



TALLINNA ÜLIKOOL

Rahvusvaheliste ja Sotsiaaluuringute Instituut
Sotsiaalse stratifikatsiooni osakond

TöökõrgEEL toimetised nr. 7/2011

WHAT IS THE ROLE OF EDUCATION IN THE RECRUITMENT PROCESS?

Employers' Practices and Experiences of Graduates from
Tertiary Educational Institutions in Estonia

Ellu Saar
Marge Unt
Jelena Helemäe
Kaja Oras



Primus

ELLU VIIB SIHTASUTUS
ARCHIMEDES

Abstract

Since the 1980s, growing globalization and economic restructuring coupled with expansion of tertiary education contributed to tremendous change in the labour market entry process in Europe. Most previous studies have been quantitative, concentrated on the supply side and analyzed the role of education in the youth labour market entry as the explanatory variable of labour market outcome equations (Shavit and Müller 1998; Müller and Gangl 2003; Blossfeld et al. 2008; Kogan, Noelke, and Gebel 2010), but they did not address the mechanisms underlying these outcomes. The demand side, e.g. practices of employers, has gained less attention (see Jackson 2001, 2002, 2007; Jackson, Goldthorpe, and Mills 2002). In this paper using Estonia as a case study both perspectives - employers' practices and alumni experience – are combined to answer the question: how employers use, in the hiring process information provided by tertiary education credentials.

Our analysis is based on semi-structured interviews with the 15 biggest employers and focus groups consisting of 63 recent graduates from tertiary level institutions. The results reveal that in pre-selection using resumés, initially educational credentials were used as screening device, and subsequently the credentials of those who stayed in selection pool were examined to get more substantive information about candidates, especially in engineering.

Keywords: transition from school to work, credentialism, recruitment, tertiary education, employers

Introduction

It has been argued that in Europe the labour market entry process and a person's early career have changed tremendously since the 1980s. Major factors behind these changes are growing economic globalisation and economic restructuring (Blossfeld et al. 2008). As the upskilling of the occupation structure has occurred at a much lower speed than the expansion of education, highly educated young people face growing competition in the labour market. In addition, the economic crisis since 2008 has contributed to the rising unemployment rates of youth. Education could be considered the crucial resource of young labour market entrants as they possess no, or limited, work experience. Therefore, if we want to understand the role of education in the recruitment process, an analysis of the process by which recent graduates are assigned to vacancies should be the best way to reveal the role of education in this process.

There are several ways to conceptualize the role of education in the job matching process: human capital, screening, signalling, queuing theory, control, cultural capital, institutional, and credentialist theories (for in-depth overview see Bills 2003). In each, a different explanation is given, how employers and job seekers acquire and use information provided by educational credentials. But important changes have taken place since the theories were first advanced. Alterations in the employment structure and increasing flexibility of the labour market have been considered as important demand-side drivers of change in the linkage between jobs and credentials. Expansion of higher education brought about proliferation and diversification of educational qualifications (Bills 2003). With the growing diversification of both the supply of, and demand, in educational credentials, their role in labour markets is suggested to change as well (Bills 2003, Jackson et al 2005), becoming more diverse, and more context and time-sensitive (Bol and Werforst 2011; Brown and Bills 2011; Smyth and McCoy 2011).

Most previous studies have been quantitative and have concentrated on the supply side, analysing the role of education in youth labour market entry as the explanatory variable of different labour market outcome equations (see for example Shavit and Müller 1998; Müller and Gangl 2003; Blossfeld et al. 2008; Kogan, Noelke and Gebel 2010; Bol and Werforst 2011; Unt 2011), although they cannot demonstrate the mechanisms underlying these outcomes. However, the demand side, specifically the actions of employers, has gained much less attention (see Jackson 2001, 2002, 2007; Jackson, Goldthorpe and Mills 2002). In order to understand the relationship between qualifications and employment, we need to study how employers use education credentials in the recruitment, assessment, and selection of new

employees. We concentrate on the labour market entry process at the micro level and juxtapose this with the perspectives of employers and tertiary graduates. How is the role of tertiary educational credentials in the recruitment process seen by both sides? Does it differ by the activity of employer or by the graduated field of study? Whether the hiring process during an economic recession differs during economic growth?

The aim of our paper is to put theories about the relationship between educational credentials and employment to a test while scrutinizing the employers' practices and tertiary graduates experiences related to the recruiting tertiary graduates. Why do we consider Estonia is a case study? The rapidly and radically changing institutional setting of former socialist countries created a context of 'natural' experiment of making hiring decisions under institutional uncertainty. Estonia is certainly context characterized by extreme uncertainty. Estonian labour market is one of the most flexible in the world (OECD Reviews of Labour Market..., 2010). Since the early 1990s, Estonian higher education has undergone rapid expansion and diversification that have resulted in uneven quality of education (Helemäe, J. and E. Saar 2011). Moreover, the field work of this study was conducted during the economic recession in 2009-2010, by which time Estonia had experienced one of the largest drops in GDP in Europe since the beginning of crisis in 2008. This dynamic case study enables us to explore the context- and time-dependency of interpretations of the role of education in post-graduate hiring.

Our analysis is based on various data sources. Firstly, we use semi-structured interviews with the 15 biggest employers across different economic activities. Secondly, we use focus groups made up of 65 recent graduates and in-depth interviews with graduates from tertiary level institutions who had unemployment experience.

Theoretical background

There are many theories of how education is linked to job assignment. We could say that in one extreme, there are theories which argue that the importance of education in job recruitment lays in its 'real' value, while the other end there are theories which stress the importance of education as a symbol *per se*. Along this continuum, human capital theory is positioned clearly at one extreme as it assumes that education provides marketable skills relevant to job performance (Becker 1964). The employers' aim is to maximise productivity, which makes the more highly educated applicants more valuable to employers. This theory has been criticised because it assumes perfect competition in the labour market or equal

access to information by employers and job seekers. The next closest to the human capital theory is the signalling or screening theory. Employers screen workers on the basis of the signals sent out by applicants (Arrow 1973; Grubb 1973; Stiglitz 1975). More schooling is seen as an indicator of some latent, desirable but unobservable, trait (for example ability, commitment, etc.) (Spence 1974; Arkes 1979). According to Bills (2003) the queuing theory of Thurow (1975) fits between the human capital and the screening models. This theory assumes that even if schools do not teach specific job-relevant skills, they do enhance the training potential of applicants, thus making education credentials a rational screen.

At the other end of continuum is symbolic theory that stresses the importance of education as a symbol *per se* (Bridges 1995). This idea is proposed by a credentialist theory that holds that education functions as a legitimised means of closure (Collins 1979). Qualifications give entrance to occupations (Weeden 2002). What matters is formal recognition of the completion of a certain education level. This means that normatively defined threshold points become valued in their own right. Education may be rewarded because access to occupations is regulated on the basis of qualifications (Brown 1995). Different authors have shown that employers often do not need the amount of education they state in their formal requirements (Berg 1971; Levin and Rumberger 1987). Instrumental credentialism characterises the orientation towards education that individuals might hold. It holds that people do not value education in itself but rather for the qualifications it brings (Fevre et al. 1999).

Institutionalist theory expresses the effect of schooling at an aggregate level. According to this theory the content of schooling matters less than the legitimising role of qualifications. As Meyer (1977: 59) claims “educational allocation rules give to the schools social *charters* to define people as graduates and as therefore possessing distinctive rights and capacities in society”. Qualifications must be made legitimate abstractions for the parties involved. Employers do not examine their own propensity to hire more highly educated workers but operate on widely shared societal assumptions about the appropriate relationship between schooling and job assignment. An important purpose of these abstractions is to create trust that the actors will perform according to given technical and moral expectations. Credentials are sources of power for individual holders insofar as they effectively block substantive judgments about their actual abilities (Brown and Bills 2011).

This theory provides an explanation for the mass production of credentials as well as credential inflation. Degrees lose their value when everyone obtains the same degree.

Employers are raising their employment standards, so to compensate for the loss of status people will invest more in education to distinguish themselves. As the importance of qualifications as determinants of access to jobs increases, the cost of not having them likewise increases (van der Ploeg 1994). Education expansion means that higher education is becoming a threshold for access to many jobs with some potential candidates never even coming to the attention of employers because they do not have higher education.

Contextualization of job assignment

None of above-mentioned theories had been unambiguously supported, and all face some critical evidence (Bills 1983, which might be explained by the differences in the contexts of the studies. There is growing consensus that the relationship between education and labour market is culturally and institutionally embedded and that strength and pattern of this relationship differ by contexts and periods (Shavit and Müller 1998; Müller and Gangl 2003; Smyth and McCoy 2011). The consensus refers to the idea that different components of country-specific institutional structure like training system, labour market structure, industrial relations and labour management are mutually interdependent and reinforcing. The consensus also refers to the idea that labour market behaviour might correspond to different mechanisms in different settings: some systems promote credentialist sorts of behaviour, while in others human capital processes seem to dominate (Bills 2003).

From the demand side, the job assignment process is suggested to be subjected to variable social constraints and pressures: e.g., from institutional infrastructure constituted by employment agencies, state regulation, union contracts (Bills 2003; Bol and Werfhorst 2011); from structural characteristics of labour markets (Werfhorst 2011; Jackson et al 2005; Smyth and McCoy 2011), etc. There is the well-established tradition in studies of youth labour market entry to explain the role of educational credentials in job assignment in the context of the segmented labour market (Doeringer and Piore 1971). The role of educational credentials proved to be much stronger in recruitment decisions made in occupational labour market (OLM) compared to the internal labour market (ILM). In OLM, the education system and labour market are closely connected and supported by standardised occupational norms present at the labour market, while in ILM the link between the education system and labour market is loose and training takes place at the workplace. Also, the distinct Southern European labour market entry pattern had been revealed, where both strong qualification and

strong experience effects occur in conjunction with very high unemployment risks in the beginning of work careers (Gangl 2003).

Werfhorst (2011) refers also to the kind of work tasks (production of goods versus production of services) as the condition influencing the role of educational credentials in the hiring. He found that the educational credential provided information about productive skills of potential employees in sectors involved in production of goods, while in case of work aimed at the production of services, education credentials confirmed trainability of job seeker (Werfhorst 2011).

In the context of the supply side, here the characteristics of the education/training system - first of all by qualification level and type (academic or vocational track), but also by field of study, and institutional differentiation (for example Smyth and McCoy 2011) - found to be of great importance for the prevailing practice of hiring. Thus, human capital theory is found to be applicable first of all to the institutional settings, where the supply side is characterized by highly vocational specific educational systems (Smyth et al 2001; Werfhorst 2011).

Important social changes have taken place since the theories were first advanced. Alterations of employment structures (growths of both a science-based, 'high-tech' or 'knowledge' economy and that of 'people' or 'high-touch' occupations - Jackson, Goldthorpe and Mills 2005) and increasing flexibility of labour market (Kalleberg 1996) triggered the change in linkage between jobs and qualifications. With the growing proliferation and diversification of the supply of educational qualifications, their role in labour markets is suggested to diversify as well (Bills 2003), while interpretations of this role are expected to have complex and context and time-dependent characteristics (Brown and Bills 2011). Thus, Jackson et al. (2005) suggest that the growing diversity of qualifications at all levels provides employers with a more 'noisy' (more difficult for them to interpret) signal than before. Although Jackson et al. (2005) do confer changes in demand reduce value of qualifications as indication of what they call 'certifying role' (specific forms of knowledge, expertise or skills - or - to put it in other way- 'productivity'). In contrast, Bol and Werfhorst 2011, interpret the growing diversity of qualifications in opposite way. They claim that more variability in degrees leads to better information on degrees (ibid: 122) which suggests that increases in the variation of qualifications develops their productivity-indicative power. This result might be, as Bol and Werfhorst 2011 explain, an aspect of diversification such as the "increasing

specialization”, while Jackson et al mean uneven quality of education or using Bills wording - wide variety of “educational experiences“ (Bills 2003: 457).

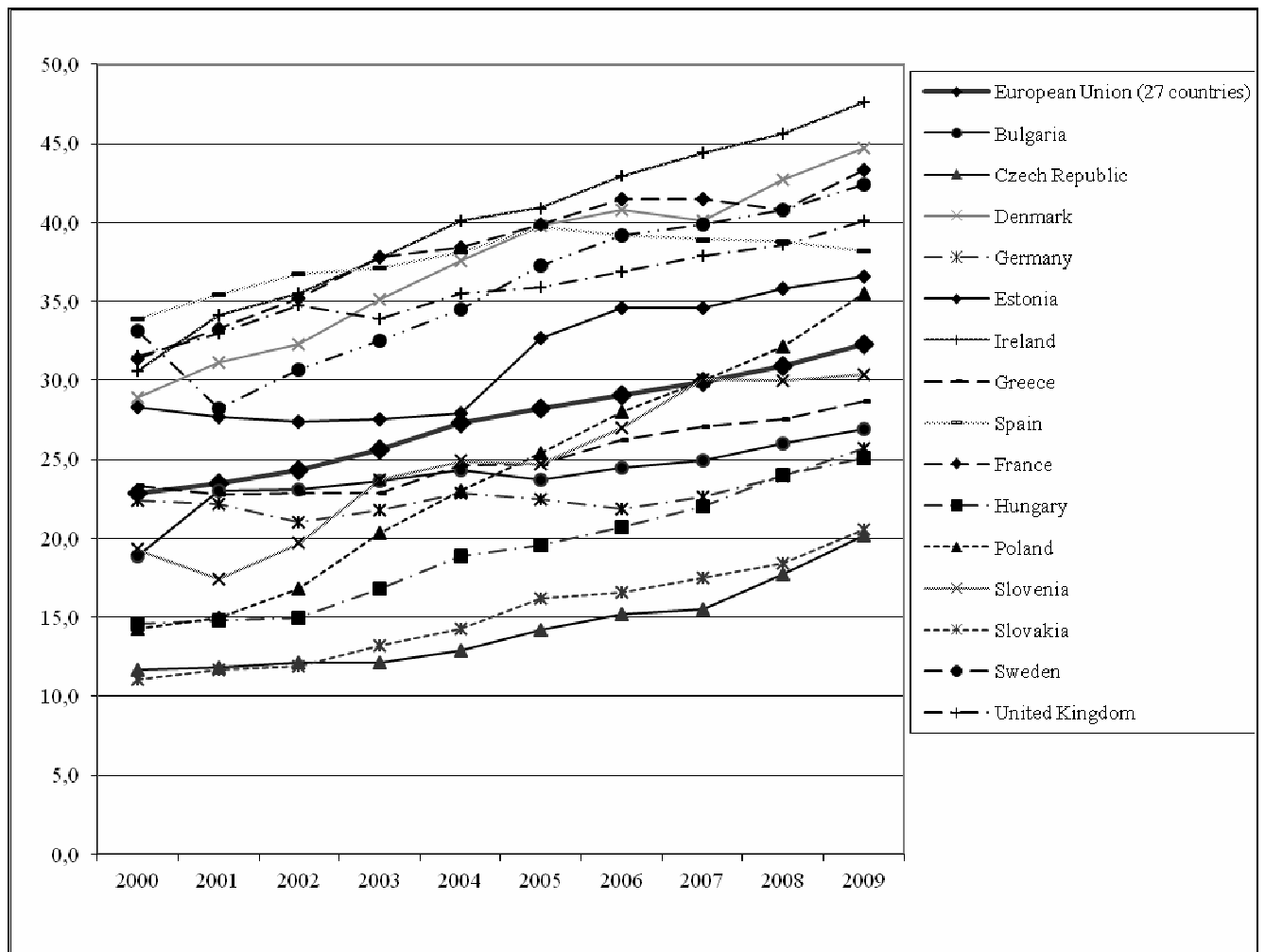
The economic cycle may also have an impact on job assignment (see Smyth and McCoy 2011). Employment prospects grew worse for all school leavers in periods of economic crisis although the relative advantage of those with a higher education tends to increase (Gangl 2002). The gap between the most and least qualified is seen to widen during recession (Wolbers, de Graaf and Ultee 2001).

Estonian institutional and economic context

During the Soviet period, the link between education and social status of jobs was even stronger than in Western countries (Solga and Konietzka 1999) as after vocational, specialized secondary and tertiary education, students were assigned to workplaces matching their educational level. However, the status match often tended to overweigh the skill match because planning guaranteed the provision of status-adequate job placements even without a skill match. This implied that young labour market entrants still needed substantial training at the workplace. During the early transition period, institutional links directing students to labour market were abandoned. Students had to develop their own strategies to look for a job and employers could apply their own criteria in deciding whom to hire. The early transition was a period when businessman without appropriate education might rapidly reach high status and amass fortunes or, in other words, entering employment as an under-educated person was a common reality (Kogan and Unt 2005). Still, since the mid-1990s, education has played a growing role in determining youth labour chances (ibid: 247), of which one contribution has been the expansion of tertiary education.

In Estonia during the 1990s, higher education underwent rapid expansion: the number of people who completed the first stage of higher education increased rapidly (from 18 percent in 1997 to 50 percent in 2006) (Veldre 2007, 6). In regard to the percentage of the 25-34 age group with higher education, Estonia is among those at the forefront of the European Union, although not at the top (see Figure 1). This percentage is higher in several EU countries, for example in Ireland, France, Denmark, Sweden, and the UK. However, compared with most Central and Eastern European countries, Estonia has more young people with higher education.

Figure 1. *Proportion of people with higher education in 25-34 age group in different European countries, %*



Expansion has been accompanied by a differentiation of higher education. Whereas higher tertiary education was standardised at the national level in the 1980s, the emergence of private tertiary institutions and the distinction between universities and professional higher-education institutions reduced the degree of standardisation. Hence, it is to be expected that graduates from tertiary education with equal qualifications will be differentiated by the institutions they attended. According to the typology offered by Arum et al. (2007), Estonia has a diversified higher-education system. While the primary tier comprises university courses, the secondary tier comprises both professionally and occupationally oriented courses, as well as more academic programs (professional tertiary education). First tier institutions are typically selective in terms of faculty and students ('status seekers') and enjoy higher prestige; the less-selective, less-prestigious second tier comprises many private institutions,

which rely on tuition for revenue ('client seekers'). Hence, it is to be expected that employers differentiate graduates with equal qualifications based on institutions they attended.

In Estonia the disruption of trade with the former Soviet Union created large shifts in the composition of the final demand for sectorial outputs in the 1990s. The proportion of the service sector increased, whereas the decline in the industrial and agricultural sectors accelerated. Estonia (as well as some other post-socialist countries) experienced a 'passive' structural change towards a service economy that was less borne by a real growth of service industries than an enormous shrinkage of primary and secondary sectors.

Estonia has a significantly higher proportion of unqualified workers in the workforce, while the proportion of white collar workers is notably lower compared with most European countries (Saar 2008). In comparison with the European average, the current structure of the production sectors and the technology used in them in Estonia is heavily based on blue-collar workers (Eamets 2008, 98). Data show that between 1990 and 2008 the percentage of lower white collars (clerks and service workers) and elementary occupations increased, while the share of skilled workers decreased (Helemäe 2011). Yet there was practically no change in the percentage of jobs at the top of the occupational hierarchy (those of managers and professionals) during the same period. It is true, the supply of educated labour has increased, but the demand for uneducated labour has not significantly changed. Therefore, there is a conflict between the current economic structure, which needs simple and cheap labour, and the relatively high educational level of the new workers, which will be added to the labour market in the next few years.

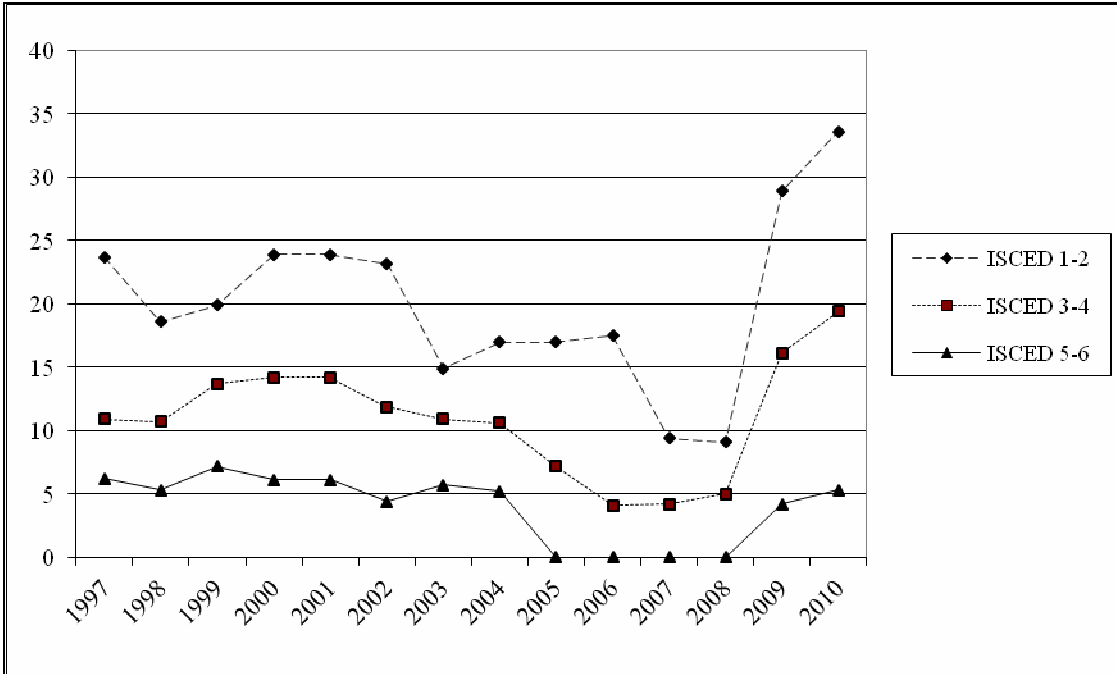
Our preliminary analysis has indicated that, after great changes in the 1990s, the Estonian institutional regime resembles that of liberal countries (e.g. the UK, Ireland) where there are many fewer institutionalised connections between education, training and the labour market, and where there is potentially more open competition between those with different levels and types of qualification for the same positions – i.e., with a less segmented labour market (Täht, Saar and Unt 2008; Saar 2005). However, the position of the UK along the ILM/OLM axis has been an issue of some debate¹. Results of cluster analysis conducted by Gangl (2001) indicate that the UK and Ireland belonged to ILM cluster with France and Belgium. On the other hand, some Estonian features are close to southern European countries, especially strong insider-outsider logic that decreases labour market flexibility (Täht and Saar

¹ Some authors (see Kerckhoff 1995) argue that the institutional context in the UK is close to OLM, while others (Soskice 1993) disagree.

2006). We suppose that in the 2000s, the Estonian pattern will combine elements present in both ILM and OLM arrangements, despite currently being more similar to ILM context.

At the beginning of the 2000s Estonia witnessed an economic boom. The GDP grew 2.5 times in the 2000-7 period, and in the context of the European Union the GDP per capita increased from 4 per cent to 70 per cent of the average of EU countries during the same period (Trumm 2010, 61). By the end of this period (2007), the boom was at its highest and a shortage of labour supply rather than a supply of the unemployed drove the mechanisms in the supplier-directed labour market. Economic growth had started to slow down by the end of 2006, and at the beginning of 2008 GDP started to decline. As a result, the GDP decrease reached 15.1 per cent in the first quarter of 2009 (see Helemäe and Saar 2011). These developments have also had a significant impact on the labour market. The unemployment rate increased 16.9 percent in 2010. This percentage was among the highest in the European Union countries. However, data on the unemployment rate indicate that during the economic crisis the main losers have been young people with a lower level of education (see Figure 2). The unemployment rate of 25-34 year-olds with higher education has increased only slightly.

Figure 2. Unemployment rate of 25-34 age group according to education level, %



Methodology

The empirical analysis of the current paper is based on semi-structured interviews with business and administration, and engineering graduates, and with large Estonian employers carried out during the economic recession, in 2009-2010.

In the **graduate survey**, we decided to opt for focus group interviews in order to promote discussion among different viewpoints. We chose mixed groups of business and engineering graduates in order to reveal the similarities and differences between fields of study in live discussion. We defined the fields of study based on the International Standard Classification of Education (ISCED) 1997 (Eurostat 1999). This has three levels: broad (1-digit), narrow (2-digit) and detailed (3-digit). We decided to concentrate on two sets of curricula that belong within business and administration (ISCED 34), and engineering and engineering trades (ISCED 52). There are two major reasons why we opted for these fields. Firstly, as we were interested in feedback from fields of study that are prioritised by the state in contrast to fields that expanded most due to student demand. Engineering fields are put on the agenda in strategic documents and the highest proportion of state-supported students study either engineering, manufacturing or construction (22% of all state-supported study places). The field of business is one of the most popular among students. 40% of students study the social sciences, law or business, generally covering their study fees themselves. Despite more and more students opting for this field, the state has decreased its support. The second reason for selection was that we wanted to contrast the opinions of graduates from more generally oriented curricula with those of graduates from more occupation specific curricula.

We included in our sample higher education institutions with different type of degree and ownership. We had graduates from private/public applied higher education institutions as well as from private/public universities. 14 focus groups were carried out in the second half of 2009 with 65 graduates. We interviewed 37 men and 26 women, 41 from the business and 22 from the engineering fields of study. Focus groups were organised as semi-structured interviews, although the order of the main topics and concrete set of subtopics varied according to the dynamic of the specific focus group. The graduates were asked about their motives for entering higher education, and about their studies and experiences in entering the world of work.

In addition to the **graduate survey**, we conducted in-depth interviews in 2010/2011 with graduates who were unemployed or had experienced unemployment. We contacted people who were looking for a job via a web-based recruitment service (CV-Online). We

filtered their CVs according to the following criteria: higher education (either BA or MA), degree in economics or technical fields, and CV updated at least 6 months ago. There were 350 graduates from economics and 15 from technical fields. We had to apply the last criterion (graduation time: 2008-2011) manually and were left with 52 graduates from economics and 4 from technical fields.

In the **employer survey**, we used the “Development of Competences in the World of Work and Education” study from the “Higher Education as a Generator of Strategic Competences (HEGESCO)” project (for details see <http://www.hegesco.org>) as a methodological standpoint. This project dealt exactly with the topics of our interest: employers' perceptions of graduates and their qualifications; recruitment strategies and cooperation with higher education institutions. The HEGESCO project study was carried out in Lithuania, Poland, Hungary, Slovenia and Turkey as semi-structured interviews with 15 large employers and 15 leaders of higher education institutions. We used the sample selection criteria as well as the central part of the interview in order to have comparative material available. Employers were selected based on NACE Rev.2 (Eurostat 2008) from Estonian Business Registry data. All sectors were covered, except agriculture, forestry and fishing, mining and quarrying as very few graduates start their careers in these sectors. Altogether, 15 interviews were carried out in 2010. We had private companies and public institutions in our sample. Private companies were based on local as well as international capital. In larger companies, a different department deals with human resource (HR) questions. Therefore, most interviews were carried out with the head of the HR department; only one interview was with the company owner. The background of the interviewees varied: they were graduates of physics, law, economic, communication, etc. The reason for the mixed background is mainly because they work in an area that is new to Estonia: there were no HR curricula before the 1990s.

We use direct quotes from interviews in our article. These are word-for-word transcriptions, reflecting the spoken language. In text analysis, Nvivo 8 is used.

Results

Changes in the labour market and the role of educational credentials

While providing the context information along the timeline in transition countries, it's crucial to differentiate between the two kinds of *changes*, which have taken place. First, and the biggest change, was transition from one institutional order to another at the beginning of the 1990s. Claus Offe (1996) calls it a triple transition as profound changes took place in the economic, political and social spheres, which touched all areas of life. Secondly, the type of changes can be observed since early and mid-1990s, since when developments in Estonian economy are directly influenced by the state of the global economy, meaning that business cycle effects started to directly affect labour demand. As mentioned above, because of the small and very open economy, Estonia is very sensitive to cyclical unemployment. Because of business cycles, many firms reduce demand for input, including labour, in recession periods when production declines. In such a context, the timing of labour market entry might play an especially important role.

In our interviews, the heads of human resource management (HRM) referred to the changed role of education during the both periods: after the regime change and after the economic crisis. When talking about the role of education after transition, HRM often referred to their own experiences when looking for a job. After the shift from a planned to a market economy, the need for new specialists, such as marketing or human resource managers, arose, although at that time no one was educated in these fields. Therefore, it was possible to make rapid career progress in these developing areas without proper education.

What is unique to Estonia is in general this: that well, actually let's say years ago, higher education was not at all for anyone any kind of determining factor. There were new areas that had never existed before, like marketing and well ... such things. Since there were almost no such specialists from our parents' generation, who were capable of working in such fields. At that time young people just got so high up so quickly in their careers – I myself am from the same generation, you know. Back then it was so that just the fact that you were a first year economics student meant that you were ready to be a businessman.

Head of human resource department, real estate company

Thus, during the transition from Soviet rule the breakdown of the normally observed stratification mechanisms contributed to the vague role of education. During that period the education system was unable to respond immediately to its changed role in the market economy, while reforms of the education system certainly lagged behind the rapid changes in

labour market institutions (Kogan and Unt 2005). The quote above is also an interesting example of how the link between capability and education is constructed: the older generation is approached on the basis they could not be capable of working in new fields because they've not got the "appropriate" education, while for the younger generation a lack of education was not seen as sign of lack of capability.

Influence of the second – short-duration - type of change (i.e. labour market fluctuations) on the role of educational credentials on labour market entry during the boom and recession years was discussed in detail in the focus groups by recent graduates as well as being pointed to by HRM. The alumni in our sample graduated during the years 2007–9, when the economy's extremely rapid growth was replaced with a sharp economic downturn. Graduates had experienced these changes themselves in their job searches and therefore were very willing to reflect on this. Graduates clearly contrasted the context of growing unemployment and severe budget cuts at the end of 2009 to the boom years, when rather the shortage of labour influenced recruitment requirements. During the economic boom, especially in the areas of higher labour shortage, qualifications did not play a crucial role in hiring.

Although I went with a CV, though I was a candidate there, ah but well, the time was two years ago, it was right at the point when the shortage of labour was at its highest, one could say everyone was being hired, really any candidate, well in the first place there weren't actually that many candidates, and the employer didn't pay any attention at all actually to what major I graduated with, we had the interview and based on that he then decided, that I was a prospective employee, and I was accepted for the position.

Field: technical engineering. Acquired education: applied higher education: Public higher education institution

During a time of economic downturn and unemployment, employers have the opportunity to choose employees from a significantly higher number of job seekers. In addition, the number of those with a higher education has grown from year to year, which might also increase competition among graduates.

Most university graduates who have unemployment experience indicate a devaluation of bachelor degrees. They are very sceptical about the role of a BA degree in getting a job.

Interviewer: When you think about the labour market: what matters in finding a job nowadays?

It's still higher education... that you have this piece of paper and preferably higher than bachelor's.

Field: economic, acquired education: BA, private higher education institution; is acquiring MA

In my mind, university education now shows that you have had the stamina to simply drag yourself through some institution at one point in your life.

Field: technical engineering, acquired education: B.A; is acquiring MA; public university

They emphasise that a Master's degree might be a sign of perseverance as well as of ambitions.

... most high school graduates go to university, most of them receive at least their Bachelor's. Fewer go to get their Master's. In fact, bachelors are all over the place. It's essentially the same as if nobody went to college at all. Competition is so intense because everyone has the same education. To stand out from the masses or to show that you're smarter or have invested more into your education, you have to get a Master's degree. Although even this won't guarantee a thing...

Field: economic, acquired education: BA, private higher education institution; is acquiring MA

...Every other person has a BA in Estonia. It takes more persistence and work to acquire a Master's degree. If I were an employer, I'd definitely prefer a person with a Master's degree.

Field: economic; acquired education: B.A.; public university

Graduates also stressed that to get some positions or to participate in public procurement you should have an MA degree.

Next, we will turn to the role of education in the recruitment process during the economic crisis in 2009-2010 in Estonia, as perceived by employers and graduates.

'Sorting' as an attribution of moral and intellectual failure: Higher Education as a filter in the pre-selection process

We concentrate on the role and role of qualifications in two stages of the recruitment process: the pre-selection of resumes, and the job offer. This distinction arises from our empirical material because interviewees themselves constantly stressed the different function of qualifications in the pre-selection process and in the job offer. Employers and graduates shared common views about the role of education in the pre-selection process.

A Higher Education credential is perceived to act as a primary filter with respect to a number of occupations. This stage of the hiring process is presented by both parties as kind of legitimate negative sorting: the lack of an education, especially in the case of the economic fields, may exclude one from getting past the screening competition. In the context of a high number of candidates, HRM turn its attention first to formal indicators, for example to the possession of a higher education degree. It does not denote absence of interest in candidate's other expertise, abilities and motivation. In the context of a high number of applicants, a

degree has become a quick 'sorting criterion'. Failure to get a higher education as conceptualised by the evaluators, was an indicator of intellectual failure. Even if some employers and graduates recognise the limitations of this first sorting criterion, they still believe that this is the most rational way to deal with high numbers of job applications.

Especially right now, I suppose, yeah, if there are 100 applications that come in, then the first thing I do, I immediately get rid of those who don't have any higher education, because in any case about twenty of them do have a higher education and if they already have it then it implies that they have pursued it and they want to be better than the others. Perhaps I do throw to the side someone who would be awfully good; however, he hasn't been successful in getting a diploma ... but you just have to make a choice.

Field: technical engineering. Acquired education: applied higher education. Public higher education institution, now working as a manager

You don't get any idea about a person's expertise only on the basis of a CV. Rather it's just an indicator or some kind of filter, on the basis of which in general to invite someone to an interview and more specifically to find out, whether he has those real areas of expertise or not. But that pile, that big pile of CVs which just swamps the managers ... and you can't completely find out about everyone and then you need that first filter just to move them along and when a person has a high-school education or a higher education then you make that [choice-author's addition] quickly and then move forward.

Field: economics. Acquired education: B.A. Public university, now working as a manager

One university graduate with unemployment experience indicated that she did not get the job because she did not have a diploma at this time.

I guess I didn't have a diploma yet. That's the first thing they look at when there are many candidates. If some have diplomas and others don't – no matter whether you haven't written your thesis or you have more stuff left to do – having a diploma is decisive.

Field: economic; acquired education: B.A.; public university

At the same time it was pointed out that higher education is not always necessary for some jobs, although it is required in job offers. It is used as a means to lower the number of candidates – that is, as a means of preselection.

The majority required higher education but I don't know if it's really necessary for doing that job. Secretaries, for instance... they do hire people without higher education, don't they. I guess it's there to somehow sort out the better ones. As there will be high demand, let's add this higher education thing.

Field: economic; acquired education: B.A.; public university

At the same time, having an higher education credential is necessary, but not always a sufficient condition to avoid being filtered out as inappropriate during the sorting process. Both parties, graduates and employers, pointed out that the value of a degree might depend on the type of higher education institution from which it was obtained. The fact that one has a degree from a particular university may turn out to be essential in getting a job interview

invitation. Alumni have experienced that in some job advertisements it is openly noted that degrees from certain higher education institutions only are expected. Thus, employers approach and respond to the uncertainty resulting from broadening of the tertiary education system, as a ‘diversification of education quality’ by comprehensively relying on information conferred by educational credentials. Employers introduce the source of credential as additional criteria of sorting out “inappropriate” candidates. In the opinion of the alumni, this behaviour has several causes. Firstly, possible earlier good or bad experiences with specific university graduates influence the recruiter’s future decisions. Secondly, depending on the job content, those who have applied higher education are sometimes preferred, while at other times those who have an academic higher education are preferred. In addition, employers highlighted the ‘two-tier’ system of Estonian higher education: more competitive public universities versus less competitive client-seeking private universities. For a high rank position employers usually expect a public university degree from an applicant. It is noteworthy that the employers who prefer first tier graduates from more competitive public universities do not connect the preferred degree with better skills, but rather express their trust in the sorting power of education institutions. According to this logic the public universities’ ‘bar’ for admission is higher and their students are ‘smarter’.

I myself saw on the CV website that some firms were offering work and underneath was written: those who have graduated from X or from Y universities [private higher education institutions], please do not call. So blunt and to the point. What kind of university you go to is essential.

Field: economics. Acquired education: B.A. Public university

Somehow it has turned out that Z (a public university) is more trusted. It may even be that the education is not necessarily better but... people trust it more. A better known and larger school – and the more reliable for that.

Field: economic; acquired education: B.A.; public university

One graduate of a private higher education institution deemed it necessary to emphasise that it is not a mediocre school but one with a rather quite high reputation among employers.

I’m quite satisfied with education from W (a private university). Later I have heard from employers that the reputation of W is not so bad as some may think. That some good people have come from there...

Field: economic; acquired education: B.A.; private higher education institution

In addition to being an indicator of potential intellectual deficits, the decision to go to a private higher education institution was perceived as evidence of moral failing, such as faulty judgement or a lack of foresight on the part of the student.

The one who hasn't gotten in /.../ like into proper universities, in that case arises the question of whether he has some shortcoming or why. Well surely a diploma alone does not give any kind of guarantee, but it is a prerequisite that shows that this person by being admitted and by persisting in school has been perhaps a little bit better than the one who has thrown up his hands and given up and well, wasted his time and money studying somewhere in U [a private higher education school].

Owner, law company.

Thus, while the additional criteria of sorting out the “wrong” job seekers was seen as legitimate way of dealing with uncertainty by both parties, it was for different reasons. Employers tended, from the mere fact that credentials obtained from the “wrong” (less competitive) educational institution to jump to far-reaching conclusions not only about skills and trainability but also about personality. Graduates might understand that an employer’s introduction of additional criteria of sorting out is a way of the dealing with uncertainty, but did not recognize that behind this criteria is not so much search for information as ranking of institutions based on their prestige. Graduates are also hardly aware about the negative attributions to applicants made by employers on the basis of the “low” rank of a tertiary institution.

The first stage of the hiring process seems to resemble a filtering model (Arrow 1973), where higher education serves as a screening device because it sorts out individuals of differing abilities, so that employers get better workers. Moreover, interpretations on both sides are in line with Arrow’s proposition (1973) that higher education offers a double filter, forcing graduates to signal their productive capacity twice: first, by being admitted to the “right” tertiary education institution and second, by graduating from it.

Signalling productivity: How education matters in getting a job offer: graduates’ view and differences by field of study

Now we turn to the second phase in the recruitment process. What role does education play in getting a job offer? Does it differ by field of study? Alumni from both economic and technical fields underline education as one of the most important criterion that employers evaluate in candidates. However, the role attributed to education differs quite remarkably according to the field of study.

Business and administration graduates emphasise education more as a formal indicator (a diploma) than its content. In their view, a person is hired with a definite level of education due to the overall norms. This reflects the way in which the company or institution has developed its human resource practices. The education qualification is delineated as a signal of personal quality characteristics (for example perseverance and stability) and also learning ability.

Learning ability was used by business and administration graduates as an explanation of why employers value education. Graduates argued that people from business and administration fields mainly possess general skills and acquire work-specific skills on-the-job. Alumni do not see their general curricula as a shortcoming, rather as a state of being of a small country that is unable to educate people for all possible job specialities. However, due to the rather general curricula, it is very important to be ready to acquire additional skills on the job. Despite this, even graduates who followed more specialised curricula with more clearly defined occupational outcomes (for instance, accounting and taxation) stressed the importance of company-specific knowledge. Therefore, business graduates perceive higher education foremost as the signal of an employee's learning ability, and take this as an indication of his/her potential to get by in new circumstances.

This also screens out those who are persistent and everything else. That you have in spite of everything been able to get a higher education, and it makes no difference in what field, you know. That you have something in your head.

Field: economics. Acquired education: B.A. Public university

I think also now, when a person is hired for a position, because it's just essential, that this person would develop into the position and would learn quickly, because that expertise, which in the position is necessary, that expertise does not come from school actually.

Field: economics. Acquired education: B.A. Public university

But if you are looking for an employee and also you know, that he has a higher education, it means that he is capable of thinking independently. Exactly for that reason, that someone might think about me in the same way, I decided to get a diploma.

Field: economics. Acquired education: B.A. Private higher education institution.

Language of study: Russian

...it wasn't important which specific higher education you had, as long as you had it. It shows that you are a highly educated person, and that you have managed to make something of yourself.

Field: economic; acquired education: B.A.; public university

Engineering graduates also pointed out qualifications as an essential condition of employment. However, while business graduates emphasised the importance of education as a formal criterion for being a candidate for work, graduates of the technical fields emphasised

rather the importance of expertise and skills. Engineering graduates perceived the role of qualifications as confirmation of existence of certain field-specific skills.

The described difference is most likely caused by the contrast of the observed fields. Graduates from business perceive their curricula as rather general and place more importance on company-specific training. Graduates from engineering, on the other hand, perceive that they already obtain large amounts of necessary expertise and skills for work at school. This difference makes itself clearly explicit in the case of applied technical higher education.

We had it in our enterprise so that before anyone was hired, a diploma was not important. If it was seen that you have worked somewhere in a similar field, and that it seemed that you should indeed be capable ... and then many times that mistake was made. Now it has been said that no one is hired any longer without a higher education and he must be more or less a specialist. Even up to now they are still looking, there is always a lack of engineers.

Field: technical engineering. Acquired education: applied higher education. Public higher education institution

But I suppose that it's really preferred that a person has some knowledge of a specialisation. Some degree of special expertise must definitely be present.

Field: technical engineering. Acquired education: B.A. Public university

A degree shows that you have some knowledge which can easily be built upon.

Field: technical engineering, acquired education: B.A.; public university

Thus, discussion on general and specific skills referred to the human capital theory's terms and meanings. Graduates of both fields thought that employers value their educational credentials as signals of their 'real' productive capacity. Just as Welfhorst (2011) points out any difference is between service-providers (alumni from business and administration) and those involved in goods-production (engineers). The former emphasized the role of educational credential as signalling their "learning abilities/trainabilities", while the latter hoped that their diplomas conferred for employers some information about their specific job-related skills.

Interpreting signals of screening: How education matters in getting a job offer: employers' view and differences by the field of study

Employers' views also differed by their respective sectors, furthermore, a clear parallel with graduates' perceptions might be drawn. Companies connected with technical branches, valued more field-specific knowledge similarly to graduates from technical fields. In contrast, human resource managers from 'soft' sectors like the arts, entertainment and recreation, and also real

estate companies, stressed foremost the importance of qualifications as a certain threshold to enter the specific occupations. In areas where legal restrictions or licensing were present, as with education, medicine or in a law company, education was mentioned as a legal criterion for selection.

No, grades we, yeah, in that sense individually we don't even look at that transcript. So we say that an MA degree is required by law. We are not permitted to recruit teachers who do not have teaching qualifications. But the person himself is always more important than the degree.

Human resource manager, secondary school

On the basis that educational credentials are a necessary condition of hiring, it seems that for this human resources manager certain features of job seekers personality are important criteria of selection. Interestingly enough, alumni themselves did not talk about importance of certain features of personality in hiring process. We reveal such a difference between graduates and employers perspectives also in interpretations of the first stage of the hiring process. Thus, an initial conclusion is that in addition to educational credential, employers consider personality of job seekers to be an important criterion of selection, moreover, they use educational credentials as the basis for attributions. Contrary to employers, young job seekers themselves hardly recognize importance of personal traits as hiring criteria. Further research is needed to study, whether such an interest in personal traits of applicants is characteristic only for certain types of organizational cultures or it is wider trend.

Companies that hire graduates mainly from technical fields - like our three case studies from the electricity, gas, steam and air conditioning supply sector; the information sector; and the communication sector - stress more the specific knowledge gained during study. However, even in these areas not only is specific knowledge needed, but employers expect that it is certified by the education system, i.e. by a diploma. Some employers from more technical sectors also complained about the new Bologna system where three-year BA studies were introduced. They feel that students need more time to acquire a certain skill level.

Here we sense indeed a very clear distinction between an old four-year baccalaureate and today's three-year baccalaureate, /.../ that they have started to form their own opinions, that they already know something, but actually with a three-year baccalaureate in today's business there is very little for us to do. If we say that about 30 to 40 percent of the selection criteria is for us a university graduate's special expertise, then with respect to the three-year baccalaureate the expertise is, in general, not acquired.

Human resource manager, heating supply firm

It is interesting to note that employers do not stress the importance of grades of job applicants in the evaluation process. It is widely believed that education provides more general knowledge and that the 'real' training will take place at the workplace even in the technical fields. One could argue that employers' ignorance towards grades should be more prevalent in the internal labour markets where the link between the education system and the labour market is weak. Although not much attention is paid to grades, they might be requested as proof that the diploma is not a fake.

I don't look at them because, um...well, grades are each one's personal thing, usually we do ask for a grade transcript, because generally a diploma is not valid without a grade transcript and then it is confirmed, that it isn't a faked diploma, because we've received in our history quite a lot of faked diplomas too, you know.

Human resource manager, entertainment company

Conclusions

As noted by Brown and Bills (2011) “a precondition for the existence of credentials is that they must be made plausible, legitimate abstractions for the parties involved and the purposes at hand in order for them to work for all”. Our analysis indicates that in Estonia, the legitimacy of qualifications has been established. Employers create social structures and selection mechanisms that affect employment and promotion. We must note that our data came from employers’ and graduates’ perceptions and may be distorted as a result. However, both graduates and employers irrespective of their field of study or economic sector, perceived qualifications as a legitimate basis of screening during the recruitment process. We suppose that it is a sign of a credible result. A diploma, preferably from a ‘first tier’ selective public university will allow one to pass the first threshold in the application process. Even if human resource managers agree that some good applicants might be rejected by this strategy, they all agree that the first selection based on qualifications is the most effective way to ‘separate the wheat from the chaff’. This means that higher education qualifications function as a screening device and a basis for attribution of negative personal traits to sort out “inappropriate” applicants, and therefore, the costs of not having higher education credentials also increase.

However, this legitimacy might be under question if the broader context changes. Respondents pointed out that when the Estonian economy went through profound reforms with the planned economy being replaced by a market economy education played a different role. It was especially clear in areas where no specific education was offered by the education system, such as marketing or human resource management. Therefore, younger people were able to make their way to the top very quickly without a proper education. After the collapse of the Soviet Union, global economic ups and downs and the expansion of tertiary education have affected the role of education in the recruitment process. During the economic boom, a labour shortage offered good opportunities to graduates, although after the financial crisis that has developed since 2008, labour market opportunities have deteriorated. Employers can choose among a growing number of graduates for both reasons - due to increasing competition in the labour market during recession, and because of the growing number of graduates produced by the expansion of tertiary education. However, in conditions of higher education expansion, differentiation and horizontal stratification on the basis of a higher education institution’s status occurs (see also Gerber and Cheung 2008). Most potential candidates – those from lower-tier higher education institutions – never even come to the

attention of some employment managers. The evaluators relied on 'school' as a criterion of evaluation due to the cultural meanings and judgements they attributed to admission and enrolment at public universities. However, it seems that the evaluators may consciously or unconsciously legitimate their own success.

While the legitimising role of qualifications was agreed by all parties for the pre-selection of resumes, there were different, field specific, shades of opinion on the role of qualifications in obtaining a job offer. While graduates from economic fields mainly stress the signalling value of education, for example motivation and the ability to learn, graduates from technical fields also put emphasis on specific knowledge gained during study; employers from the corresponding sectors expressed similar views. Thus, our results confirmed Welfhorst's (2011) interpretation of a different role of education between service-providers (alumni from business and administration/firms in the service sector) and those involved in goods-production (engineers/firms in the secondary sector). The former emphasized the role of educational credential as signalling their "learning abilities/trainabilities", while the latter hoped that their diplomas conferred for employers some information about their specific job-related skills.

Despite the fact that qualifications have been accepted as a 'must' both by employers and graduates across all fields, grades are not considered of foremost interest. This is similar to results from the USA (Rosenbaum and Binder 1997; Rivera 2011) indicating that although employers look for possibilities to distinguish the best candidates, they find that traditional ways of reporting this by grade are untrustworthy.

The current paper specifically addressed the role of education in the recruitment process. Our intention was to shed light on the mechanisms underlying the process by which employers and job seekers interpret the relationship between education qualification and occupation attainment. Although the legitimacy of qualifications has been well established in Estonia, the interpretation of why this should be so differs by field of study and by sector. When pre-selecting resumes, education qualifications worked as a filter in decision-making, later on in the process, education has more substantive meaning, especially in engineering. In addition, one could argue that qualifications are more likely to serve as screening devices in internal labour markets where the link between the education system and the labour market is weak. In these labour markets employers use the education system rather as a sorting machine than a trustworthy certifier of any specific skill.

In the next step, we would like to address the job recruitment process in a more holistic way, as it was evident from interviews that non-meritocratic criteria play a significant part in the recruitment process.

References

- Arkes, J. 1999. What do educational credentials signal and why employers value credentials? *Economics of Education Review* 18: 133-41.
- Arrow, K. J. 1973. Higher education as a filter. *Journal of Public Economics* 2: 193-216.
- Arum, R. T., A. Gamoran, and Y. Shavit. 2007. More inclusion than diversion: expansion, differentiation, and market structure in higher education. In *Stratification in higher education: A comparative study*, eds. R. T. Arum, A. Gamoran, and Y. Shavit, 1-35. Stanford, CA: Stanford University Press.
- Becker, G. S. 1964. *Human capital: A theoretical and empirical analysis, with special reference to education*. New York: National Bureau of Economic Research.
- Berg, I. 1971. *Education and jobs: The great training robbery*. Boston: Beacon Press.
- Bills, D. B. 2003. Credentials, signals, and screens: Explaining the relationship between schooling and job assignment. *Review of Educational Research* 73: 441-69.
- Blossfeld, H.-P., S. Buchholz, E. Bukodi, and K. Kurz, eds. 2008. *Young workers, globalization and the labor market. Comparing early working life in eleven countries*, Cheltenham: Edward Elgar Publishing.
- Bol, T. and H. G. van de Werforst. 2011. Signals and closure by degrees: The education effect across 15 European countries. *Research in Social Stratification and Mobility* 29: 119-132.
- Bridges, W. P. 2000. Educational credentials and the labor market: An inter-industry comparison. In *Generating social stratification. Towards a new research agenda*, ed. A. C. Kerckhoff, 173-200. Oxford: Westview Press.
- Brown, D. K. 1995. *Degrees of control. A sociology of educational expansion and occupational credentialism*. New York: Teachers College Press.
- Brown, D. K., and D. B. Bills. 2011. An overture for the sociology of credentialing: Empirical, theoretical, and moral considerations. *Research in Social Stratification and Mobility* 29: 133-138.
- Collins, R. 1979. *A credential society. An historical sociology of education and stratification*. New York: Academic Press.
- Doeringer, P. B., and M. J. Piore. 1971. *Internal labor markets and manpower analysis*. Lexington: Heath.
- Eamets, R. 2008. Economic structure, labour market and education. In *Estonian human development report 2007*, ed. M. Heidmets, 97-102. Tallinn: Eesti Ekspressi Kirjastuse AS.
- Eyraud, F., D. Marsden, and J.-J. Silvestre. 1990. Occupational and Internal Labour Markets in Britain and France. *International Labour Review* 129: 501-17.

- Eurostat 2008. Statistical classification of economic activities in the European Community. Luxembourg.
- Fevre, R., G. Rees, and S. Gorard. 1999. Some sociological alternatives to human capital theory and their implications for research on post-compulsory education and training. *Journal of Education and Work* 12: 117-40.
- Gangl, M. 2001. European patterns of labour market entry. A dichotomy of occupationalized systems vs. non-occupational systems? *European Societies* 4: 471-94.
- Gangl, M. 2002. Changing labour markets and early career outcomes: Labour market entry in Europe over the past decade. *Work, Employment and Society* 16: 67-90.
- Gerber, T. P. and S. Y. Cheung. 2008. Horizontal stratification in postsecondary education: Forms, explanations, and implications. *Annual Review of Sociology* 34: 299-318.
- Grubb, W. N. 1993. Further tests of screening on education and observed ability. *Economics of Education Review* 12: 125-36.
- Helemäe, J. 2011. Intragenerational mobility under conditions of rapid neoliberalization. In *Towards a normal stratification order. Actual and perceived social stratification in post-socialist Estonia*, ed. E. Saar, 83-110. Frankfurt: Peter Lang.
- Helemäe, J. and E. Saar 2011. Institutional and ideological foundations of marketization. In *Towards a normal stratification order. Actual and perceived social stratification in post-socialist Estonia*, ed. E. Saar, 33-60. Frankfurt: Peter Lang.
- Jackson, M. 2001. Non-Meritocratic Job Requirements and the Reproduction of Class Inequality: An Investigation. *Work, Employment and Society* 15: 619-30.
- Jackson, M. 2002. Explaining class mobility: Meritocracy, education and employers. D. Phil thesis. University of Oxford.
- Jackson, M. 2007. How far merit selection? Social stratification and the labour market. *The British Journal of Sociology* 58: 367-90.
- Jackson, M., J. H. Goldthorpe, and C. Mills. 2002. Education, employers and class mobility. ISA Research Committee on Social Stratification and Mobility, Oxford, April.
- Jackson, M., J. H. Goldthorpe, and C. Mills. 2005. Education, employers and class mobility. *Research in Social Stratification and Mobility* 23: 3-33.
- Kalleberg, A. L. 1996. Changing contexts of careers: Trends in labor market structures and some implications for labor force outcomes. In *Generating social stratification: Toward a new research agenda*, ed. A.C. Kerckhoff, 343-58. Boulder, CO: Westview Press.
- Kerckhoff, A. C. 1995. Institutional arrangements and stratification processes in industrial societies. *Annual Review of Sociology* 15: 323-47.

Kogan I., C. Noelke, and M. Gebel, eds. 2011. *Making the transition: Education and labour market entry in Central and Eastern Europe*. Stanford, CA: Stanford University Press.

Kogan, I., and M. Unt. 2005. Transition from school to work in transition economies. *European Societies* 7: 219-53.

Levin, H., and R. Rumberger. 1987. Education Requirements for New Technologies. *Educational Policy* 1: 333-54.

Meyer, J. W. 1977. The effects of education as an institution. *American Journal of Sociology* 83: 55-77.

Müller, W., and M. Gangl, eds. 2003. *Transitions from Education to Work in Europe. The Integration of Youth into EU Labour Markets*. Oxford: Oxford University Press.

OECD. 2010. Reviews of Labour Market and Social Policies: Estonia.

Offe, C. 1996. *The Varieties of Transition: the East European and East German experience*. Cambridge: Polity Press,

Pavlin, S. 2009. Report on the qualitative analysis of higher education institutions and employers in five countries: Development of competencies in the world of work and education. Available at http://www.decowe.org/static/uploaded/htmlarea/finalreportshegesco/Qualitative_Analysis_of_HEIs_and_Employers_in_Five_Countries.pdf [5 April 2011]

Rivera, L.A. 2011. Ivies, extraculliculars, and exclusion: Elite employers' use of educational credentials. *Research in Social Stratification and Mobility* 29: 71-90.

Rosenbaum, J. E., and A. Binder 1997. Do Employers Need More Educated Youth? *Sociology of Education* 70: 68-85.

Saar, E. 2008. Expansion of higher education and opportunities in the labour market. In *Estonian human development report*, ed. M. Heidmets, 20-27. Tallinn: Eesti Koostöö Kogu.

Saar, E. 2005. New entrants on the Estonian labour market: a comparison with the EU countries. *European Societies* 7: 513-46.

Shavit, Y., and W. Müller, eds. 1998. *From School to Work. A Comparative Study of Educational Qualifications and Occupational Destinations*. Oxford: Clarendon Press.

Smyth, E., M. Gangl, D. Raffe, D. F. Hannan, S. McCoy, and W. Muller 2001. *A comparative analysis of transitions from education to work in Europe (CATEWE): Final Report*. Report to European Commission.

Smyth, E., and S. McCoy 2011. The dynamics of credentialism: Ireland from bust to boom (and back again). *Research in Social Stratification and Mobility* 29: 91-106.

- Soskice, D. 1993. Social skills from mass higher education: rethinking the company-based initial training paradigm. *Oxford Review of Economic Policy* 9: 101-13.
- Spence, M. A. 1981. Signalling, screening, and information. In *Studies in labor markets*, ed. S. Rosen, 319-357. Chicago: University of Chicago Press.
- Stiglitz, J. E. 1975. The theory of 'screening', education and the distribution of income. *American Economic Review* 65: 552-578.
- Thurow, L. 1975. *Generating inequality*. New York: Basic Books.
- Trumm, A. 2010. Poverty in Estonia in the context of socio-economic situation. In *Poverty in Estonia*, ed. D. Kutsar, 54-63. Tallinn: Statistikaamet. [In Estonian].
- Täht, K. and E. Saar. 2006. Late careers and career exits in Estonia. In *Globalization, Uncertainty and Late Careers in Society*, eds. H.-P. Blossfeld, S. Buchholz, and D. Hofäcker, 301-23. London: Routledge.
- Täht, K., E. Saar, and M. Unt. 2008. Changing mobility regime in Estonia? Young people's labor market entry and early careers since the 1980s. In *Young Workers, Globalization and the Labor Market. Comparing Early Working Life in Eleven Countries*, eds. H.-P. Blossfeld, S. Buchholz, E. Bukodi, and K. Kurz, 311-32. Edward Elgar Publishing.
- Unt, M. 2011. Youth entry into the labour market and early career outcomes. In *Towards a normal stratification order. Actual and perceived social stratification in post-socialist Estonia*, ed. E. Saar, 111-42. Frankfurt: Peter Lang.
- Van der Ploeg, S. 1994. Educational expansion and returns on credentials. *European Sociological Review* 10: 63-78.
- van de Werforst, H. G. 2011. Skills, positional good or social closure? The role of education across structural-institutional labour market settings. *Journal of Education and Work* 24: 521-48.