0061	0.0012	0.0040 0.0087
2 3	3150	0.0112	0.0017	0.0051	0.0013	0.0029 0.0079
3 4	2613	0.0153	0.0021	0.0042	0.0013	0.0021 0.0070
4 5	1975	0.0173	0.0024	0.0020	0.0010	0.0006 0.0044
5 6	1373	0.0180	0.0025	0.0007	0.0007	0.0000 0.0027
6 7	993	0.0200	0.0028	0.0020	0.0014	0.0002 0.0056
7 8	650	0.0230	0.0035	0.0031	0.0022	0.0004 0.0086
8 9	520	0.0343	0.0058	0.0115	0.0047	0.0042 0.0224
Rows 9-12 are omitted						
12 13	126	0.0420	0.0095	0.0079	0.0079	0.0002 0.0293
13 14	94	0.0420	0.0095	0.0000	.	.
14 15	75	0.0547	0.0158	0.0133	0.0133	0.0003 0.0492
Rows 15-37 are omitted						
37 38	1	0.0547	0.0158	0.0000	.	.

Table 26. Estimated hazards on discrete-time survival for the status 09

Status 09 "Interrupted LMT: excluded, other reason", no adjust						
Interval	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
1 2	4091	0.0007	0.0004	0.0007	0.0004	0.0002 0.0018
2 3	3150	0.0014	0.0006	0.0006	0.0004	0.0001 0.0018
Rows 3-37 are omitted						
37 38	1	0.0014	0.0006	0.0000	.	.

Table 27. Estimated hazards on discrete-time survival for the status 10

Status 10 "Completed LMT and final exam", no adjust						
Interval	Beg. Total	Cum. Failure	Std. Error	Hazard	Std. Error	[95% Conf. Int.]
1 2	4091	0.0012	0.0005	0.0012	0.0005	0.0004 0.0025
2 3	3150	0.0012	0.0005	0.0000	.	.
3 4	2613	0.0020	0.0008	0.0008	0.0005	0.0001 0.0021
4 5	1975	0.0030	0.0010	0.0010	0.0007	0.0001 0.0028
5 6	1373	0.0044	0.0015	0.0015	0.0010	0.0002 0.0041
6 7	993	0.0044	0.0015	0.0000	.	.
7 8	650	0.0136	0.0040	0.0092	0.0038	0.0034 0.0180
8 9	520	0.0174	0.0048	0.0038	0.0027	0.0005 0.0107
9 10	399	0.0322	0.0076	0.0150	0.0061	0.0055 0.0292
10 11	268	0.0467	0.0104	0.0149	0.0075	0.0041 0.0327
11 12	164	0.0699	0.0153	0.0244	0.0122	0.0066 0.0535
12 13	126	0.1216	0.0239	0.0556	0.0210	0.0223 0.1036
13 14	94	0.1403	0.0268	0.0213	0.0150	0.0026 0.0593
14 15	75	0.1632	0.0306	0.0267	0.0189	0.0032 0.0743
15 16	64	0.1893	0.0348	0.0313	0.0221	0.0038 0.0871
16 17	56	0.2038	0.0370	0.0179	0.0179	0.0005 0.0659
17 18	46	0.2384	0.0428	0.0435	0.0307	0.0053 0.1211
18 19	41	0.2756	0.0481	0.0488	0.0345	0.0059 0.1359
19 20	33	0.3195	0.0543	0.0606	0.0429	0.0073 0.1688
20 21	27	0.3699	0.0608	0.0741	0.0524	0.0090 0.2064
21 22	22	0.3985	0.0645	0.0455	0.0455	0.0012 0.1677
22 23	19	0.3985	0.0645	0.0000	.	.
23 24	15	0.4386	0.0716	0.0667	0.0667	0.0017 0.2459
24 25	12	0.4854	0.0794	0.0833	0.0833	0.0021 0.3074
25 26	10	0.5369	0.0866	0.1000	0.1000	0.0025 0.3689
26 27	9	0.6398	0.0930	0.2222	0.1571	0.0269 0.6191
27 28	6	0.6998	0.0949	0.1667	0.1667	0.0042 0.6148
28 29	5	0.6998	0.0949	0.0000	.	.
30 31	4	0.7749	0.0964	0.2500	0.2500	0.0063 0.9222
31 32	3	0.7749	0.0964	0.0000	.	.
32 33	2	0.8874	0.0931	0.5000	0.5000	0.0127 1.8444
37 38	1	1.0000	.	1.0000	1.0000	0.253 889

8.5 Appendix to 5.5 “Full integration vs reduced integration”

Table 1. Descriptive statistics for sequence analysis as applied to variables ‘gender’, ‘education’, ‘birth cohort’, and ‘entrance cohort’)

	Freq.	Percent	Cum.
Gender			
male	1,350	49.98	49.98
female	1,351	50.02	100.00
Total	2,701	100.00	
Education			
Early education	1	0.04	0.04
Primary education	159	5.89	5.92
Lower secondary education	412	15.25	21.18
Upper secondary education	1,039	38.47	59.64
Short-cycle tertiary education	278	10.29	69.94
Bachelor or equivalent	285	10.55	80.49
Master or equivalent	283	10.48	90.97
Doctoral or equivalent	33	1.22	92.19
Not elsewhere classified	211	7.81	100.00
Total	2,701	100.00	
Birth cohort			
1935-1946	275	10.18	10.18
1947-1956	405	14.99	25.18
1957-1966	768	28.43	53.61
1967-1976	932	34.51	88.12
1977-1986	321	11.88	100.00
Total	2,701	100.00	
Entrance cohort			
1952-1961	69	2.55	2.55
1962-1971	142	5.26	7.81
1972-1981	306	11.33	19.14
1982-1991	753	27.88	47.02
1992-2001	1,276	47.24	94.26
2002-2014	155	5.74	100.00
Total	2,701	100.00	

Table 2. Concentration of sequences and descriptive statistics on sequence frequency (URA–database, N=2701 sequences, period 1952-2014)

# of observed sequences: 2701			
overall # of obs. elements: 8			
max sequence length: 63			
# of producible sequences: 7.846e+56			
Observations	Sequences	% of observed	Cum.
1	2180	80.71085	80.71085
2	77	2.850796	83.56165
3	20	.7404665	84.30211
4	12	.4442799	84.74639
5	7	.2591633	85.00555
6	3	.11107	85.11662
7	4	.1480933	85.26472
8	1	.0370233	85.30173
9	1	.0370233	85.33876

10	3	.11107	85.44983
11	2	.0740466	85.52388
12	1	.0370233	85.5609
13	2	.0740466	85.63495
16	2	.0740466	85.70899
19	1	.0370233	85.74602
20	1	.0370233	85.78304
Total	2317	85.78304	

Table 3. Concentration of sequences and descriptive statistics on sequence frequency with option ‘same order of elements’) (URA–database, N=2701 sequences, period 1952-2014)

same order # of observed sequences: 2701 overall # of obs. elements: 8 max sequence length: 11 # of producible sequences: 8.590e+09			
Observations	Sequences	% of observed	Cum.
1	456	16.88264	16.88264
2	65	2.406516	19.28915
3	24	.8885598	20.17771
4	15	.5553499	20.73306
5	5	.1851166	20.91818
6	16	.5923732	21.51055
7	2	.0740466	21.5846
8	5	.1851166	21.76971
9	3	.11107	21.88078
10	6	.22214	22.10292
11	5	.1851166	22.28804
12	2	.0740466	22.36209
13	2	.0740466	22.43613
16	1	.0370233	22.47316
17	2	.0740466	22.5472
18	1	.0370233	22.58423
19	2	.0740466	22.65827
21	1	.0370233	22.6953
observations 25-236 are omitted			
305	1	.0370233	23.32469
Total	630	23.32469	

Table 4. Concentration of sequences and descriptive statistics on sequence frequency with option ‘same elements’ (URA–database, N=2701 sequences, period 1952-2014)

same elements # of observed sequences: 2701 overall # of obs. elements: 8 max sequence length: 7 # of producible sequences: 2097152			
Observations	Sequences	% of observed	Cum.
1	37	1.369863	1.369863
2	21	.7774898	2.147353
3	13	.4813032	2.628656
4	8	.2961866	2.924843
5	8	.2961866	3.221029

6	2	.0740466	3.295076
7	4	.1480933	3.443169
8	2	.0740466	3.517216
9	3	.11107	3.628286
10	3	.11107	3.739356
12	3	.11107	3.850426
13	1	.0370233	3.887449
14	1	.0370233	3.924473
15	2	.0740466	3.998519
16	1	.0370233	4.035542
17	1	.0370233	4.072566
18	1	.0370233	4.109589
20	1	.0370233	4.146612
21	4	.1480933	4.294706
22	1	.0370233	4.331729
observations 25-305 are omitted			
313	1	.0370233	5.035172
Total	136	5.035172	

Table 5. Summary statistics on types of transitions by the 'gender'-variable

	gender	Freq.	Percent	Cum.
Type 1 'Reducing employment'	male	235	45.81	45.81
	female	278	54.19	100.00
	Total	513	100.00	
Type 2 'Delayed full employment'	male	47	33.57	33.57
	female	93	66.43	100.00
	Total	140	100.00	
Type 3 'Employment through employment services'	male	43	40.95	40.95
	female	62	59.05	100.00
	Total	105	100.00	
Type 4 'Part-time employment'	male	997	53.75	53.75
	female	858	46.25	100.00
	Total	1,855	100.00	
Type 5 Unemployment pension'	male	28	31.82	31.82
	female	60	68.18	100.00
	Total	88	100.00	

Table 6. Summary statistics on types of transitions by the 'education'-variable

	education	Freq.	Percent	Cum.
Type 1 'Reducing employment'	Early education	1	0.19	0.19
	Primary education	21	4.09	4.29
	Lower secondary education	65	12.67	16.96
	Upper secondary education	210	40.94	57.89
	Short-cycle tertiary education	59	11.50	69.40
	Bachelor or equivalent	46	8.97	78.36
	Master or equivalent	74	14.42	92.79
	Doctoral or equivalent	8	1.56	94.35
	Not elsewhere classified	29	5.65	100.00
Total	513	100.00		
Type 2 'Delayed full employment'	Primary education	8	5.71	5.71
	Lower secondary education	22	15.71	21.43
	Upper secondary education	44	31.43	52.86
	Short-cycle tertiary education	18	12.86	65.71
	Bachelor or equivalent	25	17.86	83.57
	Master or equivalent	16	11.43	95.00

	Doctoral or equivalent	1	0.71	95.71
	Not elsewhere classified	6	4.29	100.00
	Total	140	100.00	
Type 3 'Employment through employment services'	Primary education	8	7.62	7.62
	Lower secondary education	16	15.24	22.86
	Upper secondary education	30	28.57	51.43
	Short-cycle tertiary education	19	18.10	69.52
	Bachelor or equivalent	10	9.52	79.05
	Master or equivalent	13	12.38	91.43
	Doctoral or equivalent	5	4.76	96.19
	Not elsewhere classified	4	3.81	100.00
	Total	105	100.00	
Type 4 'Part-time employment'	Primary education	117	6.31	6.31
	Lower secondary education	297	16.01	22.32
	Upper secondary education	738	39.78	62.10
	Short-cycle tertiary education	163	8.79	70.89
	Bachelor or equivalent	189	10.19	81.08
	Master or equivalent	169	9.11	90.19
	Doctoral or equivalent	19	1.02	91.21
	Not elsewhere classified	163	8.79	100.00
	Total	1,855	100.00	
Type 5 'Unemployment pension'	Primary education	5	5.68	5.68
	Lower secondary education	12	13.64	19.32
	Upper secondary education	17	19.32	38.64
	Short-cycle tertiary education	19	21.59	60.23
	Bachelor or equivalent	15	17.05	77.27
	Master or equivalent	11	12.50	89.77
	Not elsewhere classified	9	10.23	100.00
		Total	88	100.00

Table 7. Summary statistics on types of transitions by the 'birth cohort'-variable

	Birth cohort	Freq.	Percent	Cum.
Type 1 'Reducing employment'	1935-1946	49	9.55	9.55
	1947-1956	95	18.52	28.07
	1957-1966	232	45.22	73.29
	1967-1976	121	23.59	96.88
	1977-1986	16	3.12	100.00
	Total	513	100.00	
Type 2 'Delayed full employment'	1935-1946	54	38.57	38.57
	1947-1956	59	42.14	80.71
	1957-1966	26	18.57	99.29
	1967-1976	1	0.71	100.00
	Total	140	100.00	
Type 3 'Employment through employment services'	1935-1946	32	30.48	30.48
	1947-1956	36	34.29	64.76
	1957-1966	35	33.33	98.10
	1967-1976	2	1.90	100.00
	Total	105	100.00	
Type 4 'Part-time employment'	1935-1946	96	5.18	5.18
	1947-1956	187	10.08	15.26
	1957-1966	460	24.80	40.05
	1967-1976	807	43.50	83.56
	1977-1986	305	16.44	100.00
	Total	1,855	100.00	
Type 5 'Unemployment pension'	1935-1946	44	50.00	50.00
	1947-1956	28	31.82	81.82
	1957-1966	15	17.05	98.86

	1967-1976	1	1.14	100.00
	Total	88	100.00	

Table 8. Summary statistics on types of transitions by the ‘entrance cohort’-variable

	Entrance cohort	Freq.	Percent	Cum.
Type 1 ‘Reducing employment’	1952-1961	7	1.36	1.36
	1962-1971	19	3.70	5.07
	1972-1981	139	27.10	32.16
	1982-1991	278	54.19	86.35
	1992-2001	69	13.45	99.81
	2002-2014	1	0.19	100.00
	Total	513	100.00	
Type 2 ‘Delayed full employment’	1952-1961	28	20.00	20.00
	1962-1971	53	37.86	57.86
	1972-1981	55	39.29	97.14
	1982-1991	4	2.86	100.00
	Total	140	100.00	
Type 3 ‘Employment through employment services’	1952-1961	15	14.29	14.29
	1962-1971	28	26.67	40.95
	1972-1981	44	41.90	82.86
	1982-1991	18	17.14	100.00
	Total	105	100.00	
Type 4 ‘Part-time employment’	1952-1961	1	0.05	0.05
	1962-1971	6	0.32	0.38
	1972-1981	37	1.99	2.37
	1982-1991	450	24.26	26.63
	1992-2001	1,207	65.07	91.70
	2002-2014	154	8.30	100.00
	Total	1,855	100.00	
Type 5 ‘Unemployment pension’	1952-1961	18	20.45	20.45
	1962-1971	36	40.91	61.36
	1972-1981	31	35.23	96.59
	1982-1991	3	3.41	100.00
	Total	88	100.00	

Table 9. Summary statistics on all generated variables for the type 1 ‘Reducing employment’

Type 1 ‘Reducing employment’					
Variable	Obs	Mean	Std. Dev.	Min	Max
Length of sequence	513	16.80117	4.686608	9	35
Length of episodes of element 0 ‘Employment services’	513	1.623782	2.402956	0	11
Length of episodes of element 1 ‘Employed’	513	7.419103	5.039859	0	20
Length of episodes of element 2 ‘Reduced working week’	513	3.516569	4.519513	0	30
Length of episodes of element 3 ‘Job-placed itself’	513	.1637427	1.324532	0	23
Length of episodes of element 4 ‘LM training’	513	1.294347	3.887217	0	28
Length of episodes of element 5 ‘Outside the labor force’	513	.5321637	2.520122	0	31
Length of episodes of element 6 ‘Another reason’	513	.7953216	3.062343	0	32
Length of episodes of element 7 ‘Unemployment pension’	513	1.45614	3.183595	0	15
Number of different elements in sequence	513	2.88499	1.116473	1	6
Number of episodes	513	3.781676	2.066071	1	11
Number of episodes (of element 0 ‘Employment services’)	513	.7037037	.8208263	0	4
Number of episodes (of element 1 ‘Employed’)	513	1.1423	.6383146	0	4
Number of episodes (of element 2 ‘Reduced working week’)	513	1.044834	.9601115	0	5

Number of episodes (of element 3 'Job-placed itself')	513	.0721248	.3135339	0	3
Number of episodes (of element 4 'LM training')	513	.2397661	.5182392	0	4
Number of episodes (of element 5 'Outside the labor force')	513	.1267057	.3611076	0	2
Number of episodes (of element 6 'Another reason')	513	.1481481	.4019988	0	3
Number of episodes (of element 7 'Unemployment pension')	513	.3040936	.5350259	0	3

Table 10. Summary statistics on all generated variables for the type 2 'Delayed full employment'

Type 2 'Delayed full employment'					
Variable	Obs	Mean	Std. Dev.	Min	Max
Length of sequence	140	32.37143	6.041038	21	56
Length of episodes of element 0 'Employment services'	140	1.25	2.225183	0	14
Length of episodes of element 1 'Employed'	140	24.37143	7.059198	3	43
Length of episodes of element 2 'Reduced working week'	140	3.135714	3.808757	0	19
Length of episodes of element 3 'Job-placed itself'	140	.1142857	.8317937	0	8
Length of episodes of element 4 'LM training'	140	.7428571	3.232861	0	26
Length of episodes of element 5 'Outside the labor force'	140	1.292857	4.50339	0	35
Length of episodes of element 6 'Another reason'	140	.4	2.278457	0	25
Length of episodes of element 7 'Unemployment pension'	140	1.064286	2.470577	0	12
Number of different elements in sequence	140	2.607143	1.001412	1	5
Number of episodes	140	3.421429	1.963948	1	10
Number of episodes (of element 0 'Employment services')	140	.5357143	.7137974	0	3
Number of episodes (of element 1 'Employed')	140	1.4	.6764273	1	4
Number of episodes (of element 2 'Reduced working week')	140	.8285714	.7675323	0	3
Number of episodes (of element 3 'Job-placed itself')	140	.0214286	.1453281	0	1
Number of episodes (of element 4 'LM training')	140	.1	.3240925	0	2
Number of episodes (of element 5 'Outside the labor force')	140	.2071429	.5561485	0	3
Number of episodes (of element 6 'Another reason')	140	.0714286	.2584641	0	1
Number of episodes (of element 7 'Unemployment pension')	140	.2571429	.4999486	0	3

Table 11. Summary statistics on all generated variables for the type 3 'Employment through employment services'

Type 3 'Employment through employment services'					
Variable	Obs	Mean	Std. Dev.	Min	Max
Length of sequence	105	26.11429	8.427649	14	46
Length of episodes of element 0 'Employment services'	105	17.51429	8.197225	0	39
Length of episodes of element 1 'Employed'	105	1.895238	3.388112	0	13
Length of episodes of element 2 'Reduced working week'	105	2.390476	3.011182	0	14
Length of episodes of element 3 'Job-placed itself'	105	.0380952	.1923443	0	1
Length of episodes of element 4 'LM training'	105	.9333333	5.67936	0	46
Length of episodes of element 5 'Outside the labor force'	105	1.580952	6.82442	0	43
Length of episodes of element 6 'Another reason'	105	1.409524	6.116961	0	40
Length of episodes of element 7 'Unemployment pension'	105	.352381	1.414084	0	9
Number of different elements in sequence	105	2.352381	.9998168	1	6
Number of episodes	105	3.066667	1.648231	1	8
Number of episodes (of element 0 'Employment services')	105	1.371429	.7239999	0	3
Number of episodes (of element 1 'Employed')	105	.4095238	.6459227	0	3
Number of episodes (of element 2 'Reduced working week')	105	.8095238	.7480132	0	3
Number of episodes (of element 3 'Job-placed itself')	105	.0380952	.1923443	0	1
Number of episodes (of element 4 'LM training')	105	.1047619	.3077152	0	1
Number of episodes (of element 5 'Outside the labor force')	105	.0952381	.2949514	0	1
Number of episodes (of element 6 'Another reason')	105	.1333333	.3686427	0	2
Number of episodes (of element 7 'Unemployment pension')	105	.1047619	.3375195	0	2

Table 12. Summary statistics on all generated variables for the type 4 ‘Part-time employment’

Type 4 ‘Part-time employment’					
Variable	Obs	Mean	Std. Dev.	Min	Max
Length of sequence	1855	5.739623	3.473062	1	15
Length of episodes of element 0 ‘Employment services’	1855	1.470081	2.244265	0	13
Length of episodes of element 1 ‘Employed’	1855	.9407008	1.668523	0	8
Length of episodes of element 2 ‘Reduced working week’	1855	2.059299	2.446347	0	14
Length of episodes of element 3 ‘Job-placed itself’	1855	.0382749	.2808932	0	6
Length of episodes of element 4 ‘LM training’	1855	.3336927	1.261077	0	14
Length of episodes of element 5 ‘Outside the labor force’	1855	.1407008	.8684439	0	13
Length of episodes of element 6 ‘Another reason’	1855	.2237197	1.051571	0	13
Length of episodes of element 7 ‘Unemployment pension’	1855	.5331536	1.675013	0	15
Number of different elements in sequence	1855	1.891644	.9004435	1	7
Number of episodes	1855	2.160647	1.287674	1	8
Number of episodes (of element 0 ‘Employment services’)	1855	.5956873	.6669763	0	4
Number of episodes (of element 1 ‘Employed’)	1855	.3633423	.5332055	0	3
Number of episodes (of element 2 ‘Reduced working week’)	1855	.7778976	.6844291	0	4
Number of episodes (of element 3 ‘Job-placed itself’)	1855	.0274933	.1668249	0	2
Number of episodes (of element 4 ‘LM training’)	1855	.109973	.326438	0	2
Number of episodes (of element 5 ‘Outside the labor force’)	1855	.0506739	.229013	0	2
Number of episodes (of element 6 ‘Another reason’)	1855	.0695418	.2607237	0	2
Number of episodes (of element 7 ‘Unemployment pension’)	1855	.1660377	.3974435	0	3

Table 13. Summary statistics on all generated variables for the type 5 ‘Unemployment pension’

Type 5 ‘Unemployment pension’					
Variable	Obs	Mean	Std. Dev.	Min	Max
Length of sequence	88	30.875	6.741214	19	44
Length of episodes of element 0 ‘Employment services’	88	.625	1.107057	0	5
Length of episodes of element 1 ‘Employed’	88	2.147727	3.621582	0	14
Length of episodes of element 2 ‘Reduced working week’	88	2.090909	2.736036	0	11
Length of episodes of element 3 ‘Job-placed itself’	88	.0227273	.1498868	0	1
Length of episodes of element 4 ‘LM training’	88	.4431818	1.631993	0	11
Length of episodes of element 5 ‘Outside the labor force’	88	.3522727	1.977109	0	16
Length of episodes of element 6 ‘Another reason’	88	.1704545	1.494985	0	14
Length of episodes of element 7 ‘Unemployment pension’	88	25.02273	7.509346	13	42
Number of different elements in sequence	88	2.465909	1.103275	1	6
Number of episodes	88	2.965909	1.777567	1	8
Number of episodes (of element 0 ‘Employment services’)	88	.3863636	.5956127	0	2
Number of episodes (of element 1 ‘Employed’)	88	.4772727	.7267828	0	3
Number of episodes (of element 2 ‘Reduced working week’)	88	.7272727	.7385489	0	3
Number of episodes (of element 3 ‘Job-placed itself’)	88	.0227273	.1498868	0	1
Number of episodes (of element 4 ‘LM training’)	88	.1022727	.3047431	0	1
Number of episodes (of element 5 ‘Outside the labor force’)	88	.0568182	.2328215	0	1
Number of episodes (of element 6 ‘Another reason’)	88	.0227273	.1498868	0	1
Number of episodes (of element 7 ‘Unemployment pension’)	88	1.170455	.4604244	1	3

Table 14. Summary statistics on all generated variables by types of transitions, ‘full’ and ‘reduced’ integration and by the ‘birth cohort’-variable

		Variable	Obs	Mean	Std. Dev.	Min	Max
Birth cohort 1 ‘1935-1946’	Reducing employment	Full integration	36	7.541667	5.37637	1	18
		Reduced integration	20	5.35	5.458214	1	22

	Delayed full employment	Full integration	54	23.72531	10.53924	4.66	42	
		Reduced integration	25	3.253333	3.110288	1	13	
	Employment through employment services	Full integration	15	4.9	3.174677	1	11	
		Reduced integration	13	3.141026	2.567466	1	8	
	Part-time employment	Full integration	22	3.136364	2.03061	1	8	
		Reduced integration	58	3.224138	2.360442	1	10	
	Unemployment pension	Full integration	15	4.866667	3.361901	1	14	
		Reduced integration	18	2.527778	1.701835	1	7	
Birth cohort 2 '1947-1956'	Reducing employment	Full integration	81	8.104938	4.724085	1	20	
		Reduced integration	69	3.849034	3.087744	1	15	
	Delayed full employment	Full integration	59	19.45904	8.173487	3	33	
		Reduced integration	41	4.04878	3.239994	1	13	
	Employment through employment services	Full integration	12	5.444444	3.075919	1	11	
		Reduced integration	26	3.711538	3.373939	1	14	
	Part-time employment	Full integration	45	3.166667	2.099784	1	8	
		Reduced integration	127	3.148294	2.390294	1	13	
	Unemployment pension	Full integration	11	5.045455	2.173184	2	9	
		Reduced integration	22	3.598485	2.758181	1	10	
	Birth cohort 3 '1957-1966'	Reducing employment	Full integration	205	7.844715	4.648175	1	19
			Reduced integration	171	3.540448	3.42776	1	21
Delayed full employment		Full integration	26	17.12179	6.599926	4.66	26	
		Reduced integration	21	5.301587	3.478753	1	13	
Employment through employment services		Full integration	9	4	2.95804	1	9	
		Reduced integration	25	2.56	1.62865	1	6	
Part-time employment		Full integration	147	2.894558	1.825646	1	8	
		Reduced integration	307	3.009772	2.101218	1	13	
Unemployment pension		Full integration	5	3.9	3.248076	1	9	
		Reduced integration	11	2.545455	1.916436	1	7	
Birth cohort 4 '1967-1976'		Reducing employment	Full integration	116	5.630747	3.384735	1	16
			Reduced integration	84	3.178373	2.647408	1	17
	Delayed full employment	Full integration	1	14	.	14	14	
		Reduced integration	0					
	Employment through employment services	Full integration	0					
		Reduced integration	2	2.5	.7071068	2	3	
	Part-time employment	Full integration	317	2.665615	1.667405	1	8	
		Reduced integration	508	2.643209	2.179263	1	14	
	Unemployment pension	Full integration	0					
		Reduced integration	0					
	Birth cohort 5 '1977-1986'	Reducing employment	Full integration	16	4.338542	2.333426	1	9
			Reduced integration	13	2.134615	1.05274	1	5
Delayed full employment		Full integration	0					
		Reduced integration	0					
Employment through employment services		Full integration	0					
		Reduced integration	0					
Part-time employment		Full integration	96	1.807292	1.05224	1	5	
		Reduced integration	195	2.153846	1.573598	1	11	
Unemployment pension		Full integration	0					
		Reduced integration	0					

Table 15. Summary statistics on all generated variables by types of transitions, 'full' and 'reduced' integration and by the 'entrance cohort'-variable

		Variable	Obs	Mean	Std. Dev.	Min	Max
Entrance cohort 1 '1952-1961'	Reducing employment	Full integration	6	5.333333	3.141125	1	10
		Reduced integration	0				
	Delayed full employment	Full integration	28	25.48214	11.62314	4.66	42
		Reduced integration	13	3.602564	3.231456	1	13

	Employment through employment services	Full integration	7	4.928571	3.469253	1	11
		Reduced integration	3	4.944444	1.417483	3.33	6
	Part-time employment	Full integration	0				
		Reduced integration	0				
	Unemployment pension	Full integration	10	4.35	2.494995	1	9
		Reduced integration	4	1.375	4.787136	1	2
Entrance cohort 2 '1962-1971'	Reducing employment	Full integration	15	6.833333	4.051749	2	15
		Reduced integration	13	5.807692	6.427605	1	22
	Delayed full employment	Full integration	53	21.18082	9.095084	3	36
		Reduced integration	29	3.724138	3.092578	1	11
	Employment through employment services	Full integration	14	5.595238	3.379624	1	11
		Reduced integration	20	3.425	2.94366	1	10
	Part-time employment	Full integration	1	3	.	3	3
		Reduced integration	2	5.5	2.12132	4	7
	Unemployment pension	Full integration	8	5.625	3.970876	1.5	14
		Reduced integration	20	3.108333	2.338512	1	10
Entrance cohort 3 '1972-1981'	Reducing employment	Full integration	122	8.773224	5.311641	1	20
		Reduced integration	91	3.712454	3.203303	1	15
	Delayed full employment	Full integration	55	18.07879	6.953909	4.66	29
		Reduced integration	41	4.313008	3.321687	1	13
	Employment through employment services	Full integration	15	4.133333	2.531704	1	9
		Reduced integration	32	2.984375	2.821245	1	14
	Part-time employment	Full integration	13	2.423077	1.077152	1	4
		Reduced integration	25	2.28	1.534872	1	6.5
	Unemployment pension	Full integration	12	4.791667	2.53573	1	9
		Reduced integration	25	3.28	2.393916	1	9
Entrance cohort 4 '1982-1991'	Reducing employment	Full integration	246	7.121274	4.174873	1	19
		Reduced integration	197	3.382741	3.040746	1	21
	Delayed full employment	Full integration	4	14.5	4.795832	8	19
		Reduced integration	4	6.75	4.856267	2	13
	Employment through employment services	Full integration	0				
		Reduced integration	11	2.5	1.161895	1	4
	Part-time employment	Full integration	198	3.007576	1.891389	1	8
		Reduced integration	277	3.169976	2.493755	1	14
	Unemployment pension	Full integration	1	2	.	2	2
		Reduced integration	2	1.5	.7071068	1	2
Entrance cohort 5 '1992-2001'	Reducing employment	Full integration	64	4.657552	2.709645	1	11
		Reduced integration	55	3.436364	3.357818	1	19
	Delayed full employment	Full integration	0				
		Reduced integration	0				
	Employment through employment services	Full integration	0				
		Reduced integration	0				
	Part-time employment	Full integration	390	2.502564	1.640974	1	8
		Reduced integration	776	2.569373	1.950412	1	13
Unemployment pension	Full integration	0					
	Reduced integration	0					
Entrance cohort 6 '2002-2014'	Reducing employment	Full integration	1	4	.	4	4
		Reduced integration	1	4	.	4	4
	Delayed full employment	Full integration	0				
		Reduced integration	0				
	Employment through employment services	Full integration	0				
		Reduced integration	0				
	Part-time employment	Full integration	25	1.98	1.17686	1	5
		Reduced integration	115	2.901449	2.260765	1	11
	Unemployment pension	Full integration	0				
		Reduced integration	0				

Table 16. ANOVA-test of variance between by continuity of unemployment periods, types of transition, gender, and ‘full integration’

One-way ANOVA-test, gender					
_clus_9 = Reducing employment ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	1274.37895	1	1274.37895	59.08	0.0000
Within groups	160191.751	7426	21.5717413		
Total	161466.13	7427	21.7404241		
Bartlett's test for equal variances: $\chi^2(1) = 9.2771$ Prob> $\chi^2 = 0.002$					
One-way ANOVA-test, gender					
_clus_9 = Delayed full employment ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	2298.72369	1	2298.72369	25.08	0.0000
Within groups	415156.801	4530	91.6460929		
Total	417455.524	4531	92.1331989		
Bartlett's test for equal variances: $\chi^2(1) = 8.9225$ Prob> $\chi^2 = 0.003$					
One-way ANOVA-test, gender					
_clus_9 = Employment through employment services ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	1096.99562	1	1096.99562	130.04	0.0000
Within groups	8756.54003	1038	8.43597305		
Total	9853.53565	1039	9.48367242		
Bartlett's test for equal variances: $\chi^2(1) = 3.2808$ Prob> $\chi^2 = 0.070$					
One-way ANOVA-test, gender					
_clus_9 = Part-time employment ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	32.2450962	1	32.2450962	10.12	0.0015
Within groups	12751.5623	4002	3.18629744		
Total	12783.8074	4003	3.19355669		
Bartlett's test for equal variances: $\chi^2(1) = 0.2421$ Prob> $\chi^2 = 0.623$					
One-way ANOVA-test, gender					
_clus_9 = Unemployment pension ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	237.036915	1	237.036915	29.41	0.0000
Within groups	8189.50066	1016	8.06053214		
Total	8426.53757	1017	8.285681		
Bartlett's test for equal variances: $\chi^2(1) = 3.5243$ Prob> $\chi^2 = 0.060$					

Table 17. ANOVA-test of variance between continuity of unemployment periods, types of transition, gender, and ‘reduced integration’

One-way ANOVA-test, gender					
_clus_9 = Reducing employment ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	848.272713	1	848.272713	66.17	0.0000
Within groups	79275.5501	6184	12.8194615		
Total	80123.8228	6185	12.9545389		
Bartlett's test for equal variances: $\chi^2(1) = 135.7326$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, gender					
_clus_9 = Delayed full employment ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	448.361574	1	448.361574	40.86	0.0000
Within groups	31690.5485	2888	10.9731816		
Total	32138.9101	2889	11.1245795		
Bartlett's test for equal variances: $\chi^2(1) = 65.3670$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, gender					

_clus_9 = Employment through employment services ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	90.7716643	1	90.7716643	11.10	0.0009
Within groups	13910.8536	1701	8.17804445		
Total	14001.6253	1702	8.22657184		
Bartlett's test for equal variances: $\chi^2(1) = 0.0060$ Prob> $\chi^2 = 0.938$					
One-way ANOVA-test, gender					
_clus_9 = Part-time employment ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	234.26759	1	234.26759	38.47	0.0000
Within groups	45340.8179	7446	6.08928525		
Total	45575.0855	7447	6.11992554		
Bartlett's test for equal variances: $\chi^2(1) = 49.3725$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, gender					
_clus_9 = Unemployment pension ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	140.456896	1	140.456896	26.10	0.0000
Within groups	8396.43876	1560	5.38233254		
Total	8536.89566	1561	5.46886333		
Bartlett's test for equal variances: $\chi^2(1) = 97.9384$ Prob> $\chi^2 = 0.000$					

Table 18. ANOVA-test of variance between continuity of unemployment periods, types of transition, education, and 'full integration'

One-way ANOVA-test, education					
_clus_9 = Reducing employment ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	3581.16135	8	447.645168	21.03	0.0000
Within groups	157884.968	7419	21.2811657		
Total	161466.13	7427	21.7404241		
Bartlett's test for equal variances: $\chi^2(7) = 57.8011$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, education					
_clus_9 = Delayed full employment ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	28324.243	7	4046.32043	47.04	0.0000
Within groups	389131.281	4524	86.0148721		
Total	417455.524	4531	92.1331989		
Bartlett's test for equal variances: $\chi^2(6) = 158.9675$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, education					
_clus_9 = Employment through employment services ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	650.872553	6	108.478759	12.18	0.0000
Within groups	9202.6631	1033	8.90867676		
Total	9853.53565	1039	9.48367242		
Bartlett's test for equal variances: $\chi^2(5) = 288.5339$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, education					
_clus_9 = Part-time employment ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	634.856346	7	90.6937637	29.83	0.0000
Within groups	12148.9511	3996	3.04027805		
Total	12783.8074	4003	3.19355669		
Bartlett's test for equal variances: $\chi^2(7) = 88.4946$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, education					
_clus_9 = Unemployment pension ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	1925.61493	5	385.122985	59.95	0.0000
Within groups	6500.92265	1012	6.42383661		
Total	8426.53757	1017	8.285681		

Bartlett's test for equal variances: $\chi^2(4) = 107.9248$ Prob> $\chi^2 = 0.000$

Table 19. ANOVA-test of variance between continuity of unemployment periods, types of transition, education, and ‘reduced integration’

One-way ANOVA-test, education					
_clus_9 = Reducing employment ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	3207.60378	7	458.229112	36.81	0.0000
Within groups	76916.219	6178	12.4500193		
Total	80123.8228	6185	12.9545389		
Bartlett's test for equal variances: $\chi^2(7) = 1.0e+03$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, education					
_clus_9 = Delayed full employment ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	961.351386	6	160.225231	14.82	0.0000
Within groups	31177.5587	2883	10.8142764		
Total	32138.9101	2889	11.1245795		
Bartlett's test for equal variances: $\chi^2(6) = 244.5504$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, education					
_clus_9 = Employment through employment services ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	3266.49672	7	466.642388	73.68	0.0000
Within groups	10735.1286	1695	6.33340918		
Total	14001.6253	1702	8.22657184		
Bartlett's test for equal variances: $\chi^2(7) = 1.2e+03$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, education					
_clus_9 = Part-time employment ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	1932.7603	7	276.108614	47.07	0.0000
Within groups	43642.3252	7440	5.86590393		
Total	45575.0855	7447	6.11992554		
Bartlett's test for equal variances: $\chi^2(7) = 424.7575$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, education					
_clus_9 = Unemployment pension ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	1843.70597	6	307.284329	71.39	0.0000
Within groups	6693.18969	1555	4.30430205		
Total	8536.89566	1561	5.46886333		
Bartlett's test for equal variances: $\chi^2(5) = 584.3043$ Prob> $\chi^2 = 0.000$					

Table 20. ANOVA-test of variance between continuity of unemployment periods, types of transition, birth cohort, and ‘full integration’

One-way ANOVA-test, birth cohort					
_clus_9 = Reducing employment ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	9553.44531	4	2388.36133	116.70	0.0000
Within groups	151912.684	7423	20.4651333		
Total	161466.13	7427	21.7404241		
Bartlett's test for equal variances: $\chi^2(4) = 490.0227$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, birth cohort					
_clus_9 = Delayed full employment ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	34403.5543	3	11467.8514	135.56	0.0000
Within groups	383051.97	4528	84.5962831		
Total	417455.524	4531	92.1331989		

Bartlett's test for equal variances: $\chi^2(2) = 279.2953$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, birth cohort _clus_9 = Employment through employment services ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	222.288391	2	111.144196	11.97	0.0000
Within groups	9631.24726	1037	9.28760584		
Total	9853.53565	1039	9.48367242		
Bartlett's test for equal variances: $\chi^2(2) = 1.9110$ Prob> $\chi^2 = 0.385$					
One-way ANOVA-test, birth cohort _clus_9 = Part-time employment ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	615.053907	4	153.763477	50.53	0.0000
Within groups	12168.7535	3999	3.04294912		
Total	12783.8074	4003	3.19355669		
Bartlett's test for equal variances: $\chi^2(4) = 193.1079$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, birth cohort _clus_9 = Unemployment pension ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	48.0835102	2	24.0417551	2.91	0.0548
Within groups	8378.45406	1015	8.25463455		
Total	8426.53757	1017	8.285681		
Bartlett's test for equal variances: $\chi^2(2) = 78.9917$ Prob> $\chi^2 = 0.000$					

Table 21. ANOVA-test of variance between continuity of unemployment periods, types of transition, birth cohort, and 'reduced integration'

One-way ANOVA-test, birth cohort _clus_9 = Reducing employment ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	2152.00016	4	538.000041	42.65	0.0000
Within groups	77971.8227	6181	12.6147586		
Total	80123.8228	6185	12.9545389		
Bartlett's test for equal variances: $\chi^2(4) = 648.8903$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, birth cohort _clus_9 = Delayed full employment ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	1902.38751	2	951.193756	90.82	0.0000
Within groups	30236.5226	2887	10.4733365		
Total	32138.9101	2889	11.1245795		
Bartlett's test for equal variances: $\chi^2(2) = 15.6598$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, birth cohort _clus_9 = Employment through employment services ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	803.974681	3	267.99156	34.50	0.0000
Within groups	13197.6506	1699	7.76789322		
Total	14001.6253	1702	8.22657184		
Bartlett's test for equal variances: $\chi^2(3) = 402.5881$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, birth cohort _clus_9 = Part-time employment ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	768.091818	4	192.022955	31.90	0.0000
Within groups	44806.9937	7443	6.02001796		
Total	45575.0855	7447	6.11992554		
Bartlett's test for equal variances: $\chi^2(4) = 138.3113$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, birth cohort _clus_9 = Unemployment pension ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	758.007057	2	379.003529	75.96	0.0000

Within groups	7778.8886	1559	4.98966556		
Total	8536.89566	1561	5.46886333		
Bartlett's test for equal variances: $\chi^2(2) = 203.0505$ Prob> $\chi^2 = 0.000$					

Table 22. ANOVA-test of variance between continuity of unemployment periods, types of transition, entrance cohort, and 'full integration'

One-way ANOVA-test, entrance cohort					
_clus_9 = Reducing employment ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	12923.4975	5	2584.69951	129.15	0.0000
Within groups	148542.632	7422	20.0138281		
Total	161466.13	7427	21.7404241		
Bartlett's test for equal variances: $\chi^2(4) = 574.6943$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, entrance cohort					
_clus_9 = Delayed full employment ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	42139.931	3	14046.6437	169.47	0.0000
Within groups	375315.593	4528	82.8877194		
Total	417455.524	4531	92.1331989		
Bartlett's test for equal variances: $\chi^2(3) = 390.0503$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, entrance cohort					
_clus_9 = Employment through employment services ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	431.889645	2	215.944822	23.77	0.0000
Within groups	9421.646	1037	9.08548313		
Total	9853.53565	1039	9.48367242		
Bartlett's test for equal variances: $\chi^2(2) = 28.0890$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, entrance cohort					
_clus_9 = Part-time employment ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	161.956961	4	40.4892404	12.83	0.0000
Within groups	12621.8505	3999	3.15625168		
Total	12783.8074	4003	3.19355669		
Bartlett's test for equal variances: $\chi^2(3) = 101.6000$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, entrance cohort					
_clus_9 = Unemployment pension ('full integration')					
Source	SS	df	MS	F	Prob > F
Between groups	442.124081	3	147.374694	18.72	0.0000
Within groups	7984.41349	1014	7.87417504		
Total	8426.53757	1017	8.285681		
Bartlett's test for equal variances: $\chi^2(2) = 87.7687$ Prob> $\chi^2 = 0.000$					

Table 23. ANOVA-test of variance between continuity of unemployment periods, types of transition, entrance cohort, and 'reduced integration'

One-way ANOVA-test, entrance cohort					
_clus_9 = Reducing employment ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	1642.74112	4	410.68528	32.34	0.0000
Within groups	78481.0817	6181	12.6971496		
Total	80123.8228	6185	12.9545389		
Bartlett's test for equal variances: $\chi^2(3) = 354.3480$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, entrance cohort					
_clus_9 = Delayed full employment ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	1135.65836	3	378.552788	35.24	0.0000

Within groups	31003.2517	2886	10.7426375		
Total	32138.9101	2889	11.1245795		
Bartlett's test for equal variances: $\chi^2(3) = 28.0179$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, entrance cohort					
clus_9 = Employment through employment services ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	507.844979	3	169.28166	21.31	0.0000
Within groups	13493.7803	1699	7.94218969		
Total	14001.6253	1702	8.22657184		
Bartlett's test for equal variances: $\chi^2(3) = 343.2134$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, entrance cohort					
clus_9 = Part-time employment ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	483.710671	4	120.927668	19.96	0.0000
Within groups	45091.3749	7443	6.05822583		
Total	45575.0855	7447	6.11992554		
Bartlett's test for equal variances: $\chi^2(4) = 126.1354$ Prob> $\chi^2 = 0.000$					
One-way ANOVA-test, entrance cohort					
clus_9 = Unemployment pension ('reduced integration')					
Source	SS	df	MS	F	Prob > F
Between groups	691.667675	3	230.555892	45.79	0.0000
Within groups	7845.22798	1558	5.035448		
Total	8536.89566	1561	5.46886333		
Bartlett's test for equal variances: $\chi^2(3) = 493.8858$ Prob> $\chi^2 = 0.000$					

Table 24. Summary numbers of years in unemployment by types of transition, 'gender', 'education', 'birth cohort', 'entrance cohort', 'full', and 'reduced' integration

	Reducing employment		Delayed full employment		Employment through empl.services		Part-time employment		Unemployment pension		Total	
	Full integration	Reduced integration	Full integration	Reduced integration	Full integration	Reduced integration	Full integration	Reduced integration	Full integration	Reduced integration	Full integration	Reduced integration
gender												
male	3306	2659	1526	887	303	570	2212	3827	341	463	7688	8406
female	4122	3527	3006	2003	737	1133	1792	3621	677	1099	10334	11383
education												
Early education	10	0	0	0	0	0	0	0	0	0	10	0
Primary education	252	233	283	185	21	112	151	524	0	31	707	1085
Lower secondary education	1025	753	720	308	164	166	666	1027	26	261	2601	2515
Upper secondary education	3119	2574	1414	1078	339	481	1735	3046	176	337	6783	7516
Short-cycle tertiary education	835	672	583	402	197	296	346	609	338	305	2299	2284
Bachelor or equivalent	661	531	776	579	138	166	433	736	260	270	2268	2282

Master or equivalent	992	915	530	203	123	252	344	801	133	212	2122	2383
Doctoral or equivalent	135	125	30	0	0	121	32	115	0	0	197	361
Not elsewhere classified	399	383	196	135	58	109	297	590	85	146	1035	1363
birth cohort												
1935-1946	646	401	1894	922	512	412	149	368	557	626	3758	2729
1947-1956	1489	1337	1828	1311	329	714	289	895	338	666	4273	4923
1957-1966	3372	2960	780	657	199	543	1041	2158	123	270	5515	6588
1967-1976	1693	1308	30	0	0	34	2012	3067	0	0	3735	4409
1977-1986	228	180	0	0	0	0	513	960	0	0	741	1140
entrance cohort												
1952-1961	115	0	1091	524	268	114	0	0	396	166	1870	804
1962-1971	360	330	1734	1014	441	666	10	24	279	679	2824	2713
1972-1981	2305	1800	1596	1241	331	722	101	237	321	674	4654	4674
1982-1991	3767	3263	111	111	0	201	1548	2413	22	43	5448	6031
1992-2001	869	781	0	0	0	0	2190	4155	0	0	3059	4936
2002-2014	12	12	0	0	0	0	155	619	0	0	167	631
Total	7428	6186	4532	2890	1040	1703	4004	7448	1018	1562	18022	19789