

**Diverse Routes from School,  
via Higher Education,  
to Employment**



**Diverse Routes from School,  
via Higher Education,  
to Employment**

**A Comparison of Nine European Countries**



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THE SOCIOLOGY OF  
EDUCATION**

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## List of original articles

**Article I** Lindberg, M. E. 2007a. 'At the Frontier of Graduate Surveys' Assessing participation and employability of graduates with master's degree in nine European countries. *Higher Education*, 53(5), 623–644.

**Article II** Lindberg, M. E. 2005. Is It Worth Being 'Traditional' in An Era of Mass Individualization? *Higher Education in Europe*, 30(3–4), 385–398.

**Article III** Lindberg, M. E. 2007b. Connections between the differentiation of higher education participation and the distribution of occupational status, A comparative study of seven European countries. *European Societies*, 9(4), 551-572.





## Preface

### Short description of the research process with acknowledgments

This doctoral thesis comprises three articles that have already been published in various higher education journals or in journals concerned with education-to-work transitions. I will shed some light on the research process from which these articles were produced. I do not try to present a detailed history of creating the articles; instead, I will focus on certain analytical choices and subjective experiences that steered the course of my study.

It all began from data. I began writing my dissertation as a doctoral student at the FINHERT (Finnish Network for Higher Education Research and Training) graduate school in January 2002. I was introduced to the data I was going to use in my study some months before applying for the graduate school, although I didn't have any part in collecting it. The information in question is generally known as the CHEERS data and it will be introduced in detail in the later chapters. On this occasion, it is sufficient to know that it is a massive, twelve-country survey that was collected by a European Union funded and coordinated research project.

When analyzing massive international data, such as the CHEERS, an obvious problem is how take into consideration all relevant contextual differences between countries. Without a doubt, the most important analytical and methodological choices that I made in the course of my research project were related to formulating a comparative research setting. My understanding was that although the data was in many ways unique, the themes covered by the data weren't novel *per se*, and the only novelty that I could introduce in my study would have to do with research setting and analytical strategies. This was plainly true when considering the 200-plus articles, research reports, working papers, and other publications that had something to do with the data and that were already published at the time when I began my work.

Besides the need to discover a comparative research setting, another matter that had a strong influence for the course of my research process was my interest in the career history methods. My interest in the sociological career history methods had already been aroused during my undergraduate studies as a sociology major, and this interest was strengthened when I gained access to the CHEERS data. Graduates' educational and working career histories were two of the most important items included in the CHEERS data. My study gradually assumed the theme of the "atypical modes of higher education participation" that I thought could combine both my methodological interest and ambitions in higher education policy. This particular theme is very much on the agenda in the present higher education studies. My comprehension was that the data at hand should make it possible to develop novel and European-wide approaches to this theme.

Undoubtedly one important reason for the atypical participation becoming the central theme of the study was my still fresh experiences of the student life as a sociology major at the University of Turku. According to my experiences, atypical participation—especially in the form of the time to complete one's degree becoming prolonged—was a too common phenomenon in order to deserve the notion of "atypical". As a matter of fact, the terms atypical participation and non-traditional student were seldom used in the Finnish discussion. Hardly any Finnish higher education student having a couple of gap years before the beginning of one's studies thought he/she was by any means atypical; if anything, it was just the opposite. It seemed to me that not more than half of my fellow students had begun their studies immediately after completing an upper-secondary degree.

Gap years between the end of upper secondary school and the beginning of higher education were not only due to completing one's military or civilian service; many people just wanted to have some time off to ponder one's future career choices. Many people have had a gap year(s) because they didn't pass the entry exam with the first attempt, or their upper-secondary grades weren't good enough in order to be admitted despite the poor success on the entry exam. Paradoxically, some people were enrolled in sociology only because they hadn't been accepted to a program of their primary wish, into which they were trying to gain access again in the next year. Some

students had already taken courses in the Open University or had a vocational higher education degree. Prior educational achievements as well as current academic ambitions of my fellow students varied to a great extent.

Another matter was that a number of my fellow students worked while studying – or studied while working – despite being enrolled as full-time students. Not all student employment was in fast-food restaurants, etc.; some of the jobs would have suited well to a graduate with a master's degree. On the whole, the university didn't measure up to be the kind of academe that I had imagined it would be. To be precise, it was that only to some.

My impression was that public discussions about the requirements of working life were reflected in the students' behaviour to a great extent. The idea that everyone should be able to market oneself was placed in students' minds and many students in sociology tried to build their profiles as experts of a certain special skill. Toughness of competition became clear to us when the search for internship opportunities began during the final years of one's studies. Most students in sociology had to spend a relatively long time in finding an internship position, and in some cases the shortage of open places threatened to postpone one's graduation.<sup>1</sup> Instead of having internship positions to offer for every student, not to mention jobs for every graduate, the university career services emphasized students' own activity and responsibility and assisted people in developing personal job search strategies. Indeed, the process of establishing oneself on the labour markets turned out to be more complex and definitely a more insecure process than the process of getting through exams and earning the degree.

The previously described experiences are entirely subjective and possibly mixed with my later experiences as a researcher of this particular subject. I do not by any means assume that all of my fellow students in sociology in the class of 1996, not to mention students in other fields, had the same experiences as I did about the student-life and the process of establishing oneself in the working life. Experiences of the students in professional study programs, especially in programs of which there was

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<sup>1</sup> Completing internship lasting about three months in a job matching one's study program was, and still is, a compulsory part of a social sciences degree in the Finnish universities.

unsatisfied demand on the labour markets, were certainly different from that of the sociologist. There is also no reason to underestimate employability of the sociology graduates. When reviewing the employment situations of my former student colleagues some five years since we graduated (some ten years since we began our studies), certainly most of them have found an employment matching the degree. However, the problem seems to be that not many of us have found a permanent employment; rather, we have had to be satisfied with project works and fixed term contracts. Although people tend to be adaptable, some of my former student colleagues undoubtedly are disappointed with the education they received because they have not yet reached an occupational position or wages that they wished for when they entered the university.

However slanted my recollections of the student life some five to ten years ago may be, the fact remains that the issues I discussed above were very much on the agenda in the Finnish higher education policy. Typical for this discussion was concern about the delay in the beginning of studies as well as the extended duration of studies. Also the need to promote graduate employability and the concern about over-supply of graduates in certain fields were major issues in the Finnish discussion. A number of policies were suggested in order to deal with these issues. From a student's point of view, these suggestions appeared to emphasize a person's own responsibility in finishing one's degree in time and making oneself appealing to recruiters. These suggestions simply offered more of a stick than a carrot. In this respect, almost nothing seems to have changed during the past ten years.

The freshness of my own experiences guided me to examine the experiences of students in other European countries. Were they similar or different in comparison to those of the Finnish students? During the early phases of my study, I was preoccupied with putting the ongoing Finnish policy discussion into a wider European perspective: I attempted to review critically the Finnish policy suggestions that seemed to be, to my mind, often too simplistic. Although I later focused on comparing the countries included in the CHEERS data on equal basis and not specifically from the Finnish point of view, this critical though constructive view on the Finnish discussion is certainly visible throughout my work.

This preface has been a short and selected description of the process that produced this doctoral thesis. Thus far I have not given any acknowledgements to the persons who contributed to my work and made it altogether possible. I want to thank Professor Osmo Kivinen (Research Unit for the Sociology of Education at the University of Turku), who guided my work during its early phases and offered opinions and advice. The most significant feedback that I received was obviously from the editors and anonymous referees of the various journals to which I offered my manuscripts. I wish to thank Professor Seppo Pöntinen (Department of Sociology at the University of Turku) for his helpful comments regarding an article published in the *Sosiologia*.<sup>2</sup> Because this article in question is a methodological demonstration, it differs significantly from the rest of the articles, which are concerned with higher education policy. In addition, that article is available only in Finnish. Because of the above reasons, that article is not included in this doctoral thesis but it nonetheless had significant importance for the progression of my work and completion of the rest of the articles.

I also thank the financiers of my work, The Ministry of Education as the financier of the FINHERT graduate school and the following foundation for a personal grant: *Apteekkari Wäinö Edward Miettisen stipendiraasto*. Finally, I have used professional help in proofreading and stylization of the texts included in this thesis; however, responsibility for the final form of the language is mine only.

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<sup>2</sup> “Statussekvenssien vertaaminen toisiinsa: optimal matching –analyysi yhdeksän Euroopan maan maisterien työmarkkinahistorioista” (“Comparing Status Sequences: Optimal Matching Analysis of the Labour Market Histories of People with Masters’ Degree in Nine European Countries”). *Sosiologia*, 2004, 41 (3), pp. 195–211.

## 1. Introduction to the “school-to-work” agenda

Although the “transition” is an established concept when discussing the process during which young people join working life at the end of educational participation, it is a more recent development to refer to this concept within an independent research agenda. Besides this study belongs to the field of higher education studies, it can be equally well identified with the research and policy agenda dealing with the education-to-work transitions of youth. This study defines the subject and research tasks of the “school-to-work” agenda as Paul Ryan (2001) defined them in his review of the cross-national differences in the education-to-work transitions, including all relevant OECD-studies. Ryan defines the concept of transition and the respective research agenda in the following way (2001, 34–35; capitalized in original):

THE CONCEPT of the school-to-work transition is a recent development, associated with change, waiting and uncertainty. The route from schooling to employment is often depicted nowadays as long and perilous, unlike the short and direct routes presumed available to previous generations – as if Powell’s expedition on the Colorado River were to replace a ride on the Staten Island ferry...The School-to-work agenda embraces many long-standing issues concerning schooling, employment, and training. Does unemployment damage young people? Do subminimum wages increase youth employment and training? Is vocational education economically beneficial? Do internal labor markets make it hard for young people to find work? These issues are considered nowadays as part of a single process, the school-to-work transition, defined typically as the period between the end of compulsory schooling and the attainment of full-time, stable employment.<sup>3</sup>

Ryan’s study considers only people without a post secondary education, not higher education graduates. Nevertheless, all the assertions made by Ryan are also suitable for depicting the experiences of highly educated people. As a matter of fact, one important aim for this study is to discuss how higher

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<sup>3</sup> Ryan cites herein OECD 1996 and 1998.

education policy studies and the general school-to-work agenda are connected to each other.

The starting point to any transition research is defining who are the people supposed to be in the “transition” and when and how does the “transition” end. There are two basic approaches (Marchand 1999, 331). First, one can analyse the employability of people of a certain age at the time of the survey. “Young people” are most often defined as persons aged 15-24; respectively, persons 25 or older who participate in education are considered “mature” or “adult” students. However, it has become a standard assumption for the school-to-work agenda that these kind of fixed definitions of youth no longer reflect real-life situations: nowadays, the moment when youth ends and the period of stable working career begin varies significantly. The second way is to classify (young) people according to the length of time elapsed between finishing compulsory education and entering the labour market, i.e., according to length of the individual transition process. The difficulty related to this type of analysis is how to define the point of initial entry on the labour market, or the beginning of a stable career, as in the case of young people who study and work simultaneously or who return to their studies from the labour market (ibid.; see also Kerckhoff 2000, 465–7).

In sociological life-course (or life-cycle) studies, the concept of transition refers to any change in a social role or from one phase of life to another (e.g., George 1993). For example, important changes in a young person’s life include moving to independent housing away from the parental home, starting a family, participating in education, and establishing oneself in the labour market. Sociological life-course studies are of great importance for the general school-to-work agenda: becoming a student to later leave this role and assume working life-related roles are undoubtedly crucial phases in any young person’s life. The importance of life-course studies for the school-to-work agenda will likely increase in the future as traditional modes of educational participation lose their significance, and young people assume new education and working life-related roles.

In recent sociological studies, much emphasis has been placed on overlapping and simultaneous participation in education and working life, as well as on the substantial variation between individuals in the duration and

outcomes of the transitions. Analysis of early career patterns and categorization of the individual transitions have become important and also quite difficult empirical research tasks (e.g., Scherer 2001). Studies dealing with the first labour market experiences of youth are sometimes described as the “early career studies,” and the “transition process” is respectively described as the “early career trajectory.” However, in most cases, the concepts of the transition and the transition process could be used equally.

An important theme for transition studies is the predictability versus the unpredictability of the transitions’ outcomes: one can discuss determinist and chaotic dynamics of transitions (Tchiboza 2002; 2004). If the transition dynamics are fully determinist, then the initial conditions (e.g., class origin, gender, possessed qualifications, and type of educational institution) perfectly determine a person’s future vocational position. Conversely, if the dynamics are fully chaotic, then the initial conditions do not in any way predict where a person will be positioned in the labour market. The extent to which the initial conditions predict the outcomes is a very important matter regarding the usefulness of *individual transition strategies*. Determination of the initial conditions implies that for individual A wishing to reach the same vocational position as individual B, it will prove to be beneficial to seek to place him/herself in the same initial and training conditions as individual B (Tchiboza 2004, 93).

The extent to which the initial conditions determine a person’s future socio-economic status, especially the importance of educational attainments in relation to class origin, is the major theme in the sociological research traditions of stratification and status attainment (e.g., Colbjørnsen 1986; Granovetter 1981; Bourdieu & Passeron 1977). However, researchers who can be considered to be representatives of these traditions do not likely regard themselves as “transition researchers.” This is especially true in the case when transition research is associated with the OECD agenda and related studies.<sup>4</sup>

The school-to-work agenda is fundamentally involved with cross-national comparisons. A general starting point for comparative transition

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<sup>4</sup> This is not to say that Bourdieu, for example, was unimportant for the studies of youth transitions. Just the opposite is true. The importance of Bourdieu’s different types of capitals as explanatory factors of a person’s success in education and the labour market cannot be overstated.



studies is connecting variation at the institutional level with variation in the patterns of the individual transition processes and their outcomes. In essence, this means that the characteristics of the educational and labour market institutions are used when explaining why the characteristics of people's education and employment histories vary systematically between countries (e.g., Kerckhoff 2000; Hannan, Raffe & Smyth 1996). The cross-national transition studies actually have a lot of common with the benchmarking analysis.<sup>5</sup> This is especially true when it comes to the studies which can be associated with the OECD agenda. These kinds of studies are typically policy-oriented and they strive to identify the "best practices" to support the youth transitions, as well as discuss to what extent these "best practices" are transferable between countries. This does not imply that the transition studies did not include many other kinds of studies besides that of the OECD, which are studies that are concerned with issues other than the efficiency of a national education/training system with respect to supporting the youth transitions. However, when it comes to the studies which focus on the question how to support the youth transitions, cross-country comparisons have proven to be indispensable when evaluating the performance and functioning of institutions that are involved with the youth transitions.<sup>6</sup>

Although the subject and the basic concepts are the same for all transition studies, the transition agenda does not have a universally applicable theoretical or methodological framework. All of the different theories that have something to do with educational achievements and labour market success can be, and indeed have been, applied as a framework for transition research. A transition research is arguably most fruitful when it discusses the functioning of the education/training system and the labour market institutions on an equal basis without overemphasizing the importance of one over the

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<sup>5</sup> A Dictionary of Business (Law 2006) defines "benchmarking" in the following way: "The process of identifying the best practice in relation to products and processes, both within an industry and outside it, with the object of using this as a guide and reference point for improving the practice of one's own organization".

<sup>6</sup> There are both internal and external views on higher education which emphasize the importance of cross-country comparisons. For the internal views, see, e.g., Clark (1983). One important external view is that higher education can be viewed as an industry and the industrial sociology's viewpoint is precisely that the functioning of production institutions can be fully understood only in comparative studies (e.g., Streeck 1992).

other. A case in point is the study by Rosenbaum, Kariya, Settersten and Maier (1990) in which they considered four different labour market theories (i.e., the segmented labour market theory, the human capital theory, the signalling theory and the network theory) when depicting national logics of youth transitions. Rosenbaum et al. discussed the four different labour market theories in relation to each other and also in relation to cross-national differences in the characteristics of the education/training systems. As Rosenbaum et al. emphasized (*ibid.*), any single theory has problems in conceptualizing the reasons for problems in the school-to-work transitions.

The importance of transitions has also grown substantially for the field of higher education studies during the past few decades. Transition has become one of the most important topics for the study of the relationship between higher education and the world of work (Teichler 1999; 1998). All of the above discussions on the transition studies, comparative or not, also applies in the field of higher studies. The importance of (comparative) transition studies for this field is reflected in the great number of (internationally standardized) graduate surveys annually collected all over Europe. The cross-national comparisons of transitions have become quite fruitful as well for the higher education researchers, of which this study is an example. Two matters can be highlighted regarding the connections between the school-to-work agenda and the field of the higher education studies.

First, the student career has become a foundational research subject for present higher education studies. The prevailing understanding is that variation in student careers has proliferated substantially during the past few decades, and even more variation will occur in the future as participation rates continue to rise from their already high levels and the importance of life-long learning grows. Researchers have exhibited interest not only in the increasing variation in the patterns of higher education-to-work transitions, but also in the more difficult and prolonged process for school-to-higher education transition for a substantial share of degree candidates.

Second, the issue of the determinist versus chaotic transition dynamics plays an important meaning in relation to policy implications. The transition from higher education to employment may be seen as a mirror image of the relationship between higher education and the world of work.

When discussed from this point of view, the transition process is the moment of truth with respect to the relevance of higher education. The smoothness of the transitions and the quality of their outcomes can be considered as a direct *reflection* of the demand for degrees, as well as the skills labour markets expect graduates to have (Teichler 1998). Therefore, the determination of the transitions' initial conditions, especially when it comes to the field of degree and the type of institution, reflects the quality of higher education. The more that a degree guarantees a certain (high) position in the labour market, the more relevant is the teaching provided by the system with respect to the requirements of the working life.

Another view is that the transitions hold a position of relative *autonomy* in the overall set of relationships linking higher education and employment (Teichler 1998). According to Ulrich Teichler (*ibid.*, 529), proponents of this second view tend to consider the transition process "as a mixture of coincidences and ways of seizing the 'right' occasion." This kind of the "autonomic view" is similar to the "chaotic dynamics" that were discussed earlier because they both emphasize the intermediary and redistributive functions that the transitions serve.

The reflection and autonomic (or determinist and chaotic) views should be perceived as extremes of the continuum between which there are many intermediate views. Actually, both of these views are present in most of the studies, although one or the other would get most of the emphasis. According to Teichler (1998, 539), those who consider immediate outcomes of the transitions as a major indicator of the relationship between education and employment also realize that graduates can make poor decisions and that employers have difficulties in specifying their demand and competences required of the job searchers. However, researchers who are proponents of the reflective (determinist) view are more likely to focus on the match between the supply of and the demand for higher education than proponents of the autonomic (chaotic) view (*ibid.*).

In conclusion, studies of education-to-employment transitions of youth constitute an eclectic and multidisciplinary research and policy agenda, the importance of which can not be overstated. From its very basis, the transitions agenda is a problem-solving oriented agenda striving for policy

suggestions. However, the exact definition of the contents and purposes of this agenda is difficult to elucidate because the transition from education to employment is a topic filled with subtleties and nuances. The transitions agenda should not be equated with the general field of unemployment studies; the transitions agenda focuses specifically on the match between initial education and employment and less on the general causes of unemployment in society. Nevertheless, the distinction between transition and unemployment studies is quite arbitrary. Unemployment spells during early career phases is a foundational topic for both of these fields or agendas.

Regarding studies of higher education-to-employment transitions, the most influential framework has arguably been the human capital theory, although this theory is often reviewed with criticism and is supplemented to a great extent. In accordance with the human capital theory, individual decision to participate in higher education is generally considered to be an investment in skills and individual employability. Respectively, the outcomes of the transitions are assumed to be determined by the existing demand for different skills in the labour markets. Present studies acknowledge that the transitions of highly educated people have become more complex than in prior generations and that job search strategies play a significant and also quite autonomic role in the process of becoming recruited. A general understanding is that a degree opens gates on the labour markets but does not necessarily guarantee a good job, which leaves a lot of room for the kind of individual strategic behaviour that does not rely on the degree itself but also seizes occasions. Eclecticism, the human capital theory (or the “human capital thinking” when defined in more loose terms), and the attempt for policy suggestions are also the starting points of this study.

## 2. Introduction to the research setting and aims of the study

In this chapter, I review the starting points and aims of the three articles included in this doctoral thesis and introduce the CHEERS data on which the empirical analysis of the articles is based. Chapter 3 is a general review of the themes and concepts related to higher education participation and graduate employment. Chapter 4 presents a framework of the relationship between higher education and the world of work. The focus of the framework is the competition for the good jobs among different kinds of higher education participants. Chapter 4 also discusses the policy implications of supporting the initial higher education-to-work transitions of youth. The final chapter (Chapter 5) includes summaries of the articles and a discussion of the main conclusions and policy suggestions. Appendices A and B provide background information on the different national higher education systems considered in the articles. Appendix C presents the articles in their entirety.

### Comparative framework and subject of the study

The subject for this study is the school-via higher education-to work transition or the relationship between higher education and the world of work from the vantage point of the individual transition process. Thus, discussion of the relationship between higher education and work is based on how individuals make use of the higher education system in the course of their education-to-work transitions in different countries. When depicting how individuals use higher education provisions, this study relies on empirical analysis of an international graduate survey data, i.e., the CHEERS data. However, the central interest for this study is precisely the relationship between higher education and the world of work from a comparative perspective and not one

based on the individual behaviour or the determinants of individual labour market success in themselves.

Although all three articles included in this thesis use the same data and share the same research subject, each one applies somewhat different methods and research designs. Despite the differences in the research designs, however, the key concepts and assumptions about the relationship between higher education and labour markets are the same. Although I discuss, in the following, the “general framework of the study,” the starting points of the articles do not constitute an exact framework; rather, they provide general concepts and assumptions regarding the central themes in current transitions and higher education studies. These preliminary ideas are developed further to become a more theoretical framework that is also, in terms of conceptual and analytical rigour and policy suggestions, the ultimate outcome of this study. Actual starting points of the articles are discussed in the present chapter (i.e., the general or preliminary framework), while the final framework is discussed in Chapter 4. Besides recent comparative transition and higher education studies, including the three articles included in this study, the final framework was greatly influenced by the emerging field of the political economy of skills production and graduate employability.<sup>7</sup>

Central concepts and assumptions that serve as guidelines for the research designs of the articles are the following:

- Growing importance of “multi-country approach” in cross-country research;
- General framework of education-to-work transitions and related general concepts such as interaction between individual and environmental factors;
- “Strategic” actions of higher education participants and the discussion of different types of students in current higher education research literature.

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<sup>7</sup> With respect to the political economy of higher education, important models for this study are the studies by Brown, Green, & Lauder (2001) and Brown & Hesketh (2004).

*The "Multi-country approach"* can be understood as the opposite of the selection of countries on theoretical grounds.<sup>8</sup> In comparative transition studies, countries to be subjects of the study are often selected because they represent different transition regimes, i.e., distinctive ways in which education systems and labour markets are organized nationally (in this respect, the comparative transitions studies have an interest in common with comparative studies of welfare regimes). (See, e.g., Breen 2005; Gangl 2003; Sackmann 2001; Marchand 1999). An established branch of comparative transition studies selects countries based on which combinations of occupation specificity of education system and the degree of labour market regulation they represent (e.g., Scherer 2005; Allmendinger 1989).

The second method of selecting countries for a comparative transitions study is the "multi-country approach" applied in this study. This is used to keep selection criteria at the minimum and to basically include as many countries as is feasible to discuss within the limits of a single study. This method of discussing a multitude of countries is gaining more popularity and is a major trend for European transition studies. This is a direct result of the European Union organizing and financing research projects to collect comparable data from its member countries (such as the CHEERS data). Growing interest of the EU in data collecting reflects its need to obtain information for policy making and evaluations. However, comparable data sets serve not only the needs of policy makers, but also researchers to whom they provide an understanding of specific social phenomena in different

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<sup>8</sup> Cf. Kohn's (1987) "nation as object of study" that is one of four major types of cross-national research, the other three being "context of study," "unit of analysis," and "transnational." In Kohn's four-fold classification, "nation as object of study" refers to the type of cross-national research in which the primary interest lies in nations themselves or in a particular institution such as the education system. The "Multi-country approach" is similar to Kohn's "nation as object of study" in that in this type of cross-country comparison, countries are not chosen because they happen to be useful settings for pursuing some general hypothesis, but because they are interesting for their own sakes (ibid., p. 714). The multi-country approach, as it is discussed in this study, takes objectification of nations to the extreme, in that the number of countries included in the research setting is appreciated over breadth of information on any specific country (i.e., width of information is appreciated over its depth). Like the four types of cross-national research in Kohn's classification, the multi-country approach is an ideal type; most studies involve characteristics of other ideal types as well.

countries, as well as how these same social phenomena might manifest themselves in different contexts.<sup>9</sup>

Most studies and research projects are subject to a trade-off between the number of countries included in the research setting and the extent to which it is possible to contextualize (or theorize) the results of the analysis. Obviously, this is mainly the case for individual-level analysis. For standard methods of macro-level analysis (i.e., for studies in which country is the unit of analysis), increasing the number of countries should not pose any problems. The multi-country approach, combined with individual-level data sets, typically—though not inevitably—leads to an explorative or descriptive research design. The trade-off relationship between number of countries and details of contextualization is most evident when data sets from different countries are analysed independently (i.e., the research setting is composed of multiple analogous country-specific individual-level analyses). In this type of cross-country analysis, contextualization takes place by interpreting and discussing observed differences between countries: contextualization is not methodologically incorporated into the analysis in that data sets are analyzed

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<sup>9</sup> I take here the existence of the CHEERS data and other internationally comparable survey data (e.g., Euromodule, European Social Survey, European Community Household Panel, EU Labour Force Surveys, REFLEX) as evidence of increase in the number studies and research projects involving multiple countries, and thereby, as evidence of increasing popularity of the multi-country approach. Evidently, most studies that discuss multiple countries and in which the “nation is the object of the study” (cf. Kohn 1987) are concerned with how nations succeed in global competition. The OECD and EU statistics dealing with, for example, economic productivity and technological innovations of nations, as well as their citizens’ higher education attainments, are so numerous that the importance of multi-country comparisons, and public interest in them, can be taken for granted. The importance of the multi-country approach in terms of theory of social sciences in general, and theory and practice of cross-country research in particular, cannot be addressed within the limits of this study. However, the present cross-country research clearly indicates that it is considered important to design research settings in a way that utilizes the new multi-country EU data in their entirety. Excellent examples of studies analysing multi-country individual-level data can be found in the *European Sociological Review*, which is considered “the leading social science journal in the area of empirical, quantitative and comparative studies” (Karl Ulrich Mayer). It is important to bear in mind, though, that to include multiple countries in a research setting often leads to pursuing some general hypothesis instead of the multi-country comparison that is considered important in itself, and often these two dimensions or purposes cannot be meaningfully separated from each other.



separately (this is especially the case with regression analysis; see, e.g., Delhey & Kohler 2006; Scherer 2005).

Naturally, various alternative methods of analyzing comparative data sets are available besides the method of repeating the same (individual-level) analysis country by country. For example, macro level data could be composed out of the country-specific data sets by aggregating or averaging individual-level information. The easiest method is to conduct analysis of multiple data sets at the level of indicators and descriptive statistics. A totally different approach is to combine all country-specific data sets into unified data and bring contextualization directly into individual-level analysis. In this case, contextual differences between countries are controlled with direct measures (i.e., macro level variables) of relevant environmental factors (with respect to regression analysis, the term often applied is multi-level analysis) (see, e.g., Gangl 2003; Wolbers 2003). This approach obviously requires that the data sets from different countries are truly comparable in terms of information and sampling methods; however, such a requirement should not pose any problems for the present pan-European survey data (such as the CHEERS). Comprehensive studies apply both the strategy of repeating analysis country by country and the method of incorporating direct measures of environmental variations into aggregated individual-level data that is comprised of individuals from various countries (see, e.g., Härkönen & Dronkers 2006).

It is important to notice that even if no theoretical criteria were applied when initially choosing countries for further analysis, the analysis itself may pursue theoretical hypotheses or establish general relationships. Although I discuss the multi-country approach as an ideal method of choosing countries that applies to any kind of cross-country research, this concept is most appropriate for research designs involving comparable individual-level (survey) data from multiple countries. With analysis of this type of data, research design is inevitably subject to the choice of either discussing a multitude of countries and focusing less on contextual differences between them (in this case, contextual differences are often standardised methodologically/analytically), or making contextual differences the primary interest by focusing on only a few selected countries. Because each national

education system is a special case and thereby is interesting in itself, the trade-off between number of countries included in the research setting and detail of contextualization is an especially delicate matter precisely for the transition studies; however, it undoubtedly applies to other types of cross-national research as well.<sup>10</sup>

Besides multi-country studies, the research designs of all three articles can largely be described as explorative or descriptive. No article discusses all twelve countries included in the CHEERS data; however, selection criteria of the countries and target group of the study are discussed later in this chapter. Their research designs are based on loosely defined conceptions about the reasons for variation between countries in typical higher education-to work transitions and their outcomes. This implies that methodologically, the focus is on describing rather than explaining or contextualizing between-country variation; these processes, however, cannot be completely separated from each other.

All of the articles are independent studies that include their own introductions to a corresponding research design. Therefore, there is no need to introduce the articles in detail. In brief, considering the above discussed alternative methods of cross-country research, Article I differs from the other two in that the analysis is based solely on indicators; i.e., it is an indicator-level study, while the other two are individual level studies. When it comes to indicators discussed in Article I, important points of comparison are the indicators used in OECD-statistics (OECD indicators are discussed in Appendix B). Articles II and III are based on individual level regression models. In Article II, data sets from different countries are combined into a single data set, while Article III applies the method of repeating analysis separately to all the country-specific data sets. As is clear based on the above discussion, the challenge of contextualizing findings of the study is greatest in the type of research design applied in Article III.<sup>11</sup>

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<sup>10</sup> Besides for “multi-country studies”, the CHEERS data has been used for single-country studies as well (see, e.g., Allen & van der Velden 2001; Hejke, Meng & Ramaekers 2003; notice that both of these studies are referred to in Chapter 3).

<sup>11</sup> Although all of the articles apply the multi-country approach when choosing countries, there are considerable differences among them. In brief, when applying Kohn’s (1987) classification, Article I applies “nation as unit of study” type of

*General framework of education-to-work transitions.* One highly influential conceptual framework of education-to-work transitions, a standard for the comparative studies, is the one by Hannan, Raffe, and Smyth (1996). According to Hannan et al. (ibid., 2):

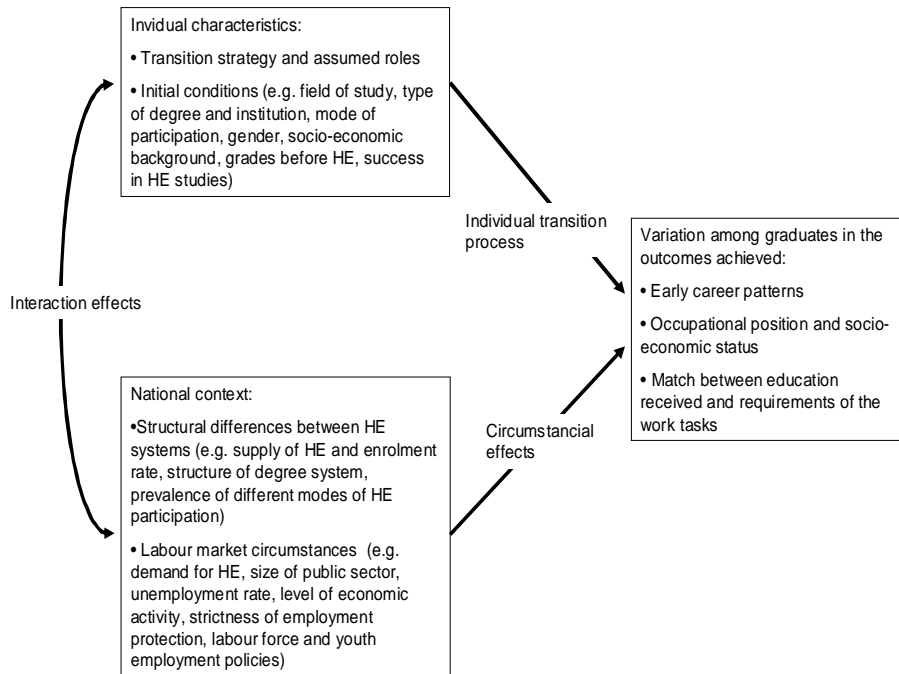
There are four general dimensions of a conceptual framework for school to work transitions that need to be taken into account in cross-national studies: the national context; the nature of the education/training system in each country and its interconnections with the labour market, as well as state policies influencing these processes; the structure of the school to work transition process itself; and the outcomes of the transition process – “success” and “failure” in transitions, and variations among groups of young people in the outcomes achieved.

It would be easy to list several subtitles under each of the four main dimensions, as Hannan et al. (ibid.) indeed do, as well as numerous possibilities as to how these dimensions could be operationalized in an empirical study. The manner in which these dimensions are operationalized in this study is depicted in Figure 1, which represents the general framework of the study that is in the background of all the articles.<sup>12</sup> The framework is a more general framework of the relationship between higher education and work than any presented in the articles. Nevertheless, all elements included in the framework are present in each of the articles, although not all of them can be addressed explicitly.

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analysis, meaning that it seeks to establish relationships among characteristics of nations; i.e., countries are classified according to characteristics of the graduate population. Articles II and III focus largely on how general certain types of individual behaviour are in different contexts. Thus, when applying Kohn’s (ibid.) classification, Articles II and III can be characterized as “nation as context” cross-national research.

<sup>12</sup> Notice that the framework includes all four dimensions suggested by Hannan et al. (1996), though not all of them have their own boxes (Figure 1).



**Figure 1.** *General framework of the study (“HE” stands for higher education).*

In the framework depicted in Figure 1, the individual transition process is perceived as a unidirectional process in which participation in education and working life are consecutive and distinct phases. This two-stage model of transition implies that the actual obtaining of the degree is also the moment when emphasis of participation shifts from education to working life. Therefore, the basis of the framework is the assumption that the transition from higher education to working life is also a person’s initial transition. Defined more precisely, the framework assumes that graduates and non-graduates do not compete for the same jobs and, in order to enter the graduate labour markets, one has to earn a degree. This kind of approach arguably still dominates in studies of higher education to work transitions, despite recent concerns as to its validity. As adult participation increases and youth transitions become more complex and prolonged, graduation is evidently losing its status as the marker for the beginning of a (stable) working career.

Additionally, the borderline between the graduate and non-graduate labour markets is becoming more blurred as a great share of graduates have to be satisfied with jobs previously occupied by non-graduates.

Although the two-stage model—graduating first and establishing oneself on the labour market next—undoubtedly has its limitations, it nevertheless is the most reasonable approach that can be applied to any data comprising only graduates. Adopting this approach does not imply that this study ignores the variation between individuals in the transition patterns; on the contrary, this is precisely one of the major themes presented. However, the research setting is such that participation in the work force before completing a degree, as well as educational attainments before higher education, can not be discussed on their own terms. Rather, they are considered in relation to other factors underlying a person's success in the graduate labour market. To put it slightly differently, all of a person's educational attainments and work experience are considered in relation to the moment of getting the degree. That is, they are considered in relation to what kind of a role they play in the competition for good jobs against other graduates of the same year. Accordingly, post graduate study is considered one possible outcome of the transition process and career pattern for a graduate. In any case, one can argue that the most important questions for higher education studies have to do with the significance that the graduation has for a person's future career. This holds true regardless of whether or not the initial transition from education to employment occurs before graduation.

In the framework of the study (see Figure 1), the contextual differences between countries also divided into two components, viz. labour market circumstances and structural differences between higher education systems. Labour market conditions and functioning of labour market institutions are less interesting by themselves. Rather, they are considered precisely as circumstantial factors, the effects of which we attempt to standardize. The labour market conditions comprise all the relevant factors that relate to graduate employment, such as: supply of and demand for labour, level of economic activity, functioning of the labour market institutions, labour force and youth employment policies, employment protection legislation, and sectoral divisions in the labour markets. The higher education

context comprises structural differences between the systems as well as differences in the national policy framework. For example, these differences involve the structure of the degree system, sectoral divisions within the higher education system, enrolment rate, and composition of the student population. Cross-national differences take into account how the supply of higher education is determined and how great the demand for graduates is locally.

The educational/labour market context has a direct circumstantial effect on the individual transitions and their outcomes, but there is also an interaction effect between context and individual (strategic) behaviour. In Figure 1, this interaction effect is depicted with a bidirectional arrow. The reasoning that macro-level and micro-level are intertwined is at the very core of transition research. Comparative studies of the education to work transitions are founded on the general conception that a collective environment—institutions and material conditions—provides incentives, constraints, and alternatives to individual actors and shapes their choices and actions. However, at the same time, people’s choices and actions shape their collective environment (Allmendinger 1989).<sup>13</sup> According to Allmendinger (1989, 231–2, italicized in original):

...(A)ny analysis of the relationship between educational attainment and mobility patterns that does not take account of the educational environment is almost certain to be misleading. Educational opportunities, and the specific structures of education systems, are as consequential for mobility in labor markets as are the attributes of the individuals who make careers in those markets. The conceptual and empirical challenge is to understand how individual and environmental factors *interactively* affect mobility process.

This study discusses “transition patterns” rather than “mobility patterns,” though in essence these concepts are identical. Interaction between micro-level and macro-level takes into account how the higher education system

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<sup>13</sup> This idea of the macro-micro-macro linkages is a classic topic for sociology as a discipline. Going through the classics herein is, nonetheless, unnecessary and also beyond the scope of this study. Arguably, theory formation for the transitions agenda is based, for the most part, on the results of empirical transition studies and cumulative knowledge of the linkages between education systems and labour market institutions. The transitions agenda is by definition an obvious example of Gibbons et al.’s (1994) “mode 2 knowledge production”.

provides incentives and alternatives to the individual action. Equal emphasis is placed on the ways in which students and graduates make use of the effects on the system's functioning. John Brennan, Maurice Kogan, and Ulrich Teicler (1996, 2) express the issue in their conceptual framework of the relationship between higher education and employment: ..."(I)t must always be remembered that higher education is not directly relevant to employment through the kind of education and training it provides, but through the ways students make use of these educational provisions."

In the framework of this study, the labour market context has a unidirectional circumstantial effect on the outcomes of the transitions, while the effect of the higher education system is perceived more as a two-way interaction between the system and the individuals making use of the system. This approach is not without its shortcomings. The functioning of both the labour markets and the education system have adapted to each other in the course of the shared evolution process (e.g., Hannan et al. 1996; Rosenbaum et al. 1990). Connections between the education system and labour market institutions should be taken into consideration in comparative higher education studies. This is especially true when considering the widely recognized fact that adaptation to growing participation rates is a wide-ranging societal process. Hence, to consider individual and environmental interactions more in relation to functioning of the higher education system and less in relation to functioning of the labour markets is a simplification. Nevertheless, to take into consideration all relevant interactions simultaneously is certainly impossible without standardizing some of their effects.<sup>14</sup>

*Strategic actions of higher education participants.* In Figure 1, the individual characteristics are also divided into two components: initial conditions and transition strategy. An important aspect of a transition strategy

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<sup>14</sup> With respect to limiting the scope of the comparative research setting, education-to-employment transitions are directly linked to other changes in a (young) person's life-course. However, as Karl Ulrich Mayer (1997) states, to consider all the different phases and changes in a person's life-course in a comparative study is a vastly complicated task and hardly worth trying for in a comparison of as many as nine countries. Therefore, this study focuses strictly on higher education participation and transition to working life and does not consider other life-course transitions. Obviously, this decision is influenced by the nature of the CHEERS data.

is the roles that the agent of the transition is willing to assume during the process. One kind of strategic role discussed often in this study is the role of a “student worker”. The concept of strategic behaviour is nevertheless broader than the concept of role. This study addresses strategic behaviour in the same manner as Tchibozo (2002) discusses in his conceptual framework of education-to work transitions. Tchibozo (*ibid.*, 337-8, italicised in original) defines the “strategic approach” in the following way:

...*(S)trategic* approach is that the school-to-work transition process is largely explained by people’s decisions. In the strategic approach, the whole transitional process can be analysed as the expression of intentional choices of the agent. School-to-work transition constitutes then an organised process conducted by the agent in order to have access to a job. The behaviour of the agent is strategic in the sense that the agent has to adapt to the behaviours of other agents. There is obviously an element of market adaptation in these decisions: people looking for employment have to take into account the behaviours of employers, of other candidates for employment, of the public authorities, of labour market intermediaries, and of unions. The agent has to be able to select the solutions that he/she thinks to be the best, given the limited information at his/her disposal in a context of complexity and uncertainty. The agent has to be able to plan, and to adjust to new conditions as to the unforeseen. However, the strategic approach does not assume that the agent is omnipotent, omniscient, or infallible. Nor does it assume that the agent is isolated: the choices of a person are necessarily influenced by this person’s own social history and environment.

Some of the transition’s initial conditions are the result of subjectively rational choices. For example, a person has much freedom of choice regarding the field of studies, the institution, and the mode of participation. Some other initial conditions are unchangeable, such as gender and the class origin. The main interest of this study lies in conditions subject to individual influence. In many cases, though, it undoubtedly is difficult to make a distinction between a changeable and unchangeable condition. Individual transition strategy includes a number of issues ranging from the application decision, to decisions dealing with the change of program, working while studying, and making up a job search strategy. A fundamental question is to what extent variation between individuals in the transition patterns and their outcomes is



the result of subjectively rational choices in relation to the determinism of initial conditions and the lack of real possibilities. Accordingly, we must ask to what extent does the relationship between the initial conditions and outcomes of the transition reflect the relevance of higher education in the working life, in relation to the transitions having a relatively autonomic position in the overall setting of linkages between higher education and employment? In any case, the way in which individual strategic behaviour and the initial conditions are intertwined is reflected in the variation of the transition patterns and their outcomes. If a degree's relevance regarding the requirements of working life is low, then arguably other initial conditions besides those related to the degree itself condition the individual strategic choices. (These issues are returned to in Chapters 3 and 4.)

When considering factors underlying individual educational decision-making, the financial expectations are undoubtedly of great importance; however, they can not by any means explain all phenomena related to the transitions. Pivotal matters for a successful transition are, for example, the ability to make independent decisions, family support, and especially subjective knowledge about the functioning of the education system and labour markets. Typical, if not essential, for a transition processes is the re-consideration of the goals and means to reach the goals. As the agent of the transition acquires more information on educational and vocational possibilities, as well as his or her own abilities and preferences, he or she becomes able to make subjectively more rational strategies so that the process leads to a satisfactory vocational position (e.g., Tschibozo 2002).<sup>15</sup>

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<sup>15</sup> This study operates with relatively weak conceptions regarding individual behaviour and decision-making; however, in order to compare as many as nine countries, assumptions about rationales for decision-making of individuals must be kept simplistic. In these respects, the framework of this study is similar to that of other comparative transition studies, such as those by Allmendinger (1989) and Scherer (2005; 2001). The concept of "strategic behaviour" is nevertheless useful in that it is theoretically more rigorous than plain "spontaneous action", yet this concept is simple enough, as it is defined by Tchibozo (2002), that it can be discussed in loosely defined common sense meaning. Actually, in the framework presented in Chapter 4, I also discuss spontaneous actions of the higher education participants in order to emphasize that many of the current phenomena related to higher education-to-work transitions are not the result of planned policies but are rather actions spontaneously adopted by individuals. The concept of strategic behaviour is clearly very similar to that of "rational action." With respect to educational decision-making,

## The CHEERS data and target group of the study

The data used for the study are commonly known as the “CHEERS” or “Careers after Higher Education, A European Research Survey.” The data were collected in 1999 by the European Union organized collaboration project known as the “Higher Education and Graduate Employment in Europe.”<sup>16</sup> The project received part of its funding from the European Commission’s TSER (Targeted Socio-Economic Research) research funds. (For a description of the project and results of national surveys, see the final report by Teichler and Schomburg 2006.)

The data comprise eleven European countries and Japan. The collaboration project had nine original member countries: Italy, Spain, France, Austria, Germany, the Netherlands, the United-Kingdom (including England, Scotland, Wales, and Northern-Ireland), Finland, and Norway. Three other countries joined the project as associate members: Sweden, the Czech Republic, and Japan. The nine actual project members were also members in the European Union. Norway and the Czech Republic—and naturally Japan as well—were outside the EU when the data were collected. The Czech Republic joined the EU in 2004. Norway was, and still is, an EFTA country, making her comparable with EU members.

The data sets from the different countries were merged at the Centre for Research on Higher Education and Work at Kassel University, the coordinating institution of the EU-project, with Professors Ulrich Teichler and Harald Schomburg as the project leaders. The institution collecting the Finnish survey data was the Research Unit for the Sociology of Education (RUSE) at the University of Turku. The RUSE is also the institution where this study was conducted. The data comprise information on altogether 37,000

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applicable frameworks of the rational action theory would be, for example, the ones introduced by Goldthorpe (2000) and Hedström (2005). However, as noted, discussion about the theoretical foundations of individual behaviour, such as those provided by the rational action theory, is beyond the scope of this study.

<sup>16</sup> Notice that the name of the project and the data are not the same. However, there will hardly be any misunderstandings even if one is used instead of the other. The list of publications related to the CHEERS data can be seen in the internet pages of Kassel University.

<[http://www.uni-kassel.de/wz1/TSEREGS/publi\\_e.htm](http://www.uni-kassel.de/wz1/TSEREGS/publi_e.htm)>.

higher education graduates measured with approximately 600 variables. When supplements made to the data in Kassel are taken into account, the data comprise over 1,200 variables.

The research subject is delimited in two important ways; therefore, this study does not use the CHEERS data in its entirety. First, this study comprises only the nine countries which were the original members of the EU-project (Articles I and II consider nine countries and Article III seven). Thus, the Czech Republic, Japan, and Sweden are excluded from the study. The Czech Republic differs from the rest of the countries because it was a transition country replacing a socialist system with a capitalistic one at the time the data were collected. The Czech Republic had therefore its own unique features and problems. Including Czechs into the analysis would complicate analysis without providing much additional value for the study. The same is true of Japan. Sweden is excluded from the analysis mainly because the Swedish data do not include all information available from the nine original member countries of the EU project. The questionnaires of the associate-member countries did not include certain important items concerning a respondent's career before beginning studies at a higher education institution.

Second, this study concerns only university graduates. The university sector was and still is the principal sector of higher education in Europe. In most countries, the so-called second sector or non-university sector institutions have been established alongside the universities. The non-university institutions have typically closer linkages with the working life than do traditional universities. A major interest in higher education studies has been the comparison of graduate employment between the different types of institutions. However, differences between institutions are difficult to handle in cross-national studies for a number of reasons. Vocational and academic higher education are not considered separate sectors everywhere; that blurs borderlines between institutions. Even when considering only countries in which there are two or more separate higher education sectors, there are marked differences in just how distinct institutions from the different sectors actually are. In some countries, the vocationally oriented higher education sector is too recent of a development to include graduates from this sector in

the survey's target population. For example, the Finnish polytechnics (AMK-sector) were just being established at the time the CHEERS data were collected.

The university's status as the principal sector of higher education is reflected in the target population of the CHEERS survey. Appendix A examines national peculiarities of the higher education system and degrees, as well as the coverage of the CHEERS data regarding different types of degrees and institutions. Appendix B discusses differences between the nine countries in terms of the OECD statistics.

The data include information on the survey respondents' educational and work histories lasting from the end of preparation for higher education to three and a half years following graduation. Because all respondents were higher education graduates, the data do not include any information on individuals without a degree. Importantly, this also means that the data do not include any cases in which a person begins but never completes a degree. In other words, the data do not include any "drop outs."

## Aims of the study

In comparative higher education studies, emphasis is on the effects that specific policy actions have on higher education participation and graduate employment, when controlling for the effects of other relevant factors. However, the most important factor providing incentives and constraints on the strategic choices of the agents of the transition is not any particular policy action or characteristic of the system, but other students and graduates. The ways in which other students and graduates make use of the system when trying to establish themselves in the labour market constitutes the most influential collective environment that defines which individual transition strategy has the greatest chance of success. One of the most central aims of this study is simply to analyze the composition of the graduate (and student) population represented in the CHEERS data. Composition of graduate (and student population) is discussed in relation to the following question: what is

the nature of the competition for decent jobs among different types of graduates (and students)? Differences in the labour market success between different types of participants is a direct reflection of the way the system supports, but also regulates, education-to work transitions. However, this is not an exact representation because this relationship comprises factors besides transitions and graduate employment.

This study considers outcomes of the transitions with three main dimensions: early career patterns (i.e., duration of job search and type of first job-contract); occupation's socio-economic status; and match between received education and work tasks. A major interest involves formulating internationally comparable indicators of graduate employment in the three above mentioned dimensions. The empirical part of this study (i.e., the three articles) does not consider graduate wages, even though this would be another major dimension of a person's labour market success. One important reason for excluding wages from the discussion is that the data comprise only graduates and therefore can not be used for comparing wages between different levels of education. Indeed, the wages of highly educated people are not interesting in themselves, but only in relation to the wages of those without a degree. Wage is also a highly contextual measure of a person's labour market success. Cross-country comparisons of graduate wages are hardly meaningful without considering a wide array of economic circumstances; as noted above, this study focuses mainly on the higher education systems and not on economic circumstances. I do not claim that variation in graduate wages among different types of degrees and fields of study is not an important topic for higher education studies. Rather, my decision to leave aside discussion on wages is largely based on the need to limit the scope of the study.

This study analyzes transition processes in a comprehensive way. A central focus is on variation in participation modes and early career patterns. Variation in participation modes comprises differences between individuals regarding duration of the studies, timing of the studies in relation to the phase of the life-course, and overlap of the studies and other activities (e.g., Schuetze & Slowey 2002). According to Martin Trow (1974, 65), during the era of the "elite universities" (in Europe that era largely came to an end at the

turn of the 1960s), the typical student career was described in the following way: "...(T)he student ordinarily enters directly after completion of secondary schooling; the student is 'in residence' and continues his work uninterrupted (except for holidays) until he gains a degree. He is in this sense 'sponsored' and in competition only for academic honours." This stylized description of the student career is no longer universally applicable. Current studies indicate that the variation among individuals in participation modes has increased substantially, and deviating from the traditional model of the student career has become a norm itself.<sup>17</sup> Students now compete against each other in areas other than academic, and the manner of competition is reflected in the individually varying modes of participation.

Variation among individuals in participation modes is considered a reflection of strategic behaviour adopted by individuals when trying to secure a high position in the labour market. That is, modes of higher education participation are discussed in relation to duration and success of a transition process. As used in this study, the term "mode of participation" refers to the process of earning the degree and activities that take place under the student status. The "transition process" is used as an umbrella concept that includes both the mode of participation, as this term was defined above, and early career phases after completing a degree.

Variation in the participation modes (and transitions) is reflected against the "standard student career" (and "standard transition"). The concept of standard student career refers to the type of traditional student career described above by Martin Trow. Thus, the standard student career could also be considered the "traditional" or "conventional" student career because it refers to the kind of career assumed to be the norm before the massification of higher education and widening of participation took place. The concept of standard transition (or traditional transition) is broader than that of standard student career in that it implies that a person has not only had a standard student career but has also found employment, within a given time, that meets certain standards of appropriateness.

The concepts of standard student career and standard transition are used merely as helpful yardsticks that reflect variation among student (and

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<sup>17</sup> See the reviews by OECD (1999), Teichler (1999) and Wagner (1999).

graduate) populations, and not as normative criteria that every student (and graduate) should fulfil. In brief, the research designs of the articles are such that the countries are not compared directly with each other; instead, comparison is conducted indirectly with the help of universal standards for individual behaviour. The question to what extent the standard student career (and standard transition) is attainable for every higher education participant is analyzed empirically in the articles; the extent to which standard student career is useable for policy making and evaluations is best discussed in Chapter 4.

A basic requirement to any study analysing individual transitions as strategic processes in the above manner is the application of some theoretical framework about the functioning of labour markets. This study discusses the relationship between higher education and labour markets mainly from the point of view of adaptation to changing circumstances. The starting point for the analysis is the fact that the number of people with degrees has increased substantially in Europe during the past few decades, and adaptation to changing circumstances is occurring in both the structures of labour markets and the higher education system.<sup>18</sup> The labour market's adaptation processes are reflected in the human capital theory and queuing models. These theories or models are discussed in more detail in the third chapter. With data comprising as many as nine countries, it is possible to analyze extensively how national characteristics of a higher education system and other environmental factors shape the individual transition process. The research questions and purposes of the study are summarized in Box 1 below.

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<sup>18</sup> See the reviews by Teichler (1999), Trow (1999) and Brennan, Kogan, and Teichler (1996).

**Box 1.** *Research questions and purposes of the study.*

1. What kinds of participation modes and transition processes can be found on the basis of the CHEERS data?
2. How prevalent are the different types of participation modes and the transitions in the nine European countries considered in the study?
3. (a) How is differentiation of the participation modes linked with the segmentation of the labour markets; (b) how influential is the mode of participation regarding a person's labour market success in relation to other individual and contextual factors?
4. How should policy makers react to the assumed increase in the differentiation of the participation modes and their relation to the segmentation of the labour markets?



### 3. Changing rationales for higher education participation and graduate employment

When reviewing the present European higher education research literature, it is impossible not to encounter conclusions about the emergence of a new balance between supply of and demand for higher education, and the resulting increased participation. This new balance is emerging at a time when the European higher education systems are transforming from mass higher education to universal access.<sup>19</sup> The concepts of “supply of” and “demand for” education are analytically inseparable from the human capital theory, as well as from general economic principles such as optimal allocation of resources and maximization of benefits from both the individual’s and society’s point of view. With the term “human capital,” I refer to the canonized textbook definition: human capital is the present discounted value of additional productivity of skilled and qualified people over the productivity of people having lesser skills and qualifications (e.g., Hamermesh & Rees 1984). This definition of human capital and the respective theory were introduced by Gary Becker in the 1960s. In real-life policy making, however, human capital and related concepts are more often than not used in a purposeful manner, disconnectedly from their original (neoclassical) economic rationales.

The present chapter discusses the phenomenon known as the “massification of higher education” from the perspective of how great the supply of and demand for higher education would be if their levels were determined by the economic rationales of the human capital theory. The further the discussion goes, the more I try to acknowledge how the supply of and demand for higher education are determined in reality. In essence, the

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<sup>19</sup> “Mass higher education” is a concept made famous by Martin Trow and OECD. According to Trow (e.g., 1974), development of the higher education system can be divided into three stages: elite university (where less than 15% of the age cohort is enrolled), mass higher education (15% < enrolled < 50%), and universal access to post-secondary education (more than 50% enrolled). A system’s transformation from elite to mass higher education is often known simply as “massification.”

present chapter discusses the political economy of mass higher education. It examines current themes and findings regarding higher education participation and graduate employment from a pan-European viewpoint that should be applicable to any European country with a mass higher education system, excluding the formerly socialist countries. It draws heavily on Ulrich Teichler's work. The final section of this chapter examines in detail Teichler's paradigm proposal, the "highly educated society."

Obviously, many differences exist among the European countries. The following discussion involves many generalizations; thus, this chapter is more a conceptual than an empirical review. Differences between the selected nine European countries should become clear with consideration of the three articles presented in Appendix C.

## Supply of higher education

In essence, the human capital theory is a long-run theory about the labour force supply.<sup>20</sup> The basic premise of the theory is that people can influence their future labour market success by investing in education and, through that method, become more productive workers. In a nutshell, according to the human capital theory, success in the labour market is determined by an individual's characteristics and the extent to which employers value the individual in given market circumstances. The human capital framework is an integrated part of the neoclassical economic theory, which asserts that wages are not dependent only on individual skills but also on the consumer demand for goods, production technology, and a person's position in the labour market. Institutional rigidities in how the labour market functions are not considered part of the neoclassical (marginal productivity) theory; instead, they are addressed only in explanations of observations deviant to the theory. Some economists claim that constant imperfections in the functioning of the

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<sup>20</sup> For a textbook presentation of the human capital theory, see, e.g., Belfield 2000; Hamermesh & Rees 1988; Colbjørnsen 1986.

markets have occasion to complement the human capital theory with other models.

According to the human capital theory, variation in the rates of return guides young people not only to participate in higher education, but also to choose programs that are in demand in the labour market. The market mechanism based on the marginal rates of return works as follows. As the supply of the highly educated labour force increases in the labour market, it becomes possible for employers to hire degree holders without as great a wage premium as before, whereupon wages of the highly educated decline. This decrease in wages in turn leads to fewer people being motivated to invest in higher education; for that reason, the supply of the more highly educated declines, stopping the decrease in the wages. Hence, supply and demand should reach a balance through the adaptation of wages.

The popular conception is that increased educational attainment automatically leads to increased productivity, and therefore education is a worthy investment both for an individual and for society. However, this point of view is more a case of politicized “human capital thinking” than theorized understanding of the labour market. The human capital theory does not actually perceive the supply of higher education as synonymous with the number of degree holding people in the labour market; instead, it is a matter of skills, experience, and knowledge. Additionally, the theory does not assume that individuals’ productivity potential can be derived from their qualifications. It is nearly impossible to observe directly the skills possessed by an individual. For this reason, diplomas are widely used as indicators of skills. Empirical studies often rely on the simplification that diplomas or years spent in education are equated with skills and productivity potential. This tradition has been heavily criticized. But even if degrees have traditionally served as indicators of skills and productivity potential, one salient problem related to massification is a decrease in the degrees’ usability for this purpose.

Another major framework focusing on the provision of education is the manpower requirements framework (e.g., Brennan, Kogan & Teichler 1996). Whereas the human capital framework focuses on the balance between the educational investments of individuals and the return to these investments, the manpower framework assumes the appropriate utilisation of competences

from the match of fields and occupational arenas (*ibid.*). The manpower requirements framework focuses on analyzing the demand for higher education in the labour market. According to this framework, the primary task of higher education is the fulfilment of the anticipated demand in order to improve economic growth. Predicting demand correctly has proven to be a difficult task, however. For that reason, it is difficult to steer students' career choices to match the anticipated demand for different types of degrees (or skills) (e.g., Teichler & Kehm 1995).

Even if the manpower requirements framework is no longer particularly fashionable for higher education policy, answering the needs of the working life is constantly on the agenda in one form or another. Continuous discussions about “translating employment needs into curriculum strategies” (e.g., DeWeert 1994) as well as the emergence of the so-called second sector of higher education—which is more vocationally orientated than traditional universities (e.g., Teichler 1999; 1994)—exemplify how higher education is changing in response to employment needs. Currently, manpower requirements and other such frameworks are associated with rigid government planning of the past, whereas current policies place their trust in free market economics and “new public management” (e.g., Olssen & Peters 2005).

From policymakers' viewpoint, the question of the optimal level for the supply of higher education involves many aspects in addition to whether highly educated individuals receive appropriate financial compensation for their educational investment. Since the 1960s, one of the most influential motives for expanding participation in higher education has been the promotion of economic growth. Even though time-series analyses usually find a positive causal relationship between national educational investments and economic growth—even if this relationship is not a mechanistic one (e.g., DeMeulemeester & Rochat 1995)—the societal discussion concerning the growth of education seems to have a life of its own, unconnected to traditional economic rationales. Recently, discussions have focused on the “new political economy” (e.g., Brown, Green & Lauder 2001) of human capital, distinct

from the self-sufficient market mechanisms of the neoclassical economic theory.<sup>21</sup>

In countries with a mass higher education system, the goals of education policies have not included the production of qualifications to match existing or anticipated demands. In the name of different ideological purposes, in addition to the goal of promoting economic growth, increasing the number of student places has become an important goal in itself. This trend implies that society's demand for higher education (i.e. social demand) is inevitably greater than the pure market demand. According to the human capital theory, exceeding the market balancing level can be justified by the assumed positive externalities of higher education.

According to the neoclassical economic theory, social support for supplying higher education is rational to the extent that the social return to higher education is greater than the sum of all the individual returns.<sup>22</sup> Higher education is generally believed to benefit people other than those actually participating; therefore, the social rate of return is assumed to exceed the sum of individual returns. However, the social returns are often so abstract that it is difficult to measure them in financial terms. For example, highly educated people are assumed to improve the productivity of their co-workers, increase social cohesion, and be responsible citizens. Also, increasing participation in higher education is considered to be a socially important goal for the sake of such ideological reasons as freedom of choice, fostering of talents, equality of possibilities, and improvement of women's and minorities' position in the labour market (e.g., Brennan, Kogan & Teichler 1996; Teichler & Kehm 1995).

Increasing the number of student places in higher education in order to fulfil the social demand has problematic consequences. Due to its costs, this expansion has been geared to fields not directly connected to the

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<sup>21</sup> Discussion about the "new" political economy is certainly paradoxical because the political economy approach essentially implies a shift from Keynesian or neoclassical frameworks to the foundational classics of the discipline. For example, Brown et al. (2001) refer to Adam Smith in their search of the "true" meaning of human capital.

<sup>22</sup> Societal provision of higher education is often justified with the fundamental imperfections in the functioning of the markets, such as the asymmetry of information. However, discussion about the private vs. public provision of higher education and the market imperfections is beyond the scope of this study.

qualifications for which demand exists in the labour markets. Due to the shrinkage of the public sector, among other things, the result has been a fall-off in graduates' positions in the labour market, at least to some extent. This issue will be discussed more in the following sections.

Higher education undoubtedly has numerous positive externalities that benefit society as a whole, but it would be rather awkward for policymakers to emphasize the benefits to society over the benefits of immediate financial returns to individuals. It is possible that in public discussion, a contradiction will emerge between the ideological foundations for growth in educational participation and the economic rationales for individual educational investments. From a more theoretical vantage point, this contradiction involves tension between the public good of higher education and the promises of financial returns to individual educational investments. If they are encouraged to participate in higher education in the name of abstract societal goals (e.g., the "development of the information society/the knowledge economy" or long-run economic growth) instead of the subjective financial benefits of completing a degree, some young people may make educational choices that they will later regret. Some may choose to participate because higher education is fashionable, even though some other type of education would be more financially rewarding. And even if highly educated people did receive, on the average, higher wages than people without a degree, a large gap could still exist between the expectations of the degree candidates and the actual rewards they receive after earning a degree.

As for the economic rationale underlying the human capital theory, the only certainty for a young person making future educational plans is that higher education will be financially beneficial to the extent that employers in given market circumstances will appreciate the skills he/she acquires. If the intrinsic or societal values of higher education are emphasized over the subjective financial rewards of a degree, the result will be a decline of the principle that the system should produce degrees to match the labour markets' demands. Such a decline would have consequences: if higher education ceases to reward individuals financially, social dissatisfaction with and criticism of the system will inevitably increase.

## Demand for higher education and the market adaptation process

Market adaptation mechanisms suggested by the human capital theory are relatively simplistic. Imbalance between supply and demand creates tension in the labour market for school-leavers. Tension leads markets into an adaptation process: the labour market position improves for school-leavers who possess skills that are valued by the labour markets, while prospects diminish for those who possess skills of which an oversupply exists. However, the question of skills possessed by an individual should not be reduced to the question of which program he/she completed. An essential feature of “human capital thinking” is that an individual’s skills profile is composed of multiple components (e.g., Hejke, Meng & Ramaekers 2002). Skills acquired in higher education are only part of the ensemble of competences that determine a person’s success in the labour market. One often speculated possibility is that the importance of formal qualifications decreases with respect to employers’ recruiting decisions, while the importance of other types of competences increases.

The magnitude of changes taking place in the graduate labour market undoubtedly varies substantially among countries, and also varies temporally. Comparative higher education studies have included many observations about how different kinds of societal, cultural, political and economic matters—which are not directly connected to the higher education sector—play significant roles with respect to cross-national differences in higher education participation and graduate employment (e.g., Kivinen & Nurmi 2003; Teichler 1999; Brennan, Kogan & Teichler 1996). Many concomitants of the massification process are closely linked to general economic development as well as to changes in the occupational structure and graduates’ expectations.

But is it true that, as a consequence of the system’s massification from a pan-European perspective, the wage premium for degrees has decreased compared to that for lower-level education? In other words, has a higher education degree lost its value compared to other educational investments? Furthermore, have individual incentives to participate in higher education diminished? Although any simple answer threatens to trivialize the

complexity of the issue, the answer to the posed question is “no”--at least to the extent that the worries of the 1960s and 1970s (the period when the massification process truly begun in Europe) have proven to be largely exaggerated from the perspective of the 1990s and the early 2000s.

A review of the average rates of return on a degree in Europe indicates that some countries have experienced a trend of decreasing returns to higher education, while others are experiencing the opposite situation (Barth & Røed 2001; Asplund & Pereira 1999). Also, considerable differences exist regarding which sectors of employment involve the greatest average returns. In any case, the average rates of return on higher education are positive throughout Europe, and they are generally greater than returns on other types of education. The increasing supply of highly educated labour has not led, at the aggregate European level, to a reduction in relative wages, because demand has shifted as well (Barth & Røed 2001, 144).<sup>23</sup>

The rates of return, however, are only a part of the diverse phenomena related to graduate employment. First, graduate labour markets are largely supply-driven, and because the political process determines a number of student places, it is practically impossible to define any kind of natural or market balancing level for the supply of higher education. It is not surprising then, when considering the actual determinants of the supply, that experts of higher education research agree that the supply has nearly always exceeded the demand (Teichler 1999; Brennan, Kogan & Teichler 1996). However, as the positive rates of return indicate, despite an over-supply to some extent, most graduates ultimately find employment matching their education or at least receive sufficient compensation for their educational investment. One explanation for this phenomenon is that demand has simply been greater than experts and policy planners were able to predict (ibid.).<sup>24</sup>

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<sup>23</sup> In all nine countries considered in this study (Italy, Spain, France, Austria, Germany, the Netherlands, the United Kingdom, Finland, and Norway), the returns to one additional year spent in education is always positive (e.g., Asplund & Pereira 1999). When the rates of return are compared among different levels of education, they are typically greater for the higher education diplomas than for lower-level education (ibid.).

<sup>24</sup> The orthodox economic view is that increase in supply will create its own demand. As for supply of skilled labour force, this phenomenon is often referred to as the “push effect,” which will be returned to in the following sections.



Second, the rates of return approach does not pay much attention to variation among individuals in the nature of the education-to-work transition process. Currently, much emphasis is placed on findings that the education-to-work transitions of youth have become more difficult and last longer than for previous generations. These findings apply equally to those who do not participate in higher education—at least during their youth (e.g., Ryan 2001)—as well as to those who have earned higher education degrees (e.g., Teichler 1999; 1998). The implication is that the variation underlying the average rates of return is likely to be great, especially if the duration of the transition process, early career turbulence, quality of the job contract, and other such criteria are taken into account (cf. Scherer 2005; Kerckhoff 2001). Studies based on graduate surveys offer more subtle insight into transitions and graduate employment than rates of return. They imply an increase in job search periods, early career unemployment, and initial fixed-term employment in most European countries (e.g., Brennan, Kogan & Teichler 1996). On the whole, many signs indicate increased difficulties in entering regular career tracks.

The changing of the graduate labour market is also assumed to influence the functionality of the higher education system itself. One new function adopted by the system is the role of an intermediate “storage” or “buffer,” balancing out the imbalance between supply and demand. Such notions are closely linked to the discussion of prolonged youth transitions. Forms of buffering vary between contexts and periods of time; however, individual purposeful prolongation of studies and an increased amount of supplementary and post-graduation courses are considered manifestations of the system’s functioning as a buffer (e.g., Kivinen & Ahola 1999; Teichler 1999). The need for “storage” is minimized when the labour market is booming or when graduates lower their expectations and accept jobs that have traditionally been considered unsuitable for highly educated people. “Buffering” is a promising approach in that it emphasizes the possibility that insecurity about future employment is reflected not only in the prolonged job search but also in the modes of higher education participation.

Although the validity of the human capital theory has been questioned extensively, it is impossible to deny the significance of the investment

perspective, due to the very fact that a higher education degree has historically been—and largely still is—a good investment in economic terms. Indeed, it seems that the validity of the human capital theory (or thinking) is not so much threatened by inflation of the degree's value, but by the prolongation and complexity of individual transitions. The more varied and complex patterns the education-to-work transitions adopt, the more difficult it becomes to find empirical specifications that are flexible enough to take into account all the variations among individuals, but that also preserve the simplicity and elegance of the original theory. Traditional ways of analyzing higher education participation as an investment decision include the assumption that higher education and working life are separate domains. The rates of return to educational investments and other such models typically assume that young people participate in education first and working life second, and the phase of educational participation is relatively short compared to time spent in working life. However, such a two-fold model of education-to-work transition is becoming less and less accordant with real-life situations.

### Over-education in the graduate labour market

The concept of over-education is widely used not only by researchers but also in public discussion. Despite the popularity of this concept and its clear intuitive meaning, it is actually difficult to define in any strict sense. Current higher education research literature is unclear regarding the actual standards of appropriateness when claims are made that graduates cannot find employment matching their education. In reality, under-education may also exist in the labour markets—either instead of over-education or simultaneously with it. Higher education studies typically address the issue of under-education by questioning whether the skills acquired in higher education are relevant to the requirements of working life. The following section discusses theoretical meanings of the concept of over-education and the ways it has been applied in higher education policy.

A basic assumption of the human capital theory is a balance between demand for different skills and individual educational investments, which is reached through the market's adaptation. Hence, according to this theory, "over-education" should not exist except temporally. The limited and temporal existence of over-education can be explained by changes in the payoffs to different components of the human capital. Following a market adaptation process, returns rise for skills that employers value and decline for skills that employers consider less useful. Whether or not employers value the skills acquired in higher education depends on the bigger picture comprised of such factors as production technology and consumer demand. It is also important to note that the human capital theory encompasses the entire individual life-course. Over-education is not considered to be a problem during the early career phases if the situation improves later on. However, a long-lasting imbalance between education and employment challenges the validity of the human capital theory's assumption of a balance between supply of education and formation of wages in the labour market (e.g., Sicherman 1991; Duncan & Hoffman 1981).

"Over-education" can be defined in at least three different ways (Rumberger 1981, 8–19). (i) Pecuniary returns to education decrease below their historical levels or relative to returns to other investments. (ii) Subjective expectations of the benefits of an investment in education are not realized. Subjective expectations cover not only pecuniary returns but also occupational status and position. (iii) Over-education exists for people who are employed in jobs that do not make full use of their education. In other words, people whose skills acquired in education exceed the requirements of their working tasks are considered to be over-educated. This third definition is conceptually the strongest one, to the extent that it is directly linked to the common understanding, derived from the general human capital thinking, that education should increase individual productivity by providing skills required to perform specific work tasks.

To define the educational requirements of different work tasks is a difficult task in itself. These definitions comprise multiple dimensions of a worker's skills and abilities. If the match between education and work tasks is gauged with a single variable (e.g., the educational level needed to perform

the work tasks), this variable inevitably contains much unidentified information (Hartog 2000).

In studies of the organization of work, the education required to perform the work tasks has been measured in three different ways (Hartog 2000, 131–133; see also Groot & van den Brink 2000): (i) Objective job analysis: systematic evaluation by professional job analysts who specify the level and type of education required for the job titles in an occupational classification; (ii) Subjective worker self-assessment: the worker specifies the education required for the job; (iii) Realized matches: the required education is derived from what workers in the respondent's job or occupation have usually attained (e.g., the mean or the mode of that distribution). In practice, education deviating one or two standard deviations from the observed average level is regarded as not matching the job requirements.<sup>25</sup>

One method of reducing the ambiguity of measuring the number of over-educated people is to separate the match of education and work tasks from the match of skills and work tasks (e.g., Allen & van der Velden 2001). This method allows for the possibility that a person's education can match the work tasks while his/her skills may not, and vice versa. Another method is to divide skills into many components (e.g., management skills, general academic skills, field specific skills) and analyze the payoffs for each

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<sup>25</sup> Indicators of over- and under-education link individual labour market success to the demand for different skills in the labour market. This approach does not, however, apply to indicators of the realized matches because they have internalized the way in which the allocation process between education and employment has come into existence under given circumstances. This type of indicator derives the amount of over-education from the realized distribution of educational attainments of workers in a certain occupation, and for that reason they do not include any criteria regarding how much education is actually required to perform the work tasks related to this specific occupation. When considering the objective and subjective measures of the required education, one can reason that the more people who have received education than is actually required to perform their work tasks, the greater increase there should be in the number of high-skill jobs, so that markets reach a balance. As noted, this kind of reasoning does not apply to the indicators of realized matches because these indicators are disconnected to the actual job requirements (Hartog 2000, 131–133). However, analysing the realized matches may be more interesting in comparative studies than in national ones. The common average of the countries (average of the averages) under study can be used as a standard for educational requirements so as to compare how the different countries perform in relation to each other. This approach is applied in one of the articles included in this thesis (see Article I); another article applies the subjective worker self-assessment method (see Article II).

component when controlling for type and level of education (e.g., Hejke, Meng & Ramaekers 2003). However, if education and skills are analysed as two different dimensions, or emphasis is given to only skills without regard to educational qualifications, over-education loses its conceptual clarity. This method would also largely disregard the traditional assumption that people with certain types and levels of education should get hired to certain occupations.

As for the match of skills and work tasks, an important matter to consider is that “skill” is comprised of experience as well as education. It has been suggested that the substitutability of education and experience might have declined during the past few decades, ensuing penalty to young workers outweighing the increased educational attainments (Ryan 2001, 53). Paul Ryan (*ibid.*) termed this phenomenon the “double skill bias.” The double skill bias can potentially play a significant role regarding competition between the young and the old—the inexperienced and the experienced—graduates for the good jobs. However, the extent to which this is the case undoubtedly varies greatly among countries and labour market situations.

Since the 1960s and 1970s, concerns about over-education have arguably been one of the most important paradigms for the field of higher education studies. Since the beginning of the massification process, constant dialogue among different parties has focused on appropriate standards for the quality of graduate employment. Graduate surveys have become indispensable tools in estimating the amount of over-education in the graduate labour market (e.g., Teichler 1991). Graduates are assumed to be capable of reviewing the match between skills they received in higher education and those actually needed to perform their work tasks. In other words, graduates are expected to be experts not only in their own fields and in specific skills but also in their job tasks and job performance.

It is difficult to determine what criteria for the quality of employment should be applied in the domain of higher education policy. Teichler (1999, 177; cf. Brennan, Kogan & Teichler 1996) suggested that four criteria should be taken into consideration when assessing graduates’ success in the labour market: (i) a low unemployment ratio; (ii) a low ratio of non-regular or precarious employment (e.g., occasional employment, part-time employment,

short-term employment, or spurious self-employment); (ii) success of graduates in vertical terms (e.g., high return for educational investment, a substantial income advantage compared to non-graduates, or a high ratio of graduates adequately employed); and (iv) success of graduates in horizontal terms (e.g., close link between field of study and occupation as well as job assignments or a high degree of utilization of knowledge on the job, which was acquired in the course of study).

Teichler (1999, 177) also discussed criteria for quality of the higher education-to-work transition that could be emphasized to the same extent as the criteria for quality of employment. The transition from higher education to work should be smooth: it should not last long, and graduates or students nearing the end of their studies should not have to spend much time searching for employment. Additional criteria for a successful transition process are a short period of time between graduation and first employment, and few if any unemployment spells during the period of searching for regular employment (*ibid.*).

How well have the different criteria for graduate employment become fulfilled among highly educated people? During the 1990s and early 2000s, an apparent consensus among researchers has been that higher education has largely preserved its value (e.g., Brennan, Kogan & Teichler 1996; Teichler 1999). Although great variation exists among individuals, a higher education degree is still a good investment compared to other educational investments. In addition, unemployment is typically at a lower level among highly educated people than in the workforce in general. However, the transition from higher education to employment seems to have become a more insecure and longer-lasting process than it used to be. Also, many (if not the majority, depending on the field of studies) graduates face a relatively high risk of not obtaining satisfactory employment any time soon after graduation. Indeed, Kivinen and Ahola's (1999) reference to human capital as "risk capital" seems justifiable. It is very important to notice, though, that to discuss human capital as risk capital makes sense only in relation to politicised human capital thinking. According to the actual human capital theory and the underlying rationales of the neoclassical economic theory, every investment always involves a certain risk (cf. the section "Supply of higher education").

Recently, an issue in higher education studies has been the large grey area between jobs and occupations that can be unambiguously considered either suitable or unsuitable for graduates. According to Teichler (1999), most countries seem to have quite clear concepts of the kinds of jobs that are worthwhile for graduates. Likewise, it is relatively easy to define jobs and careers that are considered failures for highly educated people. As for the standard definitions of employment statistics, low skilled manual labour is, at a minimum, considered unsuitable for the highly educated. Also regarded as failures are fixed-term, part-time, and self-employment jobs (*ibid.*).

A generally accepted understanding among experts of higher education is that massification has been followed less by growth in the share of graduates whose employment is clearly below the standards than by so-called middle-level occupations becoming the most common type of employment for the highly educated (Brennan, Kogan & Teichler 1996; Teichler 1991; 1998; 1999). No objective criteria exist regarding how middle-level jobs should be considered. One possibility is to find out how graduates themselves regard these jobs: if graduates are satisfied with middle-level jobs, then these jobs should probably be accepted as suitable for the highly educated. Regarding the fulfilment of graduates' subjective expectations, two matters are of special interest. First, massification has opened access for new social groups whose expectations about future occupational status are not the same as those of traditional groups. Second, expectations can change. One essential assumption in the present studies is the lowering of graduates' expectations—or remarks that they should be lower—to a level corresponding with post-massification circumstances.

In summary, from the economic rationale of the human capital theory, over-education should be considered a sign of inefficiency and sub-optimal allocation of resources. Over-education has been justified, for example, with the notion that it is beneficial to have an over-supply of the skilled labour force in certain growing sectors of the economy so that there will be room for them to grow even more in the future, not to mention employers' cries to reduce employee costs. Policymakers have certainly listened to the employers' wants for a long time now, but endogenous viewpoints within the domain of higher education also make the concept of over-education highly

ambiguous. Along with the emergence of the “highly educated society” and related concepts, policy discussion has turned toward the idea that over-education is not at all problematic. It is evident that the more policies emphasize graduates’ own responsibility and activity regarding the creation of new high-skill jobs and enrichment of the jobs that were previously held by non-graduates, the less meaningful the concept of over-education becomes both in theory and in policy.

### Imbalance in the labour markets and the labour queue

The starting point for the human capital theory is a balance between individual educational investments and demand for skills, even if the markets’ adaptation processes may be difficult and long-lasting. However, the credentialist view rejects this idea completely. Models of education-to-work transition that apply the credentialist view discuss education and labour markets largely with the same concepts as the human capital models.<sup>26</sup> However, the credentialist view contends that individuals’ offerings on the market are not skills but credentials (i.e., diplomas), and that the relationship between skills and credentials is highly arbitrary.

Randall Collins’s (1979) analysis of the evolution of the American education system is considered a landmark case study of credentialism. Massification of the higher education system first took place in the USA. There, at the end of the 1960s, growth in higher education participation reached a point at which the labour market value of a degree was, due to the over-supply, thought to be inflated to an extent that made rationales for the system’s functioning questionable. In those days, approximately half of college-aged Americans were enrolled in higher education. According to

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<sup>26</sup> This study applies the same concepts as that of Sakamoto and Powers (1995). The idea that competition between individuals for the good jobs is based on credentials and not on skills—an idea that was introduced by Randall Collins among others—is known as the “credentialist view.” Thurow’s (1975) model of the labour queue is known as the “job-competition model.” Besides Sakamoto & Powers, this section owes Boylan (1993).



Martin Trow (1974), the development of the American higher education system was about to reach the phase of universal access, implying that the system was going to bear responsibility for nearly all of the college-aged population. At that time, the European higher education systems were transitioning from elite to mass higher education. Following the inflationary development, a higher education degree no longer guaranteed a position at the top of the occupational hierarchy. According to the critics, this phenomenon—known by credentialists as the “diploma disease”—led the American credential system into crisis (Collins 1979, 191–5).

The credentialist view can be considered a version of the queuing theory (Sakamoto & Powers 1995). A similar though different version is Lester Thurow’s job-competition model (*ibid.*). The starting point for the queuing theory is that the number of highly paid jobs (i.e., the number of jobs in the primary sector of the economy) is regulated by mechanisms that are external to wage formation. According to the queuing models, the supply of highly paid jobs in the economy is not systematically related to the number of qualified job applicants or their willingness to accept lower wages. Queuing models can therefore be regarded as the antithesis of the models of market balance and price mechanisms (i.e., the models of wage competition and marginal productivity).

The queuing theory suggests that when filling vacancies, employers place job applicants into an order of superiority (i.e., into a queue), based on criteria they consider important. Education is undoubtedly one essential criterion on which employers base their rankings of applicants, but it is by no means the only one. Irrespective of the actual recruiting criteria, an individual will get the job, according to the queuing models, only if his/her relative position in the employment queue is high enough with respect to the number of vacancies. For example, with  $x$  vacancies, the first  $x$  individuals in the queue will be hired, regardless of whether or not someone behind them is willing to work for lower wages.

The credentialist view differs from other queuing models in that it assumes that education does not improve individual productivity to any substantial extent. According the credentialist view, diplomas (or credentials) are mainly used as a means to legitimate the cultural reproduction of social

inequalities. Other queuing models, such as Thurow's job-competition model, are not as strict in this respect. However, both the credentialist view and Thurow's job-competition model assume that professional skills are learned mainly in working life and not in education.

According to the job competition model, a general rise in educational attainments may improve productivity because it may reduce the cost of training recruits to perform their work tasks. The job-competition model assumes that people who succeed in education will also succeed in working life. For that reason, it should cost less for employers to train highly educated people for their work tasks than it would cost to train less-educated people. Employers therefore have an economic interest in hiring highly educated job applicants. Because educational attainments are supposed to indicate a person's learning potential, employers have an incentive to hire even clearly over-educated job applicants; accordingly, job seekers have an incentive to become over-educated. Such an incentive is alien to the human capital theory, which suggests that employees are hired and paid according to their marginal productivity.

The credentialist view and the human capital theory are fully congruent in that both assume an increase in the number of highly educated people in the labour market will inflate the value of degrees. However, according to the credentialist view, relative differences in labour market success should remain unchanged among different levels of education, despite an overall increase in educational attainments. In contrast, the human capital theory assumes that payoffs to lower-level education should increase in the event of an over-supply of higher education.

Educational requirements for vacancies should, according to the credentialist view, rise at the same rate as educational attainments in society. This view suggests that an increase in the number of job applicants having a degree will be counteracted by recruiters expecting more education from the applicants, without any real changes in wages or work tasks. This situation is unfavourable for those who already have a degree, because it means inflation in the degree's value and loss of a competitive edge. This assumption also implies that expansion of higher education participation to new social groups

will not improve the labour market position of these groups, due to a rise in the nominal educational requirements for jobs.

Closely related to the credentialist view is the common understanding that when degrees lose their value in the labour markets, individual attributes other than educational attainment play bigger roles in the recruitment process. In particular, quality and amount of networks with employers are assumed to become crucial determinants of a person's labour market success. One often-discussed possibility is the emergence of a new balance between formal and informal competences, in which importance of the latter is emphasized at the expense of the former (e.g., Chisholm 1999). An obvious danger related to such a development is that competition for the good jobs becomes less meritocratic than it may have been previously, because informal competences are, by definition, outside the system's formal accreditation (ibid.).

Fortunately, the most severe concerns of the 1960s and 1970s regarding an increase in the number of over-educated people did not become a reality. Nevertheless, one can easily find numerous claims in current studies in support of the credentialist market mechanism and employment queuing. These claims are crystallized in the often-made conclusion that a degree has become necessary but insufficient for a good job.<sup>27</sup> Olivier Marchand (1999) analyzed the disparities among the OECD countries in youth unemployment: earning a degree has become a strategy that young people adopt in order to secure a good job and to protect themselves against unemployment; however, when used collectively, this strategy is at risk of becoming watered down.

Comparative studies of education-to-work transitions often refer to the experiences of French youth as queuing (e.g., Ryan 2001; Marchand 1999).<sup>28</sup> In France, intake of the higher education sector has multiplied during the past few decades. This expansion was based on the goal that the system should guarantee everyone with an upper-secondary degree (*baccalauréat*) access to higher education. The growth in participation was timed with the decline of the national economy; thus, the result was inflation in the value of a degree. According to Marchand (1999, 340), the situation in France could be

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<sup>27</sup> See, e.g., Kivinen & Silvennoinen 2002; Kivinen & Ahola 1999; Chisholm 1999; Marchand 1999; Vincens 1995.

<sup>28</sup> Another exemplary country is Italy and, essentially, any other Southern-European country (see, e.g., Scherer 2005; Bernardi 2003).

described as a ripple-down effect: each level in the educational hierarchy—from the highest to the lowest—went through depreciation in status and pay. Escaping from unemployment and insecurity is most difficult for those with the least education. Because employment opportunities are scarce, youth are willing to compromise their expectations; additionally, even with a certain risk in hiring an over-educated person, firms still favour the highest education in their recruiting (*ibid.*).

Under circumstances similar to those in France, youth unemployment can be considered queuing as a consequence of general lack of employment and a particular market mechanism that places the most flexibility on the shoulders of the youth and altogether squeezes out the youngest and least educated from the labour market (Marchand 1999). Specific to the French situation is the intergenerational dimension of queuing: one generation at a time seems to occupy the most valued jobs, while those under age 25 have the most trouble finding any employment at all.

Drawing on his experiences in France, Alain Bienaymé (1993; cf. Vincens 1995, 149) blamed belief in education and the social structure in general for the consequences of queuing. According to Bienaymé's vision, the two-tier stratification of society (highly educated and the rest) should be replaced with a three-tier stratification as approximately 80% of youth become eligible to participate in higher education.<sup>29</sup> The first tier is composed of people who have not attained the necessary preparatory education to pursue higher education: they have the greatest risk of becoming displaced from labour markets. People in the second tier have completed secondary or higher education degrees, but they have not found employment that matches their education. These people are frustrated and have lost faith in the system. The third tier—the tier of the satisfied—is comprised of people who have found employment matching the level of their education.<sup>30</sup>

One application of the queuing theory, which could gain popularity in future studies, is the analysis of labour market displacement effects in relation

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<sup>29</sup> This actually is the share of upper-secondary degree holders in a young age group not only in France but also in most other European countries (see Appendix Table 7).

<sup>30</sup> In this kind of framework, "life-long learning" can be seen as constant attempts of people in the second tier to improve their position in employment queues by gaining more educational credentials and thus, reaching a position in the third tier.

to students' participation in working life. For example, Hofman and Steijn (2003) found that in the Netherlands, student employment has displaced low-skilled workers from the secondary (i.e., low-skilled) sector of the labour markets to unemployment. This finding is in accordance with Thurow's job-competition model, which suggests that employers have financial incentives to hire over-educated job applicants. This issue is important for future research for two reasons. First, if the displacement of low-skilled workers by student workers is considerable, it will have consequences on the functioning of the higher education system and the labour market. Second, it emphasises the fact that the moment of getting a degree has different meanings among individuals who are entering the labour market for the first time.

### “Towards a highly educated society”? <sup>31</sup> —

Frameworks based on the concepts of over-education and over-supply have recently been criticized because they are incapable of dealing with changes in the values and expectations of highly educated people. These concepts cannot effectively address the effects that the highly educated people themselves have on the organization and development of work tasks. According to Ulrich Teichler, in many countries, structures in the working life have adjusted to the substantial growth in the number of graduates much more effectively than could be expected from the traditional viewpoint.

Traditional frameworks of the relationship between higher education and the world of work appears to have been founded on the so-called scarcity paradigm: “Employers try to find the scarce talents, allocate the bulk of complex tasks and responsibilities to a few positions, and provide substantial privileges to the chosen talented few” (Teichler 1999, 186). However, according to Teichler (ibid.), the logic of recruiting may be turned upside down as the supply of even the highest competences is perceived as becoming endemic. As rationales for using the knowledge in working life change due to

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<sup>31</sup> Notice that this title is the same as the one used by Teichler (1991). This section discusses the concept of the “highly educated society” on the basis of following Teichler's articles: 1999; 1991; Teichler & Kehm 1995.

the growing supply, the organization of work tasks will undergo fundamental changes.

Ulrich Teichler has made a number of proposals in favour of changing the research and policy paradigm. Teichler's basic premises are captured in his concept of the "highly educated society." A number of experts and institutions have suggested their own similar concepts, which combine visions of the future and demands for re-orientating research interests. Noteworthy examples are the European Commission's (1996) "learning society," Gibbons et al.'s (1994) "knowledge society and mode 2 knowledge production," Brown et al.'s (2001) "high skills society," and the numerous suggestions that include the phrase "life-long learning" in their titles.

The concept of the highly educated society attracts the attention of researchers as well as policymakers as they realize that consequences of massification have been widely accepted and opinions favouring positive aspects of changes are receiving support. Despite changing attitudes, rationales for the supply of higher education are still largely based on the traditional views of what kind of employment can be considered suitable for highly educated people. Hence, as Teichler and Barbara Kehm (1995) claim, it will take a long time to reach a highly educated society in which middle-level occupations are appreciated and conceptions of the optimal allocation of work in society are not based on the assumption of a scarcity of the highest skills. Barriers to the change are policy actions that aim to improve the quality of teaching and educational achievements but do not appreciate the variety of individual skills and characteristics. Such policy actions strive to maintain traditional academic and professional standards. According to the "cultural restoration" discourse, expansion of participation will lead to lower input standards (i.e. decrease in the quality of student material) that is thought to spoil the idea of the highest kind of education (e.g., Thomas 2002; see also Trow 1974, 79–84).

Teichler's paradigm suggestion does not imply that we should give up the use of the concepts of supply, demand, and market balance; instead, it modifies and expands their scope so that they can seize the new phenomena related to graduate employment. The concept of the highly educated society emphasises the push effect that highly educated people themselves have on

the development of the working life. Teichler believes it is unlikely that graduates will take over the jobs that were previously held by non-graduates unless the work tasks undergo substantial changes.

The idea of graduates' push effect is an integral part of the current wide-ranging discussion about changes that are taking place in the occupational structure and organization of work.<sup>32</sup> This discussion includes multiple dimensions and viewpoints: increasingly common teamwork, work task restructuring, a "new economy," knowledge work and information and communications technology ICT, and a special emphasis on "life-long learning."<sup>33</sup> An overarching theme in this sprawling discussion is the idea that the effective production of the highest skills is crucial to national success in global competition. Higher education researchers contribute to this discussion with their observations that despite possible difficulties, many graduates are ultimately absorbed into jobs that can be regarded as suitable for highly educated people. In turn, consequences to the structures of the working life are inevitable. Because studies have been able to seize the developing and restructuring effects that higher education has on the working life, the focus cannot be set solely on the existing demand for graduates: research settings should be modified to allow considerations of supply and demand.

The demand for a highly educated labour force has been analyzed from different viewpoints, including comparisons of graduate employment by field of study. It is no news that an unfulfilled demand for graduates from

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<sup>32</sup> Yet a wider context to the changes in higher education policies would be the shift in employment policy rhetoric that occurred in the early 1980s "from promises of full employment to full-employability" (Brown et al. 2001, p. IX; cf. Streeck 1992, 208-214). Change in rhetoric was accompanied by change in economic paradigm from the Keynesian expedient of manipulating demand to supply-side policies (ibid.). It is interesting to note how distinctive the transition from Keynesian demand-side policies to supply side is in higher education policy discussions. Collins (1979), for example, discussed explicitly, though critically, how inflation in degrees' value could be counteracted by manipulating demand for education the Keynesian way. In contrast, current discussions focus on the supply of high skills and "knowledge production." Teichler's concept of the "highly educated society" clearly illustrates this shift from demand to supply. The emphasis on supply-side policies is most evident in Brown, Green and Lauder's (2001) introduction of the "new political economy of knowledge production."

<sup>33</sup> See the review of these conceptions by, e.g., Jongbloed (2002), World Bank (2002), Brown et al. (2001), Teichler (1999), Wagner (1999), and Gibbons et al. (1994).

certain fields exists, while over-supply is the prevailing market condition in other fields. However, Teichler and Kehm (1995) argue that the primary way for the higher education sector to promote the demand for itself is not by simply trying to fulfil the anticipated demand for graduates. The higher education sector must make use of its distance from the working life, and try to challenge and question prevailing practices (ibid.). The higher education sector should train agents of change who create jobs through their own activity (Teichler 1999; 1991).

It is apparent that higher education participants have begun to compete to master marketable competencies—perhaps as a consequence of planned policies or of spontaneous actions adopted by individual agents of the education-to-work transition, or both. New demand has emerged in the labour market for multidisciplinary skills, flexibility, the ability to co-operate, willingness to participate in continuous learning, and international skills (Teichler 1999; Teichler & Kehm 1995). How the new skills are best acquired is a complex issue. According to the views that emphasise the importance of life-long learning, pre-career education should offer only basic skills, whereas field-specific skills should be developed during the working life. Substantial growth in continuing education and life-long learning pose three significant questions with respect to restructuring the relationship between higher education and the world of work (extracted from Teichler 1999, 187–188):

- Regarding the role higher education will play in continuing professional education: Will higher education concentrate on the sectors that are congenial to its traditional functions, which are more or less segmented from the initial degree programs, or will the rationales of continuing professional education begin to shape the modes of pre-career education?
- Regarding changes of pre-career education: Will the idea of “recurrent education” become concrete so that pre-career education will be shortened, focusing on only the fundamentals and losing its status-distributive function?
- Regarding the role of teaching and learning: Will a de-institutionalization of knowledge transmission occur if societal



development assumes more of a course towards a life-long learning society than towards a life-long education society?

A central feature of the highly educated society is the assumption that the meaning of human capital changes as educational attainments increase in society and become endemic, as Teichler (1999) indicated. It is easy to find examples of the changing nature of human capital and new rationales for teaching and learning. A common feature of these new ideas of skills provision, with application of the concepts of Kivinen and Silvennoinen (2002), is the perception of “active” or “functional” human capital as the opposite of “formal” human capital that is learned in educational institutions and was the dominant form of human capital before massification.

The new meanings of human capital are not especially important by themselves, but the implications they have on the political economy of skills production are significant. According to Brown et al. (2001), all countries with a mass higher education system must figure out how to maintain people’s belief in education when it is clear that not everyone with a degree is going to find a good job under the present circumstances. Finding a solution to this dilemma is crucial, because a nation’s success in global competition is heavily dependent on its citizens’ attitudes towards continued learning, personal risk-taking, and entrepreneurialism (ibid.). Such concepts as the highly educated society can and should be perceived as plans of action to overcome this dilemma.

Changes in the nature of human capital are reflected in changes in policy rhetoric. The prevailing rhetoric stresses the importance of individual responsibility and activity. Accordingly, an important question to be addressed in future studies is how the system can help people become more active and entrepreneurial-minded, and how spontaneous individual action (i.e., individual transition strategies) can affect the system’s functioning. The emphasis placed on individual activity and responsibility is reflected in the current policy notion that higher education participants are becoming transformed “from students to learners” (Leathwood & O’Connell 2003). The implication assumes that “students” are no longer in fixed situations but make, by themselves, maxim use of the possibilities offered by the system: the only

limitation is one's own individual capabilities. The second illustrative example of the current policy emphasis is the idea that higher education systems should stop applying the "more of the same business" concept and should start assisting students in planning their own individually customised "learning pathways" (Jongbloed 2002). Yet another popular conception is "mass individualism," which involves individual strivings to distinguish oneself from the masses (ibid.).<sup>34</sup>

Regarding links between higher education and employment in a highly educated society, at least four indicators should be taken into consideration (Teichler & Kehm 1995, 127). First, it is necessary to determine the typical distinctions between the traditional graduate occupations and lower-level occupations, as well as the blurred and distinct borderlines. Second, it is important to establish how distinct the cultures are in various disciplines and occupations, regarding values and perceptions of what is desirable and adequate. Third, it is necessary to consider how students' and graduates' values change regarding education, employment, and desirability of jobs. Fourth, it is important to determine how active graduates are in shaping their jobs and tasks through utilization of knowledge, creativity, and innovation. To address these issues, research settings must be methodologically strong and include conceptually and empirically rigorous indicators of the experiences of highly educated people in their working lives.

Finally, it is also crucial to determine how the "education-to-work transition" concept is useful or even indispensable when considering links between higher education and employment in a highly educated society. Much depends on the meanings applied to this concept. If all the various themes, subtitles, and nuances related to higher education participation and graduate employment are discussed under this concept, it will eventually lose its clarity and thereby its usability for policy making. However, many of the current issues and problems addressed in higher education studies cannot be defined in narrow terms but must be holistically approached.

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<sup>34</sup> Cf. Tchibozo's definition of the strategic agent in Chapter 2. These examples of the current policy rhetoric clearly illustrate that in order to be successful in a highly educated society which requires the acquisition of marketable competences, one must find a resourceful transition strategy and be capable of modifying this strategy in the recruitment process.

Despite current attention on life-long learning and increasing variation among students' motivations to participate and their modes of participation, the majority of the student population will continue to be young people. The next chapter will discuss a tentative framework for analysing higher education-to-work transitions of youth in a highly educated society. The framework does not try to solve the various problems related to youth transitions; instead, it seeks to improve conceptual clarity and addresses the extent to which achievement of this goal is possible.

#### 4. Transition from higher education to employment in a highly educated society

The starting point for this study was the notion that nowadays numerous and varied problems faced by young people when attempting to become educated and find employment have been dealt with on their own school-to-work or youth transitions agenda. This agenda was developed in response to the increased difficulties encountered by youth when trying to find satisfactory employment, and it involves many long-standing issues concerning schooling, employment and training (Ryan 2001, p. 34–35). In the analyses conducted by OECD, the basic questions have been (ibid., see also OECD 1998; Hannan, Raffe & Smyth 1996) the following: “Does unemployment hurt young people?”, “Do sub-minimum wages increase youth unemployment and training?”, “Is vocational education economically beneficial?”, and especially in comparative studies, “To what extent can the ease of youth transitions be explained by the functioning of education and training institutions as opposed to basing the explanation on purely economic terms?”. All of these issues can be considered within a single process known as the education-to-work transition, which usually refers to the period beginning at the end of compulsory education and continuing until the individual finds full-time stable employment for the first time (Ryan 2001, p. 34–35).

A particular focus on the initial match between education and work differentiates the school-to-work agenda from the general research of unemployment. A totally different matter is that in practice, it is often very difficult to define what “initial match” or “initial transition” actually mean, because the moment when “youth” ends and the stable working career begins varies significantly for each individual. In the higher education studies, the research of transitions usually covers the period of the active job search of recent graduates or students finishing their studies. However, this practice could prove problematic, since an individual transition from higher education to work may not be an initial transition when viewed from the broader perspective of the agenda of youth transitions.

The question addressed this chapter is how higher education policy studies should relate to the general transitions agenda, assuming that the principal goal of this agenda is to find out how to support the initial education-to-work transition of young people. The relationship between the higher education system and the general transitions agenda is a complex one and possibly even contradictory to some extent, due to the fact that the higher education sector serves numerous other purposes besides supporting youth transitions. When considering the higher education system as a supportive system of youth transitions, an important question is to what extent student places in higher education are occupied by people other than those making their initial transition and the intensity of the competition for the good jobs among the different types of higher education participants and graduates. For the higher education sector itself, it is increasingly important to define its stand on the transitions agenda. It would be naive to consider problems related to the employability of graduates as merely inefficiency of the higher education system without considering the broader perspective of youth employment and other relevant policies adopted nationally.

In the following, I will introduce a tentative framework for analyzing the possibilities and constraints which higher education systems will have with respect to supporting initial education-to work transitions of the youth in a highly educated society. Focus will also be given to the issue how the system's efficiency can be evaluated in this respect. The starting point of the framework is to understand, what the competition for the good jobs is like between different kinds of higher education participants. The framework is based on the findings of the three articles included in this thesis, among other recent studies dealing with higher education participation and youth transitions. Thus reader may find it helpful to read first the three articles presented in Appendix C before going through this chapter, though that is not absolutely necessary.

## Non-traditional higher education participation and competition among graduates for the good jobs

Recently there has been a lot of research on so-called atypical or non-traditional higher education participation and on how such participation is becoming increasingly common (e.g. Osborne, Marks & Turner 2004; Leathwood & O'Connell 2003; Teichler 1999; Wagner 1999; OECD 1997; theme number of *Higher Education* 2002). The prevalent understanding is that the increased proportion of atypical students within the student population will fundamentally change the organisation and functioning of the higher education system as well as its general economic and societal significance. However, the ways in which expanding participation, both in terms of volume and diversity, can be counteractive with respect to supporting the initial education-to-work transition of young graduates—and vice versa—is seldom addressed. In order to fully understand this issue, one must be able to depict how atypical participation is related to competition on the labour market. In order for the policy modifications aimed at supporting initial transitions of youth to be successful, it is essential to recognise what kind of role the type of individual transition plays in the competition for jobs after graduation.

When reviewing higher education research literature, one rarely finds mention of “young people making their initial transition”. Instead, there are numerous notions of “standard” (Osborne et. al. 2004; Leathwood & O'Connell 2003), “traditional” (ibid; Schuetze & Slowey 2002) and “conventional” (Lindberg 2007a) students, whose opposite are the “non-standard”, “non-traditional” and “unconventional” students. However, the definition of these traditional and other types of students is, in essence, based on the concept of the youth's initial transition, even though this may not be expressed explicitly. The conception of traditional participation is essentially based on the assumption that annual intake in higher education is composed, for the most, of a single primary cohort just out of preparatory education and that similarly, the majority of individuals in any specific graduate cohort are members of the same age group. The current understanding is that due to the break in the linearity and age group restrictions of youth transitions, it has

become difficult to depict a mass of young people moving simultaneously through the educational machine towards working life (cf. Jongbloed 2002).

The more participation is dominated by a single primary cohort, the more non-traditional students can be defined as individuals who are not members of this cohort (cf. Schuetze & Slowey 2002). Even though it is relatively simple to separate the non-traditional students from the traditional ones by this negative definition, the population of non-traditional students may be, in fact, quite heterogeneous. An inherent problem in doing traditional vs. non-traditional classifications is that a great number of participants may well be traditional as regards to a certain criterion but non-traditional in terms of another (ibid.; Osborne et. al. 2004). A young individual enrolled in higher education may be a non-traditional student, for example, with respect to the time he/she spends working as opposed to attending lectures; in contrast, an individual who is regarded as a non-traditional participant due to, for example, his/her age, type and intensity of studying may well be considered traditional in other aspects.

Graduates' success on the labour market is typically reviewed by comparing the average rates of return to complete a higher education degree relative to returns to lower level education. When considering the average rates of return in Europe, as was discussed in Chapter 3, it seems that some countries are experiencing decreasing returns to higher education with respect to their historical levels, while in other countries, the opposite is true (Barth & Røed 2001; Asplund & Pereira 1999). Despite of increased participation, a higher education degree still is a good investment on average terms everywhere around. However, neither the average rate of return nor relative wages necessarily tell us much about the nature of the competition among different types of graduates for the good jobs and therefore, they may obscure many of the real problems in the functioning of the system.

The idea of a highly educated society challenges the assumption that non-traditional students are less academically talented or motivated than traditional ones. Likewise, there is no reason to assume that there wasn't real competition for the same jobs between these two groups of students. That is not to say that a substantial share of present day studies are not concerned with the issue of how the higher education sector should support students who

are at a disadvantage due to, for example, their social and/or ethnic background (see, e.g., Thomas 2001). However, when considering participation rates of nearly 50% of a given age group, as is the case in many of the European countries (or at least this is the milestone sought by policy makers), it seems rather unfair to try to establish that non-traditional is equivalent to less talented and vice versa—there are simply too many exceptions to the rule. Nowadays, competition among graduates for good jobs is intense, no matter whether one is a young (i.e. early) graduate or a mature (i.e. late) graduate.

Table 1 displays a three-stage model of an individual school-via higher education-to work transition. The stages comprised by the model include: “applying to higher education”, “studying” and “job search and career”. Hence the concept of the higher education to work transition applied here is as broad as possible, and does not merely apply to the job search after graduation. The division between traditional and non-traditional transitions displayed on Table 1 is based on the assumption that traditionally, the youth transition process has been guided by a normative standard that sets limits on the modes of studying and on the duration of studies. The traditional model of a transition is based on the following assumptions: students begin their studies soon after the end of upper secondary school; the actual process of a student’s integration to working life occurs after getting his/her degree; and the employability of graduates is high, not just on average terms but for every individual graduate concerned. Naturally, these assumptions are somewhat oversimplified and they would not fully hold true if historical facts were considered. However, the stylised model of the traditional transition is a useful point of reference to reflect on atypical participation and the increase in diversity: this is why the traditional transition can also be called the “standard transition” without making any normative assumptions about what the transitions should be like.



**Table 1.** *Typified differences between standard (or traditional) and non-standard (or non-traditional) school-via higher education-to work transition.*

	<b>Applying to higher education</b>	<b>Studying</b>	<b>Job search and early career</b>
<b>Standard or traditional transition:</b>	Starting studies in higher education immediately after completing preparatory education.	Completing studies within stipulated duration of programme (participants are all full-time students).	Short job search and substantial returns to a degree in terms of wages and socio-economic prestige.
<b>Involuntary deviation from the standard:</b>	Prolongation of the application period due to lack of student places and competitive selection among applicants.	Prolongation of studies due to limited institutional resources and competitive selection among the students.	Prolongation of job search and lowered expectations about the quality of jobs; returning to studies from labour markets as an alternative to being unemployed.
<b>Voluntary deviation from the standard:</b>	Voluntary gap years (e.g. priority given to recreational activities or opting for work rather than beginning one's studies).	Prolonging studies intentionally (e.g. change of programme, assuming the role of "working student" and attempts to make contacts with recruiters).	Returning to studies after completing the first degree in order to enhance career development or to acquire new skills for a career change.
<b>Deviation from the standard due to subjective disadvantage:</b>	Lack of subjective knowledge about existing educational choices; lack of maturity to make independent and rational choices; lack of financial resources to participate in higher education.	Lack of motivation or ability to finish the degree; misguided educational choices; lack of financial resources to finish studies.	Lack of formal and/or informal connections with working life; misguided job search strategies; becoming a mature student without a prior higher education degree.

There are basically three ideal types of ways (or dimensions) in which a transition process can deviate from the above defined standard transition (see Table 1): involuntarily, voluntarily, and due to a subjective disadvantage. “Involuntary deviation” basically means that a person aspires to the standard transition but he/she is not able to attain it, due to the structurally limited number of this type of transitions available for the degree candidates. That is to say, the standard transition is not possible for all degree candidates because they have to compete against each other for the limited number of student places and job opportunities. The opposite case is that of “voluntary deviation”. In this case, the standard transition is feasible for a person but he/she thinks that aspiring to this kind of the transition is not subjectively the most rational choice. To have a non-standard transition as a result of being at a “subjective disadvantage” implies that the standard transition is not possible for a person not so much because there is competition for the student places and jobs, but because the person lacks the required skills, networks, financial resources or other that would allow him/her to compete.

Table 1 gives exemplar or typified descriptions of a non-standard transition with respect to the three different phases of the transition process and the three ways to deviate from the standard: these are discussed in more detail in the following section.

*Applying to higher education.* Standard or traditional students generally begin their studies soon after the end of preparatory education (education qualifying them to apply at higher education institutions), i.e. they have not had any *gap years* before beginning their higher education studies (e.g., Osborne et. al. 2004; Schuetze & Slowey 2002). The reasons for the prolongation of the beginning of studies vary significantly for each individual. Independently of the national context, one common reason is the lack of a student’s subjective knowledge about his/her skills and educational preferences as well as about the functioning of both the educational system and the labour market. Tchibozo (2002) makes a case in point when he emphasises that some (if not most) of the young individuals may need to learn through trial and error in order gain sufficient knowledge and maturity: having gap years before beginning higher education studies may be a rational

choice subjectively when analysed from this “lack of knowledge and experience” point of view.

When considering the consequences of postponing the start of one’s studies with respect to success on the labour market after graduation, one important question is to what extent this delay is due to a voluntarily chosen course of action as opposed to institutional constraints such as a lack of student places. In case there are fewer student places than actual applications in a given year, some of the young people aspiring to a degree must resort to second, third and even fourth attempts to get into the programme they desire. This kind of *queuing* has probably always existed to some extent, especially when considering access to the most selective programmes and institutions; however, it may also be a characteristic reaction to the massification of participation when considering the system as a whole in some European countries (see, e.g., Kivinen & Nurmi 2003, p. 86-88).

The intensity of competition for student places, as well as the ways in which this competition is manifested in individual actions, obviously has a lot to do with the number of student places available nationally and the applied admission practices. Irrespective of the reasons for queuing for student places, the very existence of the queues emphasises the need for analyzing the transitions of the highly educated as extensively as possible, beginning at the end of preparatory education.

*Studying, job search and early career.* In the studies of atypical participation, a division is often made between the mature students and the youth who have a delayed or prolonged transition (e.g., Osborne et. al. 2004; Schuetze & Slowey 2002; Wagner 1999). The distinction between these two groups is often blurry. Nevertheless, the label of “adult” or “mature” student is basically limited to individuals who are at least 25 years old when entering the higher education system and who have had a stable career before beginning studies. In addition, the greatest motive for participation among this group is usually thought to be the desire for a promotion or otherwise improving one’s career prospects. (ibid.). This being the case, the mature students should not compete so intensely for the same vacancies with young graduates who are doing their initial transition. However, the mature students

who do not have a high-quality job before participating in higher education are very likely to aspire to the same jobs as their younger colleagues.

A common belief in the higher education studies is that late graduates, whether they are “delayed youth” or adults without a secure position on the labour market, worry about being at a disadvantage in the eyes of recruiters in comparison to early graduates—a concern that could discourage these individuals from participating altogether (e.g., Osborne et al. 2004; Egerton 2000; Wolter & Weber 1999). There are a number of empirical studies confirming this assumption but the issue is not quite so simple. An important question is to what extent recruiters appreciate a job applicant’s work experience in comparison to the degree itself. If work experience is considered a significant recruitment criterion (even if the experience itself wasn’t of the highest quality), then the participation of mature students distorts competition on the graduate labour market, at least from the point of view of young students completing their initial transition to employment.

In econometric studies, the competition between young and old applicants for the same jobs is reviewed as the substitutability of education and experience (e.g., Ryan 2001; Wolter & Weber 1999). It has been suggested that the substitutability of education and experience has decreased over the past few decades, putting young workers at a disadvantage in spite of their increased educational achievements. As was noted in Chapter 3, Paul Ryan (2001, 53) has called this the “double skill bias”. It is difficult to estimate to what extent this kind of phenomena could influence competition between different types of higher education graduates, and besides, answers would undoubtedly vary greatly between different contexts and labour market situations. In any case, if there is a severe oversupply of degrees on the labour market, recruiters are likely to base their ranking of applicants not only on experience but also on characteristics like the individual’s personality. The obvious danger of this kind development is that the competition between individuals could become less meritocratic than before (also this issue was discussed in Chapter 3).

A basic assumption in the present higher education studies is that due to the intensifying competition on the graduate labour market, both students completing their studies and new graduates (especially those in their initial

education to work transition) have to spend more time on the actual job search. This means reading job advertisements, attending job fairs, sending applications, going to interviews, etc. As a result, the period of the active job search has become an integral part of the time spent enrolled in higher education for a substantial proportion of the student population, and this period may also last long after graduation (e.g., Teichler 1999; 1998; Brennan, Kogan & Teichler 1996).

There is often a concern that time spent on the job search and especially term-time working reduces the time available for studies and that these activities related to working life may postpone one's graduation and deteriorate academic achievements (e.g., Leathwood & O'Connell 2003; Little 2002; Lucas 1997). The real question, however, is how worthwhile it will then prove to be for an individual to try to keep up with the stipulated timetable in comparison to acquiring informal (uninstitutionalised) qualifications and recruitment contacts. This also applies to undergraduate work experience, which may be considered a manifestation of informal qualifications and recruiting channels. Working while studying may be a very rational choice subjectively, not only because it enables the individual to be able to participate in higher education at the financial level, but also because the connections made with employers may be indispensable when trying to find employment after graduating.

In case participation in both studies and working life is longstanding and overlaps in a profound way, it may be more convenient to discuss a totally new status or role instead of term-time or undergraduate work. For example, when Heinz (1999) discusses youth, he mentions the role of a *student worker*, which implies an individual transition strategy of assuring a good position in the labour market by getting a degree, yet increased insecurity concerning the outcome of the transition process is confronted by working while studying. Nowadays, situations change rapidly both on the education and labour market. It is not surprising then, as already noted above, that young individuals often do not have sufficient information on the different educational possibilities and their outcomes on the labour market, not to mention the fact that they often also lack the subjective knowledge about their strengths and preferences. For these reasons, individual transition

strategies should be highly adaptable and non-linear and prolonged transitions, such as the working student transition, should be subjectively considered as rational as the quick and linear transitions (cf. Tchibozo 2002).

Yet another phenomenon related to the intensified competition among graduates is purposeful prolongation of studies due to poor employment prospects. The purposeful prolongation of completing the degree may result not only from an individual's efforts to make contact with employers but also from taking an excessive number of courses. The purposeful prolongation of the transition is aided by the increased supply of supplementary courses both at the undergraduate and graduate levels. (In Chapter 3, this phenomenon was referred as buffering).

Individual reasons for prolonging the time spent enrolled in higher education are undoubtedly diverse and it would be rather misleading to assume that all cases are the result of consciously buffering the transition process. In many cases, the reasons for prolonged transition are, for example, starting a family and taking care of children, doing military or civilian service and other tasks that are not directly related to the process of joining the labour market. A different matter altogether is that a number of young people may put more value on recreational activities as opposed to improving their career prospects, at least in the short term. Researchers should be very cautious when attempting to determine whether prolonged transitions are subjectively more rational than short standard transitions, or whether they are merely the result of institutional ineffectiveness in both the education system and labour market. The concept of buffering is nevertheless useful in that it underlines the possibility that some higher education participants may subjectively consider the status of "student" or "student worker" more appealing than the status of "unemployed graduate".

## Segmentation of the higher education participation and labour market success

When trying to depict linkages between higher education and employment in a highly educated society, a promising starting point is offered by institutional models of the labour markets.<sup>35</sup> According to the institutional models, the most important matter that determines how people succeed on the labour market is the way how the jobs are competed for. Key concept of these models is the segmentation of the labour markets.<sup>36</sup>

In the models of labour market segmentation, typically distinction is made between internal and external labour markets. In the internal labour markets, when filling open vacancies, employers give priority to their established employees seeking for career advancement over applicants coming outside the enterprise. Instead, in the external labour market employers make no difference whether the job applicant has already a position in the enterprise (e.g., Marsden 1990). Another traditional sectoral division deals with the primary-periphery continuum of the jobs (Beck, Horan & Tolbert 1978). In primary sector jobs, wages are high and there are plenty of chances for career advancement. Instead, in economy's periphery sector, wages are low and chances for career advancement are scarce and risk for unemployment is high. Primary sector is though to be the dominant form of the labour markets in large and capital-intensive enterprises. The good jobs exist because these kinds of enterprises need high quality and steady employment. The opposite is true as regards enterprises in the periphery sector: they have only a little market power and their revenues are small.

Traditional sectoral divisions such as the internal-external, primary-periphery, or public-private as well, are likely to be very useful in the future

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<sup>35</sup> For a text book presentation of these models see Colbjørnsen (1986).

<sup>36</sup> I discuss the "segmentation" as a potentially very useful concept to be applied in researches and not as concept to be applied in policy making. Idea of a "highly segmented society" hardly sounds as appealing as the "highly educated society" even if, or precisely for that reason, the former captures well actual labour market experiences of highly educated people.

studies as well.<sup>37</sup> However, there arguably is also place for new sectoral divisions. A new dimension could be how the segmentation of the higher education participation is connected to the segmentation of the labour market. Figure 2 displays a framework of the linkages between the way segmentation occurs both in higher education participation and on the labour market.<sup>38</sup> The non-traditional segmentation of the higher education system and the labour market discussed herein refers simply to the concept of the highly educated society and other suchlike concepts, which emphasise the importance of flexibility, adaptability, entrepreneurialism, readiness, etc. to improve one's qualifications throughout one's career as a means to individual success.

In the higher education studies, the concept of "differentiation" is generally used when depicting variations in the student population, whilst the concept of "segmentation" is typically associated with the models of labour market segmentation. To discuss the "segmentation of participation modes" instead of "differentiation", it is necessary to focus on the fact that variation in participation modes can be regarded as one aspect of the segmentation of labour markets. In Figure 2, traditional types of linkages between different segments of the higher education and labour market are portrayed with a unidirectional arrow, which reflects the assumption that traditionally intake was dominated by a single primary cohort and the transition process was regulated by a normative standard (cf. top of Table 1). In the framework depicted in Figure 2, the traditional forms of segmentation of the higher

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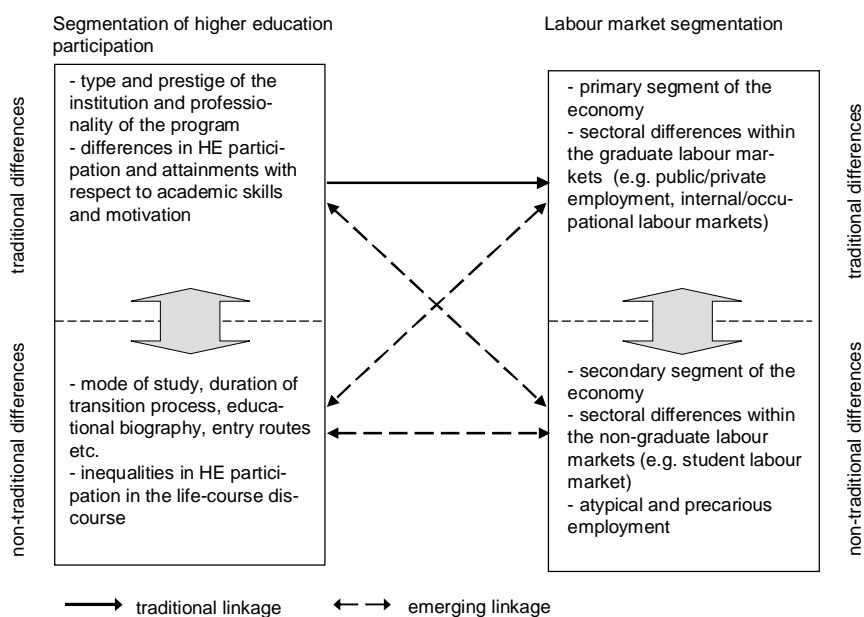
<sup>37</sup> Institutional models have both national and cross-country dimensions. Primary and periphery sector enterprises as well as internal and external labour markets can be found every where around; however, the overall institutional setting varies considerably between countries. Present day studies emphasize that country-specific characteristics of the labour market institutions are inseparable from the mode of skills production adopted nationally (Lauder 2001). In cross-national studies concerning the connections between the mode of skills production and segmentation of the labour markets, typical questions have been: to what extent skills are enterprise-specific rather than transferable, and respectively, are skills acquired more in educational institutions rather than in professional training arranged by employers (ibid.).

<sup>38</sup> I prefer to use the concept of linkage (Sackmann 2001) rather than, for example, transition pathway or transition route. The concept of linkage "...characterize(s) the context of institutions and the corresponding macro-structures of transitions. A linkage structure formalizes individual transitions and relates an origin status to a destination status (ibid., p. 374)".



education system have to do mainly with the field of degree and the type of institution, while the non-traditional segmentation is related precisely to the participation modes.

When it comes to the emergence of new roles and mixed statuses assumed by youth, as well as adult participation, it is essential to note that these phenomena are typically the result of spontaneous action by individuals, and not so much the consequence of purposeful policy interventions, although in some countries, they may also have played a significant role (Wagner 1999; OECD 1997). In addition, more and more of the highly educated who already made the transition to working life believe it is necessary to return to academics to update one's qualifications or to make a career change (ibid.). As can be seen in the recent changes in participation, students themselves blur the distinction between education and working life, making it difficult to conceptualise the outcomes of the transition process. In this respect, *a fundamental question is to what extent spontaneously emerging segmentation between different modes of participation is a consequence or reflection of difficulties encountered by individuals when trying to find good employment. When considering this, one must also ask to what extent participation preserves its traditional modes even when the traditional kind of work career could not be attained by everyone concerned* (cf. Lindberg 2007b; 2005). The courses of development emphasised in this study may lead different modes of participation to become more segregated and also to become more closely related to the segmentation that occurs on the labour market.



**Figure 2.** Framework of the higher education-to employment transitions: traditional and emerging linkages between different segments (“HE” stands for “higher education”).

When considering linkages between higher education and the different segments of the labour markets, graduates have traditionally occupied the primary sector jobs. However, due to a possible excess of graduates, this may not necessarily hold true in a highly educated society. In any case, a considerable share of graduates may work in secondary sector jobs at some point of their life as undergraduate workers. Therefore, for some higher education participants, the actual moment of getting the degree may imply a transition from secondary to primary sector employment, or at least this is their hope. These issues are closely related to a more general question: to what extent youth are integrated to the labour market by differentiating youth vs. mature labour markets from each other, with the youth labour market becoming the low-pay and service-oriented sector of the economy (e.g., Sackmann 2001).

The non-traditional segmentation of the labour market depicted in Figure 2 shows individual differences in the rationale for higher education

participation, modes of participation, student employment and changes to the graduate labour market that were discussed in the above sections. The emerging new kinds of linkages between higher education and the labour market have been portrayed in Figure 2 with bidirectional arrows that reflect the back-and-forth movement between different activities and their simultaneousness (cf. the deviations from the standard transition on Table 1).

The segmentation of the participation modes comprises individual differences with respect to the entry routes, educational biography, mode and intensity of studying, motivation and participation in other activities in addition to studying (e.g., Schuetze & Slowey 2002). The emergence of new kinds of linkages between higher education and the labour market draws attention to questions such as: do mature students occupy different positions on the labour market in comparison to traditional students? How does prolonging the transition and simultaneous participation in education and working life affect an individual's success after graduation? Finally, how are the different motivations for participating (investment vs. other motives) related to the segmentation of participation modes? Still another fundamental question is how the emerging differences within higher education system and the labour market are linked to traditional kinds of differences that exist in these domains (in Figure 2, these linkages are portrayed with wide bidirectional arrows).

One issue that is closely related to the discussion of non-traditional participation involves "non-traditional inequalities" (see, e.g., Enders 2002; cf. Osborne et. al. 2004; Leathwood & O'Connell 2003). Traditional studies of inequality cover questions such as how gender, socio-economic and ethnic background, location, etc. affect an individual's success on the labour market, while also dealing with how these features affect an individual's propensity to participate in higher education in the first place. In present day studies, growing emphasis is placed on mechanisms that create inequalities in the life-course discourse. The study of non-traditional inequalities covers some (but not all) of the questions addressed in the above sections (see Table 1), such as the effects of a non-traditional education career and the age at the time of completing studies when evaluating an individual's success on the labour market.

The mechanisms that generate inequalities connected to the mode of participation are probably not so influential through themselves. Instead, the question is how the segmentation of participation modes is linked to the traditional determinants of labour market success such as institutional quality and field of study. For example, non-standard participation may be especially rational in that it can help an individual get accepted to an institution or programme that he/she was not able to get into in the first place. Respectively, non-traditional participation may prove to be an additional disadvantage in a case in which the individual is enrolled in a substandard institution and in a programme that there is no demand for on the labour markets.

In conclusion, traditional way of thinking was that the system's role is to train people for professional occupations and provide the highest skills, while the ways in which graduates compete against each other on the labour markets, and the toughness of this competition, isn't per se concern of the system. That is not to say there have not been, for a long time now, concerns about the returns to degrees and the system's relevance with respect to requirements of the working life. What this is to say, is that the internal viewpoint to graduate employment (i.e. the system's viewpoint) is pre-selection of people to professional occupations through the system's differentiation. System is differentiated between fields and sectors having different amounts of vocational thrust and connections to professional occupations. Selection of students to different positions within the system serves also the function of pre-selection of people to different positions in the labour markets.

The segmented higher education system/segmented labour markets framework emphasises the fact that the functioning of higher education system is likely to become more closely coupled with the functioning of labour markets. In essence, this is a matter of internal views on graduate employment becoming ever closely matched with external demands. One very important course of development is that the ways in which the good jobs are competed for on the labour markets become more closely linked to the higher education system's functioning. This course of development takes place largely through the segmentation of the participation modes and it implies that modes of competition for the good jobs which previously were external to the

higher education system become internalized into the system's domain. The result is that it will become more difficult to view the higher education system as a domain separate from the labour markets.

### Implications for policy

When considering that one important goal for the higher education system is to assist young people in reaching a high position on labour markets, then from the system's point of view, graduating within the standard time-frame and finding a good job in the primary segment of the labour markets is the most "efficient" type of a transition process. Accordingly, all the other kinds of transitions are less efficient. Therefore, the standard students and graduates, as defined on Table 1 above, are the kind of people who truly satisfy the system: the system has no reason to try to alter the course of their transition process. Expressed slightly differently, these kinds of people are efficient to the system because they are not subject to any "corrective" or supportive policy action, at least not directly. This holds true even in a highly educated society in which acceptance of the diversity is the norm. This is not to say the relationship between acceptance of diversity and system's efficiency wasn't very complex and even conflicting in some occasions, however.

The number of standard graduates (i.e. the number of students who start and finish their studies within the stipulated time-frame) is undoubtedly one major indicator of the quality and efficiency of the system's functioning. However, from the individual's point of view, the transition process does not end when completing a degree but when secure employment is found. As discussed in the previous section, aspiring to the standard kind of educational career cannot be the most feasible option for all degree candidates, as regards maximising one's future employment prospects. It is not surprising then, that certain policies aiming to support higher education participation and graduate employability are potentially counteractive to each other, as will be discussed below.

**Table 2.** *Three higher education policy domains concerned with the three individual reasons for a non-standard transition: implications for policy.*

<b>Involuntary non-standard transition → domain of “system’s inefficiency”:</b>	<b>Voluntary non-standard transition → domain of “lack of incentives”:</b>	<b>Non-standard transition due to subjective disadvantage → domain of “student counselling and support”:</b>
Rationalising the provision and the structures of higher education. e.g. flexible and customized provision of the higher education; increasing the turnover of students.	Influencing rationale for individual decision making. e.g. Reducing benefits for those students who don’t conform to the standard and/or rewarding those who do.	Supporting disadvantaged students. e.g. giving specialised student counselling and financial aid.

As the individual reasons for departing from the standard transition (or the standard mode of participation) can be divided into three distinct categories (see Table 1), there are three different higher education policy domains that have to do with supporting higher education-to-work transitions. These policy domains are depicted on Table 2 and they are: “the system’s inefficiency”, “lack of incentives”, and “student counselling and support”. These three policy domains have to do with the phases of applying to higher education and studying and less with the phase of job search and career (see Table 1), which is due to the fact that this final phase of the transition process does not lie within the actual domain of the higher education sector. It is important to note that even if these policies were not based on the premise that the standard mode of participation is unambiguously the most desirable way of doing one’s degree, insomuch as these policies are successful, the result would nevertheless be that the standard student career with a smooth degree earning process would be accessible for more degree candidates.

The different policy domains involve different implications for the policy and evaluation practices. Some examples of these implications are listed on Table 2. Next, three major policy implications are examined more closely: the first deals with the viability of “punitive” policies, the second with the diversification (or segmentation) of the higher education sector and the third with evaluation practices.

*First*, a number of current higher education policies openly “punish” those individuals who are not willing or able to keep up with the standard time frame of their studies. The exact forms of these “punitive policies” vary slightly from country to country, but they mainly cover issues such as taking away or limiting studying rights, reducing study grants or adding additional fees to courses after a certain time limit for completing the degree has been passed.

As discussed above, instead of truly having a lack of incentives, the non-standard participants may subjectively be using higher education provisions in a more rational way. Even so, non-standard participation is potentially inefficient from the system’s point of view, because it is, by definition, outside the standardised domain of efficiency. Therefore, “punitive” policies are likely to be useful insofar as they increase the turnover of students and set the scene for initial transitions. To the extent that these policies reduce student mobility between programs and prevent individuals from making use of the possibilities offered by the higher education system in creative and subjectively rational ways, they are counteractive with respect to the goal of promoting graduate employability in general.

Perhaps not enough attention is paid in higher education research to matters not related to the teaching purposes of the system, matters that erode the division between education and working life and therefore the viability of using the “standard student” as a framework for policy making. In higher education policy studies, one seldom finds, for example, discussions of the significance of student labour force with respect to the functioning of the economy. When evaluating if the labour force is sufficient in a given economy, it is reasonable to doubt whether it would be possible to retain nearly half of a young age group in higher education institutions without a great share of them participating simultaneously in working life.

*Second*, the acceptance of diversity and the planning of educational participation on completely individual grounds are often considered the unavoidable consequence of the fact that participation is more extensive, in addition to the growing importance of life-long learning. As suggested by Jongbloed (2002), one model on the provision of higher education in the

future states that the prevailing “more of the same” business concept should be abandoned altogether and that students should be assisted in planning their own individually customised “learning pathways”. With regards to economic feasibility, however, only part of the higher education provision could be fully customised (ibid.).

Greater customization of the higher education sector certainly seems to be unavoidable as the individual needs of the participants become ever more diverse. As unavoidable this course of development may be, it also emphasizes how complicated issue the graduate employability is with respect to the system’s organization and evaluation of its efficiency. Much of these ambivalences relate to the concept of “life-long learning” itself. In essence, the concept of life-long learning can be understood as the antithesis to the concept of initial transition: this holds true not only conceptually but also in practice when the life-long learners are the kind of relatively young graduates who already have made the transition to working life but have not been able to find employment that matches their degree. The same goes for the concept of “inequalities if the life-course discourse”: it is rather paradoxical to worry about the success of late graduates if the priority is on supporting the initial transitions of early graduates, assuming that these two groups compete for the same jobs.

The relationship between transition strategies developed individually and customization of higher education should also be addressed. The danger is that the increasing customization begins to reflect to a great extent differences between the students in how well they recognize their own strengths and how good they are in making use of the system. The issue of some students being in disadvantage relative to others due to the lack of information and of other resources should be addressed with the help student counselling and support, and not by greater differentiation of the system, however.<sup>39</sup>

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<sup>39</sup> The concept of “customized production” was introduced to higher education studies from the fields of institutional economics and industrial sociology. In essence, this concept refers to the difference between the Japanese model of diversified production and the Fordist model of mass production. In a nutshell, customized production implies that an enterprise should produce differentiated products that do not compete against products of other enterprises but would create a market niche of their own (e.g., Best 1990). Higher education studies typically discuss customization from the viewpoint that want-to-be students are the clients and study programs are the products



*Third*, a rather common perception seem to be that along with the focus on life-long learning, multiple modes of participation and diverse routes of entry, there is an irreversible trend toward evaluation approaches that address the learning outcomes and the acquired competences of students over the input and process aspects of education (e.g., World Bank 2002, pp. 84–91; Wagner 1999). This kind of thinking may overemphasise the positive consequences of the system’s expansion and life-long learning, especially since it typically views the concept of segmentation in an entirely negative way: it reduces individual possibilities with respect to acquiring competences and having success during working life (ibid.).

However, one may surmise that segmentation both within and also between higher education and working life is not going to disappear: it is merely adopting new forms. As has been addressed in the present chapter, segmentation of the participation modes is a new important form of the segmentation that involves simultaneously both the higher education system and labour markets. Higher education policies should take into account the possibility that unless they are carefully balanced and thought over, the expansion and diversification of higher education could compromise the needs of youth doing their initial education-to work transition and that issue should be addressed when evaluating the system’s efficiency. It is difficult to imagine how the challenge of supporting initial transitions can be overcome without sufficiently emphasising input and process-based indicators and evaluation practices. Analysing the transition processes of youth requires, by definition, process-based indicators that are fixed on a certain (young) age

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that should be customized to meet the different needs of the clients (e.g., Jongbloed 2002). Besides being clients, students (and graduates) are also the system’s “products.” However, at least two issues make this concept ambiguous for higher education policy. First, the idea that the higher education system could make products, each of which has a separate market niche and which do not compete against each other, is implausible in a highly educated society. Second, the Japanese model of production is not only a case of customization, but it involves the idea that volume of production should be equated with volume of demand so that the need to store products would be minimized. However, a number of phenomena have already been addressed regarding rationales for the non-standard transitions, which make “minimizing storage” and “just-in-time production” impossible goals for higher education policy in general.

group, and transitions of the highly educated people are no exception in this respect (e.g., Lindberg 2007a).

In conclusion, ambivalences related to the concept of the highly educated society and similar concepts become evident when these concepts are discussed in relation to young people's higher education-to-work transition experiences. On the one hand, these concepts emphasize adaptation and positive consequences of change. On the other hand, they do not try to conceal the fact that graduates' employment prospects are going to be difficult to fulfil. Inasmuch as the current policies pass responsibility to the individuals themselves, individuals will have "sink or swim" experiences (cf. Leathwood, C. & O'Connell 2003). Ulrich Teichler himself seems to be very aware of the ambivalent nature of his concept of the highly educated society. His solution is to stress the push effect that highly educated people have on the labour market (see Teichler 1999; 1991). However, as was indicated at the end of the first section of the Chapter 3, it will still be difficult to square the policy rhetoric emphasizing societal and long-run economic benefits of the growing participation with the individual motives and expectations underlying educational decision-making.

Higher education policy in a highly educated society requires finding a balance between the standard and the non-standard—or the mass and the elite—functions of the system. It is equally a case of maintaining people's belief in the system's fairness and in the value of a degree in the labour markets. Spontaneous actions adopted by youth during their initial education-to-work transition are crucial with respect to what this balance will be like. Much depends on the extent to which expectations regarding status and pay vary among the agents of transition. The spontaneous "non-standard" actions of individuals require that the system, in turn, replace fixed policies with more fluid and experimental ones.

What the balance between contradictory policy demands will be like is obviously a highly contextual matter that can be addressed only with the help of case studies. However, the extent to which a given population of higher education participants is comprised of standard students, student workers, and mature students directly reflects the ways that people make use of higher education provisions. The challenge is to reach an understanding of

the interactions among the transition strategies adopted by individuals, the structure of the higher education system, and the labour market circumstances. Thus, it is essential to consider the employment situations of the different types of students and graduates. These issues are addressed empirically in the three articles in Appendix C.

A step further would be to determine how the different types of students are regarded in higher education policy and public discussion in varying contexts. It is necessary to determine if discussion focus on the system's inefficiency and lack of students' incentives in countries in which the proportion of standard students is low. On one hand, it is important to consider the extent to which non-standard students are perceived as disadvantaged individuals who need compensatory financial aid and counselling. On the other hand, it is important to determine the extent to which non-standard students are perceived as active new students in a highly educated society, who create new high skills jobs through their own activity and enrich jobs that were previously held by non-graduates. These issues should be addressed in future studies.

## 5. Diverse routes from school–via higher education–to employment in Europe

### Article summaries

**Article I** ‘At the Frontier of Graduate Surveys’ Assessing participation and employability of graduates with master’s degree in nine European countries, *Higher Education*, 2007, 53(5), 623-644.

This article introduces the concept of the conventional student/graduate that is also present in the two other articles. Synonym concepts are the traditional and the standard student/graduate. The purpose of this study is to reflect on concerns about the prolongation of individual transitions with a framework that simultaneously considers both the graduate employability and the duration of the transition process. The article suggests that the duration of the transition process should be viewed as an intervening factor between higher education enrolment and graduate employability. The importance of this approach is highlighted by demonstrating how the understanding of graduate employability varies when the viewpoint of the analysis changes from cross-sectional to longitudinal. Indicators derived from the CHEERS data are used when illustrating differences between the two views on employability. Indicators pertain to graduates with a master’s degree in nine European countries. Countries in this study are: Italy, Spain, France, Austria, Germany, the Netherlands, the United Kingdom, Finland and Norway.

Longitudinal dimension of the graduate employability is brought into the analysis by standardising the time spent in the process of getting access to higher education institutions and completing the degree. Technically this is achieved by excluding all graduates from the analysis who have not finished their studies within the stipulated time frame of their programme. Graduates remaining in the analysis are called “conventional graduates.” Accordingly, the group of conventional graduates consists of individuals who have

completed their degree within the stipulated duration of the programme, including time spent in the transition from school to higher education. Conventional graduates, as defined above, are relatively young individuals who are performing their initial transition from education to working life. Employability of the conventional graduates is compared to employability of the rest of the graduate population. This study also tries to estimate the share of people in a young age group who have the conventional education career and also a conventional working career after completing their degree. The article reasons that the attempts made by conventional graduates to join the labour market must have taken place after graduation, since there was not enough time for them to do so during the process of getting their degree. For that reason, employability of the conventional graduates should be the most unbiased indicator of the system's relevance and efficiency with regards to the needs of the working life.

In all nine countries, conventional graduates make up a considerable share of the student flow, passing from higher education to the work world. The share of conventional graduates is by far the largest in France, where they comprise the overwhelming mass. The proportion of the conventional graduates is the lowest in Italy, Finland and Austria, where approximately only one in four graduates had completed the process of becoming highly educated within the stipulated time frame. Of the nine countries compared, the non-standardised cross-sectional graduate employability (i.e., employability of the whole graduate population) is the greatest in Norway, the UK, Finland and the Netherlands. When considering the employability of so-called conventional graduates, these same countries again top the ranking. However, in Finland and Norway, the proportion of conventional graduates over all graduates is rather small. Therefore, there is a doubt as to whether in these countries—in comparison to other countries—high graduate employability results from the difficulties in finding employment being transformed to inactivity on the labour market in the form of an extended duration of the transition process. The most central result is that, even though the ranking among countries remains largely unchanged, the variations among them are smaller when the length of transition is standardised. Compared with plain cross-sectional employability, variation among the countries is considerably

reduced when reviewing the employability of only conventional graduates. This finding clearly shows how hard it is to discuss graduate employability at the pan-European level without considering the longitudinal nature of this phenomenon.

The ongoing Finnish policy discussion is used as an example of the determination to increase the share of conventional graduates over all graduates and to “speed up” the youth transitions by this way. The article emphasises that these kinds of policies have only limited chances of success, since speeding the degree earning process can easily lead to prolonged job search after completing the degree. The article concludes that longitudinal indicators, especially those fixed on age groups instead of graduate populations, are important with respect to the debate on the efficiency of the higher education system in terms of maintaining proper limitations. Whatever the reasons for prolonged transitions at the individual level, the more standardised the definition of graduate employability, the more similar is higher education systems’ efficiency in international comparison. Therefore, the efficiency of higher education as a system regulating education-to work transitions should not be evaluated without considering the broader context of youth employment and other relevant policies nationwide.

**Article II** Is It worth Being ‘Traditional ’in An Era of Mass

Individualization?, *Higher Education in Europe*, 2005, 30(3–4), 385–398.

This article deals with the topic of how the segmentation of higher education participation is connected with the segmentation of the graduate labour market into jobs with different levels of quality. This topic is approached empirically using the CHEERS data. This article considers the same nine countries as the first article (viz. Italy, Spain, France, Austria, Germany, the Netherlands, the United Kingdom, Finland and Norway) and also only graduates with a master’s degree.

This article reviews how graduates with the traditional higher education careers appear in the European labour market compared to those with the non-traditional educational careers. This is approached from the point

of view whether becoming a traditional graduate proves to be a good transition strategy individually when competing for good jobs after completing one's degree. Traditional educational career is defined the same as in the first article, i.e., traditional graduates are people who have completed their degree within the stipulated duration of the program, including time spent in the transition from upper secondary school to higher education.

The method used in the analysis is logistic regression. The analytical strategy adopted for this study involved modelling with a single data set that included graduates from all nine countries. Three criteria are taken into account when examining the quality of employment that graduates obtain early on in their career: the job stability and the quality of the education-job match to both the level of their studies and skills. These three criteria are the dependent variables in regression models. Regression models include both micro-level and macro-level level independent variables. The most interesting explanatory variable is whether the individual is a traditional or non-traditional graduate. Other micro-level variables control for individual characteristics such as field of study, sex, and grades when entering a higher education institution. Macro-level variables included in the regression models control for the differences among the nine countries with regards to the general condition of the national economy and the size of the higher education system. Contextualising the meaning of the traditional student career is attempted by adding interaction terms between micro- and macro-level variables to the regression models.

According to the results of this study, becoming a traditional graduate has a different influence (either positive or negative) on the odds of finding a good job depending on which of the three criteria is used in gauging a job's quality. The way in which the type of the educational career affects an individual's success on the labour market also varies between sexes and depending on how great is the proportion of traditional graduates over all graduates locally. For a woman, it is unquestionably safer to aspire to a traditional kind of educational career. For men, the situation is more unclear: the benefits of being traditional/non-traditional vary depending on the criteria set for the adequacy of the job. However, in relation to other individual level variables, the type of educational career has a small effect on the odds of

finding a quality employment. Hence, according to the results of this study, the future labour market success of a higher education graduate is, in the pan-European discussion, only modestly dependent on whether one enters the graduate labour market from the traditional or non-traditional student segment.

Regarding implications for higher education policy, the results of this article are ambivalent. On the one hand, the relatively small differences in the labour market success between the traditional and the non-traditional graduates indicate that mature students and “delayed” youth are not severely discriminated against. On the other hand, one is tempted to ask how fair it is for young people making their initial transition from education to employment to have to compete for the same jobs with “lifelong learners.”

**Article III** Connections between the differentiation of higher education participation and the distribution of occupational status, A Comparative study of seven European countries, *European Societies*, 2007, 9(4), 551–572. <sup>40</sup>

This article continues the themes already discussed in the previous articles but with two major differences. (i) Analysis comprises only seven countries. For the sake of increased conceptual clarity, the UK and France are left out (i.e., this article considers only the countries in which a master’s is the first degree). (ii) More focus is on the variation in the modes of higher education participation and other types of students than just the “traditional” or “standard” students. In comparison to Articles I and II, this article gives more emphasis on the young people’s subjective experiences about the process of establishing oneself on the labour markets.

With respect to the applied methods, the article is divided in two parts. First, cluster analysis is used to determine variation between individuals in the school-via higher education-to work transitions. On basis of the cluster analysis, four ideal types of the transitions are composed, viz. “standard transition,” “prolonged transition with no clear structure,” “working

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<sup>40</sup> A different version of this paper is included in the proceedings of the Nordic Conference on Adult Education 2005 (Lindberg 2007a).



transition,” and “delayed standard transition.” Of the four ideal types of the transitions, the actual moment of graduation is most closely associated with the initial entry to the labour market in the “standard transition.” As noted in the first article, the individuals with the standard transition are relatively young and they are in the process of their initial education to work transition. For the most, their attempts of entering the labour market must have taken place after graduation because there has not been sufficient time for that any sooner due to the short duration of the degree-earning process. Individuals who have made the “working transition” have spent a notably long period working before graduation and, hence, their goal in obtaining a degree is to improve the position that they have already acquired on the labour market and not just to establish themselves. The other two ideal types lie somewhere between these two extremes.

These ideal types of the transitions are used in the second part of the analysis as explanatory variables in the regression model in which an occupation’s socio-economic prestige score is a dependent variable. According to the results of the regression analysis, there are marked differences between the seven European countries as to the average level of the socioeconomic prestige, when controlling for the variation between different fields of study and the ideal types of transitions. This finding implies that at the pan-European level analysis, the graduate labour markets are not heavily segmented in terms of the type of the individual transition process. When considering within-country differences between the graduates, the field of studies is clearly a more powerful explanatory variable than the type of the transition. This is not surprising when considering that the dependent variable is an occupational prestige score and that a person’s occupation is, for its part, strongly dependent on the program from which he/she graduated. There are, nevertheless, clear indications that, irrespective of the country, chances of finding a high status job are, on the average, highest amongst the “standard graduates,” while the “working transition” protects against unemployment after finishing one’s degree.

The article concludes by stating that when considering prolongation of the transitions, or the so-called “buffering” of the transitions, it is important to note that the proportion of a young age group for whom standard transitions

is possible in the first place, is always relatively small due to the limited number of student places and the limited resources available for the higher education system. This structural constraint on the share of standard transitions (or graduates) is conceptually different from—but easy to compare with—the tendency to present difficulties in finding employment as an important differential factor in the modes of higher education participation. However, when considering that the entry rates to university level education are at least thirty percent of a given age group in most of the European countries, and that the share of upper secondary school graduates who are eligible to apply for a student place in higher education is between fifty to eighty percent, it seems rather unfair to try to establish that the “non-standard” graduate is equivalent to one less talented and disadvantaged, or vice versa; there are simply too many exceptions to the rule. Likewise, there is no reason to assume there wasn’t any real competition for the same jobs between the “standard” and “non-standard” students and graduates.

## Highly employable, highly segmented, and highly ambivalent—discussion and main conclusions of the study

In their recent and highly influential study, Philip Brown and Anthony Hesketh (2004) draw attention to the duality of graduate employability. According to Brown and Hesketh, graduate employability comprises both relative and absolute dimensions. The former refers to the imbalance between supply and demand and the resulting positional competition among graduates. The latter refers to the absolute increase in a person's productivity that is reached by acquiring high skills. Improved productivity, as suggested by the human capital theory, should respectively lead to increased demand for highly educated people in labour markets. The question is: how can both dimensions be considered in higher education policy making?

Brown and Hesketh (2004) point out that while the massification of higher education has enhanced the equality of access, in the future, more focus should be on the inequalities in recruitment and career opportunities after graduation. The relative dimension of graduate employability emphasizes the importance of the cultural or the "personal capital" in competition between graduates for scarce good jobs (*ibid.*). That is to say, when there is an abundance of job applicants who meet the educational requirements for the job tasks, recruitment decisions are based less on the nominal educational attainments and more on personal attributes such as charisma and work experience. Recruiter emphasis on personal attributes undermines the meritocratic nature of the competition between graduates. This kind of development also affects the equality of access to jobs because the non-credential components of the personal capital strongly depend on a person's background and connections. However, higher education policy in a highly educated society is not only a question of making competition among graduates fairer, *i.e.*, appreciating the variety and multitude of talents irrespective of a person's social and ethnic background. Rather, future higher education policies should inevitably include the element of "management of graduate expectations" (*ibid.*, 230). This is because the growth in participation, despite the growth in demand, appears to have outpaced the

creation of new high skills jobs and the upgrading of the occupational structure.

In broad terms, the main conclusions and policy implications of this study can be addressed as they are in that of Brown and Hesketh (2004). The tension between absolute and relative dimensions of graduate employability poses serious challenges for policy making and evaluation. In the following, I illustrate these challenges and present possible solutions.

*Highly employable.* The central theme of this study is graduate employment and employability in European-wide discussion. International comparisons have become important tools for present policy making and evaluations of the higher education system. When it comes to policies related to the “knowledge production,” indicators of graduate employability are considered indispensable when reviewing a system’s efficiency and a nation’s success in global competition. Graduate employability is nevertheless a highly contextual phenomenon; therefore, the extent to which indicators actually reflect the system’s efficiency is questionable. Even if we accept that indicators of graduate employment do reflect the amount of knowledge and skills produced, that does not imply they could be unambiguously used for measuring the national competitiveness. The vast majority of individual graduates compete against their fellow graduates as well as against people without degrees in the local labour markets. There is thus a potential pitfall when it comes to evaluating the system’s efficiency in relation to other national systems in terms of graduate employability.

A general starting point in studies of youth unemployment and education-to-work transitions is that students should be regarded as an inactive labour force. This practise reflects the widely accepted belief that the education system, to a certain extent, keeps excess labour force from the market. Perhaps this starting point is not so widely recognized in higher education policy studies; this seems to be the case when considering indicators used in the evaluation studies and the discussion about the system’s efficiency. Flows into and out of the system are typically measured with indicators that are independent of each other and of the graduates’ experiences from the labour market, such as enrolment and graduation ratios. Respectively, indicators of graduate employability constitute a domain of their

own. However, none of these different indicators are meaningful in themselves, but rather should be considered in relation to each other. The real limits of the system's efficiency become visible only when considering the indicators of inflow, outflow, and graduate employability in an integrated way.

Indeed, a more comprehensive view on higher education-to-work transitions is becoming accepted by policy makers. In some countries, such as Finland, policy makers have recently paid much attention to the more or less purposeful prolongation of finishing one's studies. Attention given to this issue can certainly be considered a step in the right direction. However, in Finnish discussions, the concern over prolonged studies is occasionally emphasized more than problems with graduate employability. This is actually quite paradoxical, considering the interconnected nature of these matters.

One major argument of this study is that the wider and more integrated our view on the indicators of higher education participation and graduate employment, the smaller the differences between countries appear to be. Accordingly, differences in the system's efficiency appear unsubstantiated. When it comes to policy implications, this integrated view corresponds to the review of graduate employability as part of the greater context comprising youth employment and labour force policies.

*Highly segmented.* Throughout this study, I use the concept of "segmentation" instead of "differentiation" to emphasize the idea that variation in the participation modes is by no means unconnected to the segmentation of labour markets. The higher education sector is blind to the segmentation of participation modes; non-traditional participation modes often fall outside the evaluation standards and measurements of the system's efficiency. Hence, the higher education sector must persuade young people to adopt a standard or traditional mode of participation for evaluation standards to be met. However, the transition process does not end with a degree, but with secure employment. This implies that the duration of the transition process is, for most, determined by labour market circumstances rather than by efficiency of the higher education system.

Individual choice of participation mode is a case of strategic behaviour in uncertain and complex circumstances. To some degree

candidates, it may be subjectively more rational to face the insecurity of finding employment, for example, by postponing graduation or assuming the role of the student worker. At the same time, to some other degree candidates a quick transition from education to work is the best strategy, even without the guarantee of finding immediate employment. The first possibility is likely to gain more popularity at a time when there is an abundance of graduates, often assumed to be the market condition in many fields. Also, the institutional environment and employer recruiting practises undoubtedly play a significant role in this respect, independent of the demand for graduates. There undoubtedly also exist cultural differences between academes regarding the normative or stipulated duration of studies. Nevertheless, to assume that differences in the average duration of the degree earning process are due, for example, to student differences in academic skills and motivations across countries is surely an over-simplified and insufficient understanding.

The segmentation of participation modes and student work is hardly a new phenomenon. Even though it is difficult to find comparable statistics pre-massification, we can safely assume that many students have always participated in the work force while studying in all the European countries and not every one has had the “traditional” kind of educational career. “Highly segmented” and similar phrases have been used since the 1960s and 70s when transformation from the *elite* to mass higher education was taking place in Europe. The “segmentation” and the “differentiation” were key concepts in the classic studies by Martin Trow and Burton Clark, among others, and these concepts have certainly maintained their importance in present higher education studies.<sup>41</sup> Atypical modes of participation and unconventional working careers are undoubtedly becoming more common due to rising entry rates and emphasis on life-long learning. These phenomena are also gaining more recognition in discussion about the system’s efficient and purposeful functioning. One can argue that the more the system’s efficiency is reviewed

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<sup>41</sup> Trow and Clark also emphasized the need of analysing all the different phenomena related to the expansion of higher education in a comprehensive way, as well as the tension between standardization/administration and the system’s diversification. Hence, this study replicates the foundations of higher education studies also in these two respects.

from individual grounds, the more necessary and purposeful are the “student worker” and other such phenomena.

*Highly ambivalent.* If the higher education system is considered “efficient” to the extent that graduates can find good jobs, then should not the system’s functioning be considered “ambivalent” to the extent that graduates’ experiences of their internecine competition are ambivalent? People’s experiences about the system’s functioning undoubtedly are ambivalent, if not “sink or swim” experiences. While current policy rhetoric stresses “full employability” instead of “full employment” for everyone, it is nevertheless hard to imagine how these issues should be dealt with in the domains of student counselling and customization of teaching. Because there is often too much for counsellors to handle, responsibility for obtaining the correct information is largely placed on the students. The worry is that the increasing customization of teaching begins to reflect differences in the amount of information and skill among individuals as to using the possibilities provided by the system. Instead, customization should reflect the different methods of teaching skills and differences in the students’ motivations and abilities to acquire the skills.

Current higher education policies inevitably include trade-offs between the conflicting desires of the different participants. If the number of high skill jobs on the labour market proliferates while the enrolment rate remains constant, the need for trade-offs is arguably small. On the other hand, if the number of graduates outpaces the creation of new high skills jobs in the labour market, then higher education policy becomes precisely a policy of trade offs. In that situation, policy makers can not support any particular group of participants without compromising the expectations of others. Not surprisingly, more emphasis is currently placed on innovations, knowledge production, and other such policies instead of how the higher education sector regulates youth transitions and allocates people to different positions in the labour markets.

The way in which the higher education sector affects economic growth and development is a long-term issue. Therefore, knowledge production and other such policies do not necessarily share an interface with individual educational decision-making, which is based on more immediate

expectations. In addition, since the higher education system does not in essence support the initial transitions of youth any more than it supports the employability of “life-long learners” and other “non-standard” participants, higher education policy may become detached from the general school-to-work agenda. This issue would undoubtedly have problematic consequences. Increasing enrolment is by itself a policy action that potentially erodes the labour market position of today’s graduates and increases competition for future graduates. Even though present day higher education policies focus mainly on contributing innovations and knowledge production, the ways and the extent to which the system allocates labour market success among different types of participants remain important issues. To ignore these issues would be to essentially exclude the higher education sector from the domain of the youth employment policy. Considering the currently high level of enrolment, addressing these issues is critical.

Finally, it is very important to notice that my intention is not to claim that higher education policy was, nor should become, subject to youth employment policy or the school-to-work agenda. In fact, there are clear indications of the opposite course of development: the highly educated society becomes—if it already has not become—a meta-policy paradigm for youth employment and transitions. This implies that problems in the school-to-work transitions are discussed subject to efficiency of the skills production, competitiveness and productivity, and a nation’s success in global competition. But even if the case was that the highly educated society and suchlike concepts have become the primary policy agenda or paradigm,<sup>42</sup> this does not change in any way the fact that the success of youth transitions and graduate employability will remain one of the major criteria against which the success of a higher education system must be evaluated.

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<sup>42</sup> Although not exact synonyms for the “highly educated society”, this applies equally to the concepts of the knowledge society/information society/knowledge-based economy, etc., whichever of these concepts it is most purposeful to use in a given context and for a given purpose.



Appendix A: Types of degree systems and admission  
criteria in European higher education

Appendix Table A1 presents the principal types of higher education degrees in the latter half of the 1990's (from the moment when the CHEERS data was collected) in the nine European countries considered in the study. Titles of the degrees are placed into the timeline according to their stipulated durations. Defining stipulated or typical lengths of studies is often difficult, and the figures given in Table A1 should be regarded as suggestive.

In all the countries, stipulated durations vary to some extent between fields of study, and different kinds of special cases and exceptions to the norms are not uncommon. There are also marked differences between academes, both between and within the countries, in how compelling the stipulated durations are actually perceived.<sup>43</sup>

Because the bulk of the CHEERS data is comprised of people having completed their first degree, this appendix considers only the basic degrees (level 5A degrees with the ISCED 1997 classification); specialist degrees as well as post-graduation and research degrees are largely excluded from the following discussion (PhD and suchlike degrees are of the level 6 with the ISCED 1997 classification). Degrees which are represented in the CHEERS data are printed in bold in Table A1.

European higher education degrees can be divided into three main categories: bachelor's and master's level degrees granted by universities and

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<sup>43</sup> Students' perceptions about the requirements of programs/exams (this including the duration of studies) and how these perceptions are related to individual learning strategies and academic culture of a specific program/institution is a central topic for pedagogically oriented higher education studies (see, e.g., Vermetten, Lodewijks & Vermunt 1999; Entwistle & Entwistle 1991). Considering the great within-country diversity between institutions/programs, it is practically impossible to try to depict, in a nine-country comparison, how students actually feel how compelled they are to finish their studies within a certain time-frame. Therefore, this appendix focuses solely on the nominal or stipulated durations of degree programs—without regard to how students actually perceive them—that can be easily assessed using descriptions of the national higher education systems. Nevertheless, it is important to note that a national higher education system can well be, in general, more school-like in comparison to some other system. In other words, students may enjoy less academic freedom in some national system than in another. This kind of cultural differences between the systems is a foundational topic for higher education studies (see, e.g., Clark 1983). However, there actually is no standard classification of higher education systems (cultures) in terms of academic freedom—school-likeness that covered all the countries discussed in this study, and there is no attempt to introduce one on this occasion either.

non-university degrees. Non-university degrees are typically more vocational than are traditional university degrees. Since 1991, the European Union's system of higher education degree recognition has required at the minimum three years of education for a degree. Three years of higher education usually leads to a bachelor's or comparable degree. The next level after the bachelor's is the master's, which requires typically two to three years of additional studies.

Though most European higher education systems offer both bachelor's and master's level degrees—i.e. short and long degrees—there are marked differences between the systems as to what kind of a continuum the different types of degrees constitute. The first possibility is that students are selected for bachelor's level programs, and finishing a bachelor's successfully is necessary to access master's level programs. In this case a bachelor's is the first degree and a master's is, accordingly, the second degree. A second possibility is that students are selected directly to master's level programs, which makes the master's the first degree and a bachelor's, if recognized by the system at all, an intermediate degree. The national degree systems can therefore be divided into short and long first degree systems, or single and dual cycle systems. An exception is the French system, which is clearly more complex in comparison to the other degree systems considered in this study.

In France and the UK, completing a bachelor's degree is necessary before getting access to master's level studies. Accordingly, France and the UK are the only countries in which short (university) degrees are more common than long degrees. In France, according to the CHEERS data, c 60 % of the graduates having a bachelor's level degree (*licence*) continued their studies at least for another one year (one additional year of studies leads to a *maîtrise*). Circa 23 % of the British CHEERS-respondents having a bachelor's continued their studies at the master's level.

The Spanish degree candidates aspired either to a dual or a single cycle program. In dual cycle programs students can finish their studies at the first cycle (i.e., at the bachelor's level), or continue studies in a second cycle program (i.e., the master's level) after completing the first cycle. The single cycle comprised only master's level programs.

The Italian, Austrian, German, Dutch, Finnish and Norwegian degree systems were principally long first degree systems at the time the data was collected. Some of these systems did also offer bachelor's or other short degrees; however, these types of degrees had been added to the selection recently and/or they were intermediate degrees enjoying only a mild popularity among the students.

The French degree system includes a third tier (above the *maîtrise* level) that includes DESS (specialized higher studies) and DEA (diploma of further study) degrees.<sup>44</sup> A DESS degree includes one additional year of professional specialization after the four years of university studies and a DEA degree is an additional one year research course that is required for access into doctoral studies. Since the *maîtrise* programs last for four years, in actuality only the DEA and DESS programs are congruent with the standard of five years of study as the minimum requirement for a master's. According to the CHEERS data, c 40 % of the graduates having *maîtrise* or equivalent degrees continued their studies in the DEA or DESS programs.

The second sector, also called the non-university sector of higher education, is basically composed of all the higher education institutions other than universities. Whereas the university sector institutions are quite similar between countries, the non-university sector institutions are clearly more diverse. However, the non-university institutions tend to be, in all of the countries, more vocationally orientated than are traditional universities. Table A1 presents the name of the non-university sector nationally and the typical duration of studies in this sector.

The Italian higher education system was the only one of the nine systems considered in this study which did not include or was not establishing vocational higher education institutions. The Italian system does include some art and military academies and other highly specialized institutions, but their importance is minuscule considering the overall set of linkages between higher education and the world of work. Italian universities have separate departments which offer short diploma courses. The Italian sample of the CHEERS data does not include any graduates from these short courses, which

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<sup>44</sup> In other countries the third-cycle comprises PhDs and other level 6 programs in the ISCED-1997 classification.

reflects their minor popularity. Only 6 % of new students were enrolled in the short courses in the academic year of 1994/95 (Moscati & Rostan 2000, Table 1).

In Spain, vocational higher education is part of the university sector, though an incipient vocational sector is being developed. The Spanish first cycle university courses offer vocational choices that enable quicker access to the working life in comparison with the single cycle courses (i.e., long first degree/master's level). In 1995, approximately 58 % of the Spanish graduates came from the long cycle (i.e., long first degree) programs and 42 % from the short cycle programs (derived from Mora et al. 2000, Table 3). According to the CHEERS data, c 21 % of the Spanish graduates having a first cycle degree continued their studies in a second cycle program.

The French non-university sector has multiple components. First, there are the STSs (*Sections de Techniciens Supérieurs*), which offer two-year technical programs; according to the international classifications, these are actually sub-degree programs. Second, there are the elite business, management and engineering schools, namely the *grandes écoles*, which award diplomas after five years of successful studies. The CPGEs (*Classes Préparatoires aux Grandes Écoles*) are institutions that prepare students for studies in the *grandes écoles*. The French non-university sector includes architecture, paramedical and veterinary schools of various levels as well as elite teacher training schools (*Ecoles Normales Supérieures*). The above are the main components of the French non-university sector but other institutions could be mentioned as well. An essential feature of the French system is that a vocational thrust can be found both in the university and non-university institutions and programs.

In France the share of graduates coming from the university sector was 57 % of all the graduates in 1995 (derived from Paul & Murdoch 2000, Table 2). The engineering, business and management school graduates (i.e., the *grandes écoles* graduates) comprised c 14 % of all the graduates and the remaining 29 % came from non-university sector institutions other than the *grandes écoles* (ibid.).

The German higher education system has traditionally maintained a clear division between academic and vocational teaching, that is, a division

between the universities and *Fachhochschulen*. In the early 1990s, two thirds of the German graduates came from the universities and one third from the *Fachhochschulen* (Schomburg 2000, 191). In comparison, the Dutch non-university sector is comprised of the HBO (*Hoger Beroepsonderwijs*) institutions. The division between HBOs and universities is more blurred than the division between universities and *Fachhochschulen* in Germany. Studies in the HBO institutions and in the universities often last for equally long: first degrees took four years in both these sectors at the time the CHEERS was collected (like the French *maîtrise* degrees, these degrees actually were not congruent with the minimum requirement of five years of studies for a master's level degree). During the end of the 1990s, the university sector graduates comprised c 40 % of all the Dutch graduates, the rest coming mainly from the HBOs (Allen et al. 2000, 212). The Norwegian non-university sector is comprised of state colleges (old name) and university colleges (new name). Programs offered by these institutions are typically vocationally orientated but they also include traditional lower level university courses. The share of academically oriented courses is nevertheless small in comparison to vocational courses. In 1995, c 38 % of the new students in Norway were enrolled in the university sector and 62 % in the college sector (Arnesen 2000, Table 1).

In the UK, the division between the universities and vocational higher education was dismantled when the polytechnic-institutions gained university status in 1992. However, a distinction between the two sectors has remained to the extent that it has become customary to discuss the “old” and “new” universities. Despite the polytechnics becoming upgraded to university status, there actually still are non-university higher education institutions in the UK, namely higher education colleges and university colleges. These institutions offer the same types of programs as the universities, but they are limited (mostly sub-degree). In the UK, 52 % of the new entrants to universities and colleges in 1996/97 were in first-degree courses, 24 % did sub-degree courses and 24 % did post-graduate courses (Woodley & Brennan 2000, 241).

In Finland and Austria, the trend has been the opposite from the UK: a vocational higher education sector has been established alongside the universities. The non-university sector in these two countries greatly

resembles the German *Fachhochschulen* and the Dutch HBOs. The Austrian non-university sector institutions are also called *Fachhochschulen* in accordance with their German model; the Finnish polytechnics are known as AMK institutions (that is acronym for *ammattikorkeakoulu*, the Finnish word for *Fachhochschule*).<sup>45</sup> Because vocational higher education is a relatively recent development in these countries, the Finnish and Austrian samples of the CHEERS data do not include any graduates from this sector. Three percent of the new Austrian higher education students were enrolled in the *Fachhochschulen* in 1994/95; two years later enrolment in the *Fachhochschulen* had reached 13 % (derived from Kellermann & Sagmeister 2000, Table 1). In Finland, the number of students enrolled in the AMK polytechnics was approximately 25 % of all the students enrolled in higher education institutions in 1997 (derived from the KOTA and the AMK-KOTA data bases).

To summarize, a master's is the principal type of higher degree in all the countries, excluding France and the UK. In these two countries a bachelor's (or equivalent) is the basic degree and a master's (or equivalent) is a research or professional specialization degree. When considering multi-tier degree systems, transition from higher education to work is correspondingly spread out into multiple waves. Hence, when comparing multi-tier systems with single-tier systems (i.e., short and long first degree systems), one must take into account how great of a proportion of students in multi-tier systems continue their studies after completing the first degree instead of entering working life immediately after the first stage.

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<sup>45</sup> German-speaking countries use the "university of applied sciences" as translation for *Fachhochschule*. The Finnish AMK institutions have begun to use this same translation.

**Appendix Table A1.** Basic types of higher education degrees in nine European countries in the academic year of 1994/95 (uni = university; n-ui = non-university institution). Degrees which are represented in the CHEERS data are printed in bold.

Duration of studies:	2 years (sub-degree level)	3 years	4 years	5 years	6 years
France	Deug (uni)	<b>Licence, DUT</b> (uni)	<b>Maîtrise</b> (uni)	<b>DEA/DESS/maîtrise ingénieur</b> (uni)	
	<b>Business, management and engineering schools</b> (2-5 years) (n-ui)				
Spain		<b>Diplomado</b> (short cycle) (uni)		<b>Licenciado</b> (long cycle) (uni)	
Italy	Corsi di diploma (2-3 years) (uni)			<b>Corci di laurea</b> (4-6 years) (uni)	
Austria		Fachhochschulen (n-ui)		<b>Magister/Diplom studien</b> (4-6 years) (uni)	
Germany		<b>Fachhochschulen</b> (n-ui)		<b>Magister/Diplom studien</b> (uni)	
The Netherlands			<b>Wetenschappelijk Onderwijs</b> (uni) <b>Hoger Beroepsonderwijs</b> (HBO) (n-ui)		
UK	Certificate and intermediate levels (uni)	<b>Bachelor's</b> (honours level) (uni)	<b>Master's</b> (Master's level) (4-5 years) (uni)		
Finland			Kandidaatti (uni) Ammattikorkeakoulu (n-ui)	<b>Maisteri</b> (5-6 years) (uni)	
Norway	<b>Høgskoler</b> (2-4 years) (n-ui)		<b>Cand. Mag</b> (uni)	<b>Høvedfag</b> (Cand. Mag. + main course) (4-7 years) (uni)	



Vocational higher education degrees are weakly presented in the CHEERS data. This is mainly because in some countries, such as Austria and Finland, a vocationally oriented higher education sector was not firmly developed until the late 1990s. Even when considering only the countries in which vocational higher education has a long tradition, there are marked differences in how vocational the education given by this sector actually is. Typically, the academic vs. vocational orientation of the teaching is controlled better in the field and level of studies rather than in the type of institution; this applies not only to the CHEERS data but generally.

Appendix Table A2 gives brief descriptions of the entry routes and the admission criteria to higher education institutions in the nine European countries.<sup>46</sup> Admission practices differ between the European countries in at least two important dimensions (e.g., Teichler 1988). The first dimension has to do with differences in admission practices between the different sectors of higher education. The short cycle or vocational higher education sector is often academically less demanding than is a university sector education, excluding the French *grandes écoles*. The second dimension deals with the extent to which the selection of higher education students takes place during (upper) secondary education in relation to all of the (upper) secondary school leavers having relatively equal access to higher education. In all of the nine countries considered in this study, the basic admission criterion is an upper-secondary degree. However, there are substantial differences between the countries as to what extent student places are allocated to the applicants, according to success in upper-secondary studies alone or in combination with entry exams.

Field of study and institution specific admission criteria can be regarded as the third dimension of selectivity. Whether or not the national system is divided into university and vocational sectors, all the systems include variations between institutions regarding the academic prestige they enjoy. Also, all the national higher education systems include differences

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<sup>46</sup> Information given in Table A2 is extracted from the latest update of the Eurybase-databank (<http://www.eurydice.org>) and it covers the academic year of 2003/2004. However, this information should also apply well to the time when the CHEERS data was collected since the basic admission criteria and the routes of entry have remained, despite the growth in participation, quite unchanged.

specific to the field of study with respect to the strictness of admittance. Certain fields of study, such as medicine, tend to be universally more selective than most other fields. The CHEERS data covers well all the different fields of study and institutions of varying prestige; even the most highly ranked institutions are relatively well represented in the data. The data includes graduates from, for example, the University of Oxford, the University of Paris No. 11, the University of Utrecht and the Technical-University of München.<sup>47</sup>

**Appendix Table A2.** *Typical entry requirements and pathways into higher education in nine European countries in the academic year of 2003/2004.*

Italy	Until recently access was possible with only an upper secondary school leaving certificate (diploma di superamento dell'esame di Stato), except for courses with limited intake. Current development is that each university must define the knowledge required for the admittance and lay down the tests' procedures.
Spain	Admittance basically requires upper-secondary level certificate (baccalaureate) in addition to passing a Suitability University Entrance Exam. Passing the entrance exam is indispensable for taking single and second cycle (long cycle) university studies. Entrance exam is not required in order to gain access to first cycle studies. However, pupils who have passed the exam have priority to studying places which often are limited. Hence, passing the entry exam is practically a must.
France	Most of the French university courses are open access courses and a study place is basically guaranteed for everyone with an upper secondary school leaving certificate (which is most often baccalauréat, held by c 80 % of an age group). As regards the university sector, entry exams are basically applied only in medicine and related fields. Many of the non-university institutions are elitists and have entry exams.

<sup>47</sup> These four are the most highly ranked institutions represented in the CHEERS data. According to the Academic Ranking of World Universities 2004 by the Shanghai Jiao Tong University, Oxford was the 8<sup>th</sup> best university in the world, the Utrecht 39<sup>th</sup>, the München Technical-University 45<sup>th</sup> and the University of Paris No. 11 48<sup>th</sup>. <<http://ed.sjtu.edu.cn/rank/2004/top500list.htm>>.

**Appendix Table A2. Continues**

Austria	Access to universities: a matriculation examination (Reifeprüfung) is required for admission to all degree programmes at universities. Those who don't have Reifeprüfung must pass a university entrance examination (Studienberechtigungsprüfung). Access to Fachhochschulen: Allgemeine Universitätsreife (general qualifications to enrol in university studies) or any professional qualification in the particular field. Depending on the objectives of a course of study, additional examinations and qualifications may be required both in universities and Fachhochschule-institutions.
Germany	Access to universities: Allgemeine Hochschulreife (gives entry into any institution of higher education in any subject or field) or the Fachgebundene Hochschulreife (gives entry only into specified courses). The criteria for the selection of applicants in subjects with nationwide quotas currently are the applicant's average mark in the Abitur (school-leaving examination constituting higher education entrance qualification, 51%), the waiting period (between sitting for the Abitur and applying, 25%) and the result of an institutional selection (24%). Access into a Fachhochschule: Allgemeine Hochschulreife (general higher education entrance qualification) or Fachgebundene Hochschulreife (higher education entrance qualification restricted to a specified field of study), or by completing grades in vocational post-secondary education. Over half of those entering Fachhochschulen have a higher education entrance qualification which also entitles them to study at university.
The Netherlands	Access to universities: a pre-university (VWO) school-leaving certificate or an HBO qualification or preparatory HBO certificate. For courses subject to a quota ("numerus fixus"), there is also a weighted draw for places followed by selection by the institutions themselves. Access to HBO-institutions: a senior general secondary education (HAVO) certificate, a middle-management or specialist training certificate or a pre-university education (VWO) certificate. Prospective students aged 21 or over who do not possess the required qualifications may be admitted to university or HBO after a <i>viva voce</i> examination.
The United-Kingdom	All major higher education institutions are autonomous bodies and they determine their own admissions policy. The traditional – and still the most common for full-time under-graduate students – qualifications for entry to degree study has been two or three General Certificate of Education Advanced-level GCE A-level passes, as well as a minimum number of General Certificate of Secondary Education GCSE passes at grade C or above. However, a wide range of other qualifications is acceptable for entry.

**Appendix Table A2.** Continues

Finland	Admission (both in universities and non-university institutions) is based on the grades attained in the matriculation certificate (and in the general upper secondary school leaving certificate) together with the results of an entrance test, which is the most common procedure; or on the results of an entrance test only; or on the grades attained in the matriculation certificate and in the upper secondary school leaving certificate only.
Norway	Successful completion of 3 years of upper secondary education including foundation course, advanced course I and advanced course II (regardless of area of study), or a recognised vocational qualification/trade certificate.

*Source: The Eurybase-databank*

Since the CHEERS data was collected, there have been some modifications in the structures of the national degree systems. In back of the modifications lie the Sorbonne Declaration in 1998 and the accompanying Bologna Declaration one year later. The general objective of the Bologna Declaration and process is the creation of a common European Higher Education Arena by 2010. Building blocks of the Arena are the harmonization of degree structures Europe-wide and the increase of transparency between national higher education systems. In reality, harmonization has meant agreeing on common minimum requirements instead of setting rigid standards or getting rid of the national particularities (e.g., Ahola & Mesikämmen 2003). The Bologna declaration presupposes a bachelor's level degree as the general basic degree in European Higher Education. National higher education systems should therefore adopt two main cycles—undergraduate and graduate—with the successful completion of the first cycle being a necessary requirement for access to the second cycle, and first cycle studies lasting three years at the minimum (ibid.).

Appendix Table A3 presents the main categories of degrees in the academic year 2003/2004 (the most recent point of time covered by the Eurybase when making this study). That the titles of “Bachelor’s” and “Master’s” are becoming more common in the country descriptions of the Eurybase-databank reflects increased European-wide harmonization. Nevertheless, policy actions aiming for harmonization and the speed at which

they are implemented varies substantially between countries. France, for example, still applies her own distinctive system despite France being one of the four countries (along with the UK, Italy and Germany) that started the harmonization process with the Sorbonne Declaration.

When comparing Appendix Table A1 with Table A3, the most notable difference between them is that a bachelor's degree has been introduced into the university sector in most of the countries and in some cases also into the non-university sector. Even though the national degree systems appear on paper to be much more similar in the academic year of 2003/2004 than in 1994/95, the real-life consequences of harmonization remain unclear. In Finland, for example, a bachelor's has been available for students from the early 1990s, but so far students have not appreciated it because they think employers prefer job applicants with a master's. The future will show to what extent students in Finland and elsewhere begin to appreciate first cycle degrees and make use of the earlier entry to working life enabled by this type of degree.

**Appendix Table A3.** *Basic higher education degrees in nine European countries in the academic year of 2003/2004.*

	Basic degrees in the university sector	Characterization of the non-university sector and basic degrees in this sector
Italy	<ul style="list-style-type: none"> <li>• Diploma universitario</li> <li>• Diploma di laurea</li> </ul>	Specialized high level music, art, religious sciences etc. institutions.
Spain	<ul style="list-style-type: none"> <li>• Diplomado</li> <li>• Licenciado</li> </ul>	Advanced Specific Vocational Training: <ul style="list-style-type: none"> <li>• Técnico Superior</li> </ul>
France	<ul style="list-style-type: none"> <li>• Licence</li> <li>• Maîtrise</li> <li>• DESS/DEA</li> </ul>	Business, management and engineering schools (e.g. STSs, Grandes Écoles, Ecoles Normales Supérieures)

**Appendix Table A3.** Continues

Austria	<ul style="list-style-type: none"> <li>• Bachelor's</li> <li>• Master's and diploma degrees</li> </ul>	Fachhochschule: <ul style="list-style-type: none"> <li>• Bakkalaureus</li> <li>• Diplom-Ingenieur</li> <li>• Magister</li> </ul>
Germany (year 2002/2003)	<ul style="list-style-type: none"> <li>• Bachelor's</li> <li>• Master's and diploma degrees</li> </ul>	Fachhochschule: <ul style="list-style-type: none"> <li>• Bachelor's</li> <li>• Master's</li> </ul>
Netherlands	<ul style="list-style-type: none"> <li>• Bachelor's</li> <li>• Master's</li> </ul>	HBO: <ul style="list-style-type: none"> <li>• Bachelor's</li> <li>• Master's</li> </ul>
UK	<ul style="list-style-type: none"> <li>• Bachelor's (etc. honours level first degrees)</li> <li>• Master's (etc. master's level second degrees)</li> </ul>	Higher education colleges and university colleges: <ul style="list-style-type: none"> <li>• First degrees</li> <li>• Taught (not research) master's degrees</li> </ul>
Finland	<ul style="list-style-type: none"> <li>• Bachelor's</li> <li>• Master's</li> </ul>	Polytechnics (institutions of vocational higher education): <ul style="list-style-type: none"> <li>• Polytechnic degree</li> <li>• Polytechnic postgraduate degree</li> </ul>
Norway (year 2001/2002)	<ul style="list-style-type: none"> <li>• candidatus magisterii (short degree)</li> <li>• candidate/magister (long degree)</li> </ul>	University colleges: <ul style="list-style-type: none"> <li>• college graduate or college engineer</li> <li>• candidatus magisterii (short degree)</li> </ul>

Source: *The Eurybase-databank*

Appendix B: OECD key higher education indicators  
and their statistical definitions

This appendix gives a brief introduction to the differences between the nine European countries in the terms of basic educational statistics. The following statistics are derived from the OECD's "Education at a Glance" publications from the time the respondents of the CHEERS survey got their degrees (i.e., 1995). Changes in the indicator values are reflected relative to the first years of the 21<sup>st</sup> century. This appendix also discusses how the OECD indicators are defined in statistical terms.

Of all the numerous international ranking and league tables, the statistical year-books and other publications by the OECD are arguably the main platform or media in which countries compete against each other. Thus, methods applied by the OECD strongly influence the national practices of statistical compilation. OECD statistics also have a strong undirected influence on higher education policies adopted nationally. For a country to gain a high ranking in the OECD statistics, it has to adopt policies and structures of its education system that are recognized by the OECD indicators. The following indicator definitions are extracted from the OECD Glossary of Statistical Terms.<sup>48</sup>

One of the most fundamental statistics in the OECD's educational comparisons is the proportion of people eligible to participate in higher education (or eligible to apply for access to higher education). An upper-secondary degree is the basic requirement for admission into higher education. In some countries this degree guarantees access without any additional entry examinations (see Appendix Table A2). Table A4 displays the proportion of 25–34-year-olds having at least an upper-secondary education. The nine country average of this indicator was 75 % in 1995; Spain and Italy were the only countries clearly below this average. OECD statistics typically consider various age groups, of which the 25–34-year-olds are the youngest. In all the countries, the share of people having at least an upper-secondary education is greater the younger the reference age group that reflects the growth in the share of people eligible to participate in higher education during past few decades (these statistics are not reported herein; see OECD 1997, Table A2.2a).

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<sup>48</sup> Available online <<http://stats.oecd.org/glossary/>>



Table A4 gives the proportions of people who have attained a university-level education. It is important to notice that most of the OECD statistics do not apply the term “higher education” but the more general term “tertiary education”. In earlier OECD statistics, such as those for the year 1995, tertiary education was divided into university and non-university education. Present statistics make distinctions between tertiary-type A and B education that are defined in the following way:

TERTIARY-TYPE A PROGRAMMES (level 5A in the ISCED-1997 classification) are largely theory-based and are designed to provide sufficient qualifications for entry to advanced research programmes and professions with high skill requirements, such as medicine, dentistry or architecture. Tertiary-type A programmes have a minimum cumulative theoretical duration (at the tertiary level) of three years’ full-time equivalent, although they typically last four or more years. These programmes are not exclusively offered at universities.

TERTIARY-TYPE B PROGRAMMES (level 5B in the ISCED-1997 classification) are typically shorter than those of tertiary-type A and focus on practical, technical or occupational skills for direct entry into the labour market, although some theoretical foundations may be covered in the respective programmes. They have a minimum duration of two years full-time equivalent at the tertiary level, and generally do not lead to university level degrees.

The earlier division between university level and non-university education is the same as the present division between tertiary-type A and B education; however, neither is the same as the division between university and non-university sectors applied in this study (and in higher education studies in general). In the OECD statistics, tertiary-type A education (as well as the earlier university level education) includes programs in the *Fachhochschule*, HBO, polytechnics and suchlike institutions in addition to traditional universities. Usually in higher education studies, all institutions other than universities are regarded as belonging to the non-university sector of higher education and thus are separated from the universities (see Appendix A). Table A4 as well as all the following tables consider only the university level (as regards year 1995) and tertiary-type A education (as regards year 2000 and later points in time), because this statistical classification corresponds best with the concept of higher education as applied in this study.

Table A4 displays the proportions of people in the adult population (25–64-year-olds) in 1995 who had completed university level tertiary education. Principally, it would be more interesting to consider the proportions of degree holders in the age group of 25–34-year-olds, as was the case earlier when the proportions of upper-secondary degree holders were considered. When discussing the growth in the number of degree holders, it would obviously become more visible when considering young age groups instead of the adult population as a whole. However, information on the number of graduates in the age-group of 25–34-year-olds is not available for 1995. When considering the whole adult population in 1995, the nine country average proportion of university level degree holders was 13 %. Only Austria was clearly below this average while the Netherlands and Norway were clearly above it.

In the OECD statistics, intake to higher education institutions is typically gauged with a net entry (or enrolment) rate that is defined in the following way:

NET ENTRY RATES represent the proportion of people of a synthetic age-cohort who enter the tertiary level of education, irrespective of changes in the population sizes and of differences between OECD countries in the typical entry age. The net entry rate of a specific age is obtained by dividing the number of first-time entrants to each type of tertiary education of that age by the total population in the corresponding age group (multiplied by 100). The sum of net entry rates is calculated by adding the net entry rates for each single year of age.

The third indicator in Table A4 is the net entry rate for university level education by gender. This indicator gives a prediction of how many of the secondary school leavers in 1995 are likely to participate in university level education during the course of their lives. Of the five countries from which these statistics are available, figures are greatest in the UK and lowest in Austria, the five-country average being c 33 %. In all of the countries from which there is information, entry rates are higher for women than for men. Differences between men and women are generally quite small, excluding Norway in which the discrepancy between genders is a staggering 10 % in favour of women.

**Appendix Table A4.** *Entry rates and tertiary/upper secondary education attainments in year 1995 (percentages).*

	Percentage of population with at least upper secondary education (25–34 year olds) <sup>A</sup>	Percentage of people in adult population (25–64-year olds) having completed university level education <sup>B</sup>	Net entry rates to university level education by gender <sup>C</sup>			Net enrolment to university level education in three age groups <sup>D</sup>		
			Men	Women	Total	18–21	22–25	26–29
Austria	81	6	25	28	26	12.6	14.1	8.5
Finland	83	12	m	m	m	12.3	21.8	11.2
France	86	11			33	m	m	m
Germany	89	13	27	28	27	7.9	15.3	9.5
Italy	49	10	m	m	m	m	m	m
Netherlands	70	22	32	36	34	23.2	18.7	5.6
Norway	88	18	20	30	25	9.5	17.9	7.7
Spain	47	12	m	m	m	24.9	17.3	5.5
UK	86	12	42	44	43	20.9	6.8	3.2
Country mean	75	13	29	33	31	15.9	16.0	7.3

Source. OECD 1997; A: Table A2.2a; B: Table C3.1; C Table C4.1; D: Table C5.2b.

m = information is not available

Table A4 displays the percentages of people enrolled in university level education in three different age cohorts. In Finland and Norway, and to a lesser extent in Austria, enrolment rate appears to be the highest in the middle age cohort (22–25-year-olds), while in the other countries it is the youngest age-cohort (18–21-year-olds) in which the participation is at its peak.

Tables 5a and 5b present the graduation ratios by level of degree and by gender in 1995 (cf. Teichler 2000, Tables II and III). Defining graduation ratios is difficult because in many countries the dispersion of graduates' ages is great and therefore it is difficult to suggest any typical age of graduation. As was discussed above (see Table A4), there are notable differences between the countries in which age group entry rates are the greatest; a wide dispersion on the enrolment age leads congruently to a wide dispersion of the graduation age. When considering multi-tier higher education systems, variation between individuals in the duration of studies is likely to be great since many people take more than just one degree.

The OECD statistics offer two kinds of graduation rates:

NET GRADUATION RATES are the percentages of persons within a virtual age cohort who obtain a tertiary qualification, thus being unaffected by changes in population size or typical graduation age. The net graduation rate is calculated by dividing the number of graduates by the population for each single year of age.

GROSS GRADUATION RATES refer to the total number of graduates (the graduates themselves may be of any age) at the specified level of education divided by the population at the typical graduation age from the specified level. In many countries, defining a typical age of graduation is difficult, however, because graduates are dispersed over a wide range of ages.

The net and gross graduation rates presented in Table A5a are quite close to each other in most cases. When considering short university degrees, the greatest graduation rate can be found in the UK. When it comes to long degrees, the graduation rate is the greatest in the Netherlands. The graduation rate of PhDs is the greatest in Finland. The largest difference between the net and gross graduation rates (4 %) can be found in Spain. The net graduation rate for Spanish long university degrees is 10 % while the corresponding gross graduation rate is 14 %. Enrolment in higher education grew strongly in Spain during the 1980s and 90s. This growth appears to be reflected more in the gross rather than in the net graduation rates, presumably because the typical age of graduation has changed due to widening participation. Net graduation rates should take into account changes in the typical graduation age as is the case, for example, when the growth in participation is unevenly distributed between short and long programs.

**Appendix Table A5a.** *Gross and net graduation ratios by level of education in year 1995 (GGR = gross graduation rate; NGR = net graduation rate) (percentages).*

	Non-university tertiary education	Short first university degree		Long first university degree		Second university degree		Ph.D. or equivalent	
	GGR	GGR	NGR	GGR	NGR	GGR	NGR	GGR	NGR
Austria	5	m	m	10	9	m	m	1.2	1.2
Finland	22	8	7	13	12	m	m	2.0	1.9
Germany	12	m	m	16	m	m	m	1.6	m
Italy	7	1	m	11	11	m	m	1.6	m
Netherlands	m	m	m	19	20	m	10.2	1.9	1.8
Norway	48	17	17	5	5	8.4	8.6	0.9	0.9
Spain	2	10	9	14	10	m	m	0.9	m
UK	17	31	30	m	m	11.2	10.9	0.9	1.0
Country mean	16	13	16	13	11	9.8	9.9	1.4	1.4

Source. OECD 1997, Tables G2.1 and G2.2.

m = information is not available or the category doesn't apply

**Appendix Table A5b.** *Gross graduation ratios by gender in year 1995 (percentages).*

	Non-university		Short first university degree		Long first university degree		Second university degree		Ph.D.	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
	Austria	3	7	m	m	10	9	m	m	1.7
Finland	14	31	10	6	11	14	m	m	2.2	1.7
Germany	11	14	m	M	18	14	m	m	2.1	1.0
Italy	5	9	1	1	10	12	m	m	1.8	1.7
Netherlands	m	m	m	m	18	20	m	m	2.2	1.5
Norway	42	53	12	23	5	6	9	7	1.2	0.5
Spain	2	2	8	13	12	16	m	m	1.0	0.7
UK	12	22	30	32	m	m	11	11	1.3	0.6
Country mean	13	20	12	15	12	13	10	9	1.7	1.1

Source. OECD 1997, Table G2.1.

*m* = information is not available or the category doesn't apply

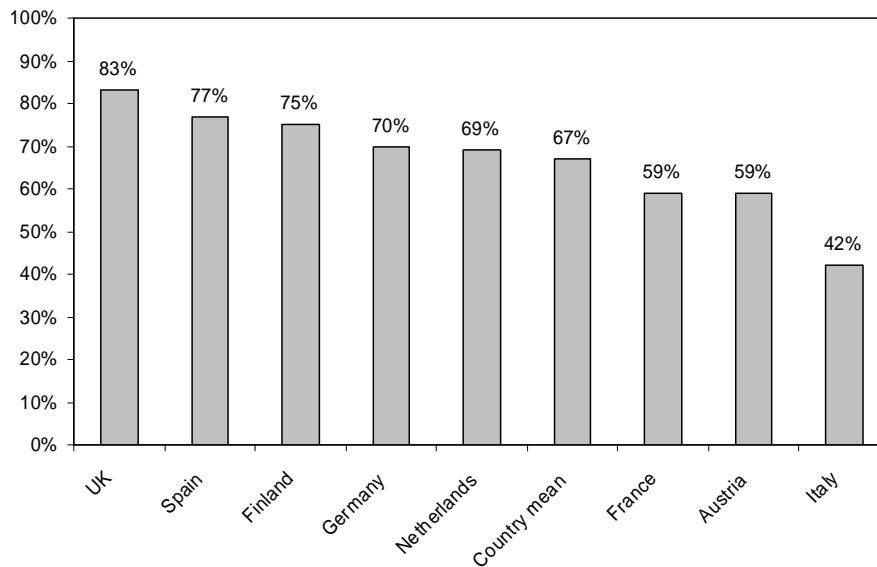
Table A5b shows that graduation ratios in the non-university sector programs and short first university programs are clearly greater for women than for men in most of the countries. Differences between the sexes are generally smaller when considering long first degrees. It seems, according to Table A5b, that the proportion of men is higher when the time to obtain the degree is longer: in all countries the number of men awarded a PhD or equivalent is higher than that of women (cf. Teichler 2000).

An often discussed phenomenon in higher education studies is the so-called “drop-out” that refers to students not completing a degree. Dropping out is an ambiguous phenomenon because the duration of the degree-earning process varies a lot between individuals; it may literally be a life-long process. Dropping out can therefore be defined only in relative terms: as a proportion of students that does not complete a degree by a given time or age. The OECD statistics do not usually present drop-out rates, but survival rates. A survival rate is the counterpart to the drop-out rate, and it is defined in the following way:

SURVIVAL RATE at the tertiary level is defined as the proportion of new entrants to the specified level of education who successfully complete a first qualification. It is calculated as the ratio of the number of students who are awarded an initial degree to the number of new entrants to the level  $n$  years before,  $n$  being the number of years of full-time study required to complete the degree.

Figure A1 presents survival rates in tertiary type A education in eight European countries in 2000 (there is no information from Norway). Information on the survival rates is not available from 1995 so it is not possible to make comparisons between the two periods of time. Figure A1 suggests that in 2000 the ratio of graduates to new entrants was highest in the UK (83 %) and lowest in Italy (42 %), the eight-country average being 67 %. Survival rates appear to be lower in countries in which an upper-secondary degree largely guarantees access to higher education for everyone willing, as in Italy, France and Austria. It seems, then, that the more open is the access to higher education, the lower are the survival rates. However, this conclusion should be taken with some reservations because there are counterexamples to it, such as Spain (relatively open access with a high survival rate). It is also

important to keep in mind that low survival rates could be due to students prolonging their studies instead of not finishing their degrees.



**Appendix Figure A1.** *Survival rates in tertiary-type A education in year 2000*

Source: OECD 2004, Table A3.2

Table A6 depicts the changes between 1995 and early 2000 with three indicators: the proportion of upper-secondary degree holders in the age group of 25–34-year-olds, the proportion of degree holders in the adult population and the net entry rates. The year of reference for 1995 is either 2000, 2001, or 2002, depending on the period from which there are comparable indicators with the year 1995. According to Table A6, the proportion of upper-secondary degree holders among 25–34-year-olds has risen substantially only in Italy and Spain, but has decreased in some countries. When considering Italy and Spain, despite the catching up, they are still well below the nine-country average. A decrease in the proportion of upper-secondary degree holders in France, Germany and the UK is better explained by the changes in educational classifications than by an actual decrease in participation. The



2001 statistics no longer include some short programs (of the ISCED 3C-level) which do not prepare students for studies in tertiary education.

According to Table A6, the proportion of degree holders in the adult population has risen the most in Norway, the UK and Spain, the nine-country average growth being 3,1 %. Although there has been growth in all of the countries except Germany, Italy and the Netherlands, it does not seem that the relative differences between the countries narrowed much. That is, the countries which were ahead of others in 1995 are the top countries in 2002. In the UK, the 1995 entry rate was at a level which most other countries did not reach until some ten years later. Hence, in the UK, the peak of enrolment and the phase of levelling off were reached earlier than in the other countries. Therefore, in the UK we can observe greater relative change in the share of degree holders than in the enrolment rate between the years 1995 and 2002. In the other countries, during this period the growth in participation was not yet reflected in the share of degree holders in the adult population, at least not to the same extent that it was in the UK.

There have been changes in educational classifications that explain, in some part, the growth of entry rates. Various programs which were not previously considered as higher education, or which were shorter than three years, have been updated to higher education since 1995, and new institutions have been founded (cf. Teichler 2000). Institutional upgrading and changes in the practices of statistical compilation relate especially to Finland. The phenomenal entry rate of 71 % in tertiary-type A education in Finland can be, to a substantial degree, explained by the fact that in Finland there were (according to this particular statistic) only type A programs. In the other countries (Austria excluded) tertiary education participation was divided between type A and B programs, though in all the countries type A programs were the majority.

**Appendix Table A6.** *Entry rates and upper-secondary/university level educational attainment in year 2000–2002, and changes from year 1995 level (percentages).*

	Percentage of 25–34-year-olds having at least upper secondary education <sup>A</sup>		Percentage of people in adult population (25-64-year olds) having completed tertiary-type A education <sup>B</sup>		Net entry rates to tertiary-type A education <sup>C</sup>	
	Year 2000/2001	Change from year 1995	Year 2002	Change from year 1995	Year 2000	Change from year 1995
Austria	83	+2	7	+1	33	+7
Finland	87	+4	16	+4	71	m
France	78	-8	12	+1	37	+4
Germany	85	-4	13	0	30	+3
Italy	57	+8	10	0	43	m
Netherlands	74	+4	22	0	51	+17
Norway	93	+5	28	+10	59	m
Spain	57	+10	17	+5	48	m
UK	68	-18	19	+7	46	+3
Country mean	76	0.3	16	3	46	7

Source. A: OECD 2002, Table A1.2; B: OECD 2004, Table A1.1; C: OECD 2002, Table C2.1,

m = information is not available

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