

CHAPTER 13

Comparative analysis of education and labor market entry in Central and Eastern Europe

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1. Introduction

Past research on Western countries has shown clearly that the education system plays a central role in explaining not only variation in patterns of labor market entry, but also inequalities in educational attainment and social mobility (Breen and Jonsson 2005, Erikson and Jonsson 1996, Hout and DiPrete 2006, Müller and Shavit 1998). In this volume, we extend this research to Central and Eastern European countries, in one of the biggest comparative stratification projects to date. Studying the transition from school to work as well as social inequality in educational attainment, we have obtained important insights about education systems in Central and Eastern European countries and their capacity to prepare young people for the labor market. These issues are not only relevant to understanding how labor market chances and life course risks are distributed in CEE countries today, but also uncover central problem areas in policy intervention, for example in combating youth unemployment and better preparing young people for the labor market in a rapidly changing economy.

In our introductory chapters 1 and 2, we have drawn on theories and concepts developed by researchers dealing with social transformation, political economy, economics and sociology

of education and labor markets to conceptualize how exactly the transition from socialism to capitalism affects the transition from school to work, and how differences in educational institutions can explain variation in the labor market outcomes of young people. By studying these problems in Central and Eastern Europe, we also obtain more general insights about the role of the education system in structuring labor market entry.

Given rapid structural change, globalization and population-ageing, policy makers today face the difficult question of how best to prepare young people for productive labor market careers in a rapidly changing, knowledge-based economy. The experience from Western countries has shown that historically two main institutional solutions have emerged (Müller and Wolbers 2003). On the one hand, Central European countries, like Germany, Austria, and the Czech Republic, have developed diversified vocational education programs at the secondary level to prepare young people for skilled work positions in industry but also in services. On the other hand, Anglo-Saxon but also post-Soviet countries have expanded post-secondary and tertiary education, partly by facilitating the entry of private education providers, giving individuals access to higher education on a mass scale. These solutions have never been uncontested in the respective countries, and their relative advantages and drawbacks have figured prominently in public debates. We show that Central- and Eastern European countries have faced similar problems and developed comparable approaches in the education system. The success and failures of these models in CEE countries should therefore also teach valuable lessons for other countries.

In the following, we summarize some key results and conclusions from the chapters in this volume. Two key questions that guide our analysis pertain to the efficacy of both educational models, vocationalism at the secondary level and expansion at the post-secondary/tertiary level. On the one hand, we ask whether vocational education provides advantages relative to

general secondary programs. Past research on Western countries suggests that vocational education is particularly effective in integrating young people into the labor market, if the skills acquired in vocational programs match the skills demanded by employers (Kerckhoff 2000, Müller and Shavit 1998, Ryan 2001, Shavit and Müller 2000). Particularly the on-the-job training of vocational students can lead to the acquisition of up-to-date vocational skills and provide a screening opportunity for employers. However, school-based vocational education may be similarly effective, depending on whether or not skills acquired match employer demand. Hence, we have to ask whether the heavily centralized socialist education system could be reformed such that the different vocational education and training programs could be adapted to changing employer demand.

Second, while some countries adhered to the principle of vocationalism at the secondary level, other countries expanded the post-secondary and tertiary sector at a rapid pace. While this may have taken some pressure off the youth labor market during times of economic crisis, we have to assess the consequences of tertiary expansion and differentiation. Previous comparative research has analyzed the implications of these trends for the social selectivity of tertiary education (Shavit, et al. 2007, Stevens, et al. 2008), but large-scale comparative research on the labor market returns on different post-secondary degrees is still lacking, which is also true for Western societies. Available research suggests that the demand for higher education has been rising across the CEE region, but at times rapid growth tertiary education may have generated oversupplies. Furthermore, we need to take stock of the emergent heterogeneity of post-secondary educational degrees, in terms of their social selectivity and typical labor market outcomes.

We approach these questions from two perspectives. First, we will report evidence from cross-sectional analyses only, focusing on the most recent cohort of labor market entrants in

the CEE countries studied here (section 3). We will analyze the relative labor market outcomes among secondary graduates (section 3.1) and post-secondary graduates (section 3.2), finally providing an overall assessment of youths' labor market integration (section 3.3). In the second step, we will take a historic perspective to assess how the transition from socialism to capitalism and the post-transformation crisis have affected young people with different education, and to what extent changes in the education system triggered by social transformation can explain the variation we observe across cohorts (section 4). To set the scene, however, we will begin in section 2 with a comparative overview of the distribution of education attainment in CEE countries.

2. Education systems in Central and Eastern Europe

The basic features distinguishing education systems in CEE countries today were already laid out under socialism. While lower secondary education is traditionally unified until ninth grade¹, upper secondary education is highly stratified. With some qualifications (see Chapter 1 for more details), all CEE countries have developed a tripartite structure at the upper secondary level, distinguishing three main tracks: lower vocational, general secondary and upper vocational. Mobility between these tracks is limited, and tracks differ in their duration, curricula, and linkages to employers, quality and opportunities for access to higher education. Lower vocational programs generally do not provide access to university education and prepare individuals for less prestigious occupations, mainly semi-skilled and skilled manual work in agriculture and industry. Lower vocational schools were often attached to specific firms, which (partially) financed vocational schools and offered on-the-job vocational training for students. General secondary and upper vocational programs both give access to higher education, although general secondary is the traditional route to university. Compared to

¹ After 1989, some CEE countries partially abandoned lower comprehensive schools through the introduction of long general secondary schools (gymnasias) admitting students as early as age 10 (see Chapter 1).

lower vocational programs, upper vocational degrees give access to more prestigious, non-manual occupations, including technician and clerical jobs. A key difference among CEE countries, already present under socialism, is a stronger vocational orientation in secondary education of Central European countries compared to the Soviet Union. While particularly lower vocational programs are unpopular in the Soviet Union, they often account for the majority of labor market entrants in Central European countries. Under socialism, the tertiary education sector was, in general, rather small, exclusive and dominated by a system of traditional universities, technical universities and few vocational colleges. Tertiary education experienced intermittent expansion, but remained highly exclusive with enrollment rates below advanced Western countries. The principle of occupational specialization also persisted at the tertiary level.

The transition to capitalism provided a window of opportunity for change in the education systems in Central and Eastern Europe (see Chapter 1). While initial conditions differed and subsequent developments are characterized by path dependencies, we can observe common dynamics across the region. At least in terms of enrollment, all CEE countries have witnessed educational expansion at the tertiary level, which in some countries has grown at a speed hardly ever observed in Western societies. Educational expansion at the tertiary level at the same time has implied institutional differentiation. Expansion and diversification have occurred through the upgrading of (post-) secondary vocational oriented programs to tertiary level programs and through the emergence of private and public tuition-charging providers, particularly at the lower tertiary level.

At the secondary level, we have also observed substantial enrollment shifts mainly out of dead-end, lower vocational programs into secondary programs giving access to higher education. Furthermore, we observe the breakdown of employer involvement in lower

vocational programs. Employers have increasingly withdrawn from financing and especially from training lower vocational school students. Table 1 presents the outcome of these developments in terms of the distribution of educational degrees among the most recent cohorts of labor market entrants in ten CEE countries.

[Table 1 about here]

In East Germany, the Czech Republic and post-SFRY countries, we observe very high shares of graduates with vocational degrees among young people who enter the labor market with a secondary degree. Despite enrollment shifts out of lower vocational programs, more than 40% of recent secondary graduates still obtain the respective degree, which continues the pattern already observed under socialism. General secondary education, which constituted the central pathway to higher education under socialism, apparently continues to perform this function: the relative share of general secondary graduates entering the labor market is marginal suggesting that many of them do continue on to higher education.

This pattern appears to almost be reversed in the post-Soviet Union countries. Here graduates from general secondary and upper vocational programs represent the large majority of labor market entrants with a secondary degree. Lower vocational programs, which were already unpopular under socialism (Gerber 2003), play a marginal role nowadays. Poland and Hungary fall in between the post-Soviet countries and other Central European countries (East Germany, the Czech Republic and the post-SFRY countries). While at the time of transition, lower vocational programs were similar in size compared to the other Central European countries (see Baranowska 2008, Bukodi and Róbert 2008), their numbers shrunk rapidly after 1989, and currently more young people enter the labor market with a general secondary or upper vocational degree.

Furthermore, the absolute size of lower vocational programs is a strong predictor of the size of the tertiary sector. The more students enroll and graduate from vocational programs, which generally do not qualify for access to higher education, the lower the demand for higher education seems to be. Hence, we observe the largest shares of labor market entrants with tertiary degrees in Russia and the Ukraine and the smallest in East Germany and the Czech Republic. The latter two countries clearly stand out among the Central European countries we analyze with a small and exclusive tertiary sector that is dominated by traditional research universities (Table 1). In contrast, we observe an expanded tertiary sector in Hungary and Poland, where post-secondary vocational and lower tertiary tracks dominate. Countries of the former Yugoslavia, Serbia, Croatia, and Slovenia, form another cluster with strongly expanded higher tertiary sector. Finally, the countries emerging from the Soviet Union (Estonia, Russia and the Ukraine), are characterized by both expanded lower and higher tertiary education sectors.²

3. Transitions from school-to-work in Central and Eastern Europe

3.1. Labor market integration of youth with secondary education

This section pursues the question how differences in the education attainment across CEE countries translate into various patterns of school-to-work transitions. We begin with an analysis of labor market outcomes among young school leavers at the secondary level, first

² While this pattern is already visible in Estonian enrollment rates (Kogan, 2008), expansion is not yet visible in the Estonian analysis (covering the period until 2003) because many tertiary students temporarily entered the labor market before completing their tertiary degree or combined work and studies which delayed their graduation beyond our observation period (see Saar and Unt, this volume; Saar and Lindemann 2008). This delay in graduation age induced temporarily low graduation shares, which are similar in its size to East Germany and Czech Republic. Thus, the labor market performance of recent Estonian tertiary graduates has to be understood from the perspective of a (temporary) shortage and exclusiveness of tertiary graduates.

comparing graduates of general school to leavers of upper-vocational education. While many previous studies on Western Europe compared general and vocational graduates from different education levels (for a critique see Iannelli and Raffe 2007), we compare them at the same level. By doing so, we can try to single out the effect of differences in curricular content and vocational specificity, while controlling (in most cases) for the program duration and differences in opportunities to enter tertiary education.

Completing vocational programs should provide certain advantages over general education, because it should equip young people with job-specific skills demanded by employers. Employers should be more interested in recruiting young people possessing such skills, as it saves them training costs. One can expect that leavers of upper vocational programs enter employment quicker than graduates from general secondary schools, and this effect should be stronger in countries with higher occupational specificity of upper-level vocational tracks (*Hypothesis S[econdary]1*).

Since upper vocational programs are of similar duration and, like general secondary programs, also grant access to all forms of higher education, we expect no major differences in terms of occupational status between graduates from general secondary and upper vocational programs (*Hypothesis S2*). Some disadvantages for vocational graduates may emerge however, if they are often prepared for industry work, which has a lower socio-economic status than service sector work.

Next, we compare labor market prospects of lower and upper vocational school leavers. Compared to upper vocational programs, lower vocational programs are of a shorter duration, do not give access to higher education and traditionally train youth for blue-collar work, i.e. semi-skilled and skilled work in industry and agriculture. In contrast, upper vocational

programs prepare for somewhat more prestigious occupations, including white-collar jobs. Upper vocational programs have traditionally been school-based and comprise a substantial portion of general education, in order to prepare students for higher education, while also providing knowledge of a broadly defined vocational field. In contrast, lower vocational programs have traditionally combined school-based vocational education with work-place based training, preparing students for specific occupations. Training can take place sometimes in school workshops, but often also in enterprises, particularly in Central European countries following the German-Austrian tradition of the dual system. From these observations, we can expect that lower vocational programs should result in lower status occupations compared to upper vocational programs (*Hypothesis S3*).

Regarding job search duration, we may expect faster entries for graduates from lower vocational programs (*Hypothesis S4*), which, however, crucially depends on the country-specific institutional setting. As the studies in this volume have shown, lower vocational education has come under pressure to adapt as employment opportunities in industry diminished and links to employers broke down. In response to these challenges, countries developed a number of strategies to reform the lower vocational school sector and adapt to the changing circumstances (see Chapter 1). From a theoretical perspective, these efforts should have been particularly effective, if they could ensure employer participation in the design of curricula as well as in providing firm-based training to vocational students. Either mechanism should contribute to an advantage of lower vocational graduates, because they acquire up-to-date specific skill and/or because employers have a low-cost screening opportunity when they train students at the firm, eliminating information problems and speeding up labor market entry. As the country studies have shown, lower vocational schools particularly in the Central European countries as well as Croatia and Slovenia still managed to maintain ties to employers, through apprenticeship programs, dual system arrangements or schools' local

initiatives. Hence, if we observe advantages in terms of the speed of labor market entry for lower vocational graduates, they should manifest themselves in the Central European countries as well as Croatia and Slovenia.

Table 2 allows a multidimensional assessment of the differences between secondary school leavers from upper and lower vocational and general tracks for their labor market integration taking into account these students selectivity with regard to social origin.

[Table 2 about here]

In all countries except Poland, upper vocational programs are marked by a stronger persistence of social origin than general secondary programs. Young people graduating from upper vocational education are more likely to originate in families, in which parents acquired secondary education at the utmost. They are also more likely to be comprised of children of the least educated parents (with lower secondary education only). General secondary school leavers are more likely to come from families with tertiary educated parents. This might also indicate the fact that the level of education upon leaving continuous education for the first time might not be the final level of education attained by these young people.

In accordance with Hypothesis S1, at the upper secondary level, vocational tracks ensure a quicker first job entry in all countries, except for Slovenia and Croatia, in which no differences between general and vocational school graduates are observed. A more detailed analysis of the size of the differences between general and upper-vocational schools conducted in Figure 1a and 1b confirms a comparatively large advantage of vocationally-oriented secondary school leavers in the speed of the job entry in the Czech Republic or East Germany. A comparative advantage of secondary school leavers with vocational education in

Estonia, evident from Figure 1a, cannot be immediately explained with the institutional set-up of the vocational education in this country. As a whole, we can say that with two exceptions, upper vocational education facilitates a faster labor market entry compared to general secondary education. There is no indication that a vocational curriculum is an impediment to labor market entry, rather the opposite may be true.

[Figures 1a and 1b about here]

With regard to the occupational status of the first jobs no significant differences exist between secondary school leavers from general as opposed to vocational education in the bulk of the countries. As expected (Hypothesis S2), broadly defined curricula of upper-level vocational schools ensures its graduates similar returns in form of job status compared to generally educated school leavers. Only in the Czech Republic and Estonia do upper-secondary vocational school leavers end up in occupations with lower occupational status than their generally educated peers. Given, a less expanded tertiary education sector in both countries, general secondary graduates may have better job opportunities because of a scarcity of tertiary graduates.

Regarding job mobility, we cannot find noteworthy differences between general secondary and upper vocational graduates. However, we frequently observe higher exit rates from the first job, particularly into unemployment and inactivity, for young people with only lower secondary education or less. Apart from a heightened labor market vulnerability for this group, this finding may also be the results of young people returning to the education system after a brief period on the labor market.³

³ For details of job mobility analyses we refer to the respective country chapters.

Next, we compare labor market integration patterns of lower and upper vocational leavers and address the issue of effectiveness of labor market linkages particularly for lower vocational programs. This question is particularly relevant to countries with a large lower vocational sector that adhered to or have tried to implement a dual system of vocational education and firm-based training, i.e. East Germany and Slovenia (Ivančič 2008), and to some extent Hungary (Bukodi and Róbert 2008), Czech Republic (Straková 2008), Croatia and Poland (Baranowska 2008). The summary of results is presented in Table 3.

We begin with results on the social selectivity of vocational graduates. Lower vocational graduates are more likely to come from families with the least educated parents in all countries except the Ukraine. Upper vocational school leavers, in contrast, experience a stronger upward mobility outperforming their parents in educational attainment. This holds true for all countries except for East Germany.

In accordance with Hypothesis S3, upper vocational graduates obtain higher occupational statuses in their first job compared to lower vocational graduates⁴. This is observed for all countries in which this effect was estimated, except for Ukraine and Hungary. Once the occupational status of the first job is controlled for, we cannot find any residual effect of education on job stability.

Interestingly, while granting access to higher quality jobs, upper vocational education is not necessarily a faster route to the first significant job. In both Croatia and Hungary, lower vocational graduates enter the first significant job more quickly compared to upper vocational

⁴ Detailed analyses reveal that this holds true both for graduates of vocational and general tracks (see country chapters).

graduates. It appears that the organization of lower vocational education is particularly effective in these countries, especially when compared to post-Soviet countries.

[Table 3 about here]

Previous research has attributed the advantageous performance of vocational school graduates (as compared to general education leavers) to the curricular content and the institutional setting of the firm-based training they undergo (Breen 2005, Müller and Shavit 1998, Wolbers 2007). However, it was often neglected that vocational and general programs differ not only in the type of training, but also in other dimensions such as duration, quality or employer involvement. A unique feature of our study is that due to the detailed individual-level measurement of education characteristics we are able to conduct a direct test of specific institutional features, among them, the organization of vocational training. In Poland, East Germany and Croatia the difference between school- and firm-based training were assessed at the same level of vocational education. This guarantees that we can disentangle the (almost) pure training effect from other confounding institutional influences.

For the countries we analyzed we found no differences either for the entry speed or job quality between school leavers who acquire their vocational skills within the dual system versus those who only receive school-based education and training. Interestingly, in Croatia the effect of the firm-based training for the first job entry was pronounced only among those whose training lasted longer than 6 months. Although we hardly expected any effect of training in the Ukraine, a country in which training is not particularly institutionalized, firm-based training did appear to significantly speed up the first job entry, an indication of possible self-selection of youths who have undertaken training on their own. On the contrary no such

effect was found in Serbia, despite largely similar (to the Ukraine) organization of vocational training.

Our results for Central and Eastern Europe are hardly indicative of the advantages of the dual system over school-based vocational education, casting doubt in the superiority of skills provided in the firm environment, at least in Central and Eastern Europe. This result might come of no surprise given that the vocational curricula had become quickly outdated in the course of economic restructuring and linkages to employers had been broken, whereas, the preconditions for effective reform, given weak employer coordination and lack of funds, seemed modest at best. This result, however, raises an important empirical question, whether advantages associated with the dual system are not specific to the countries like West Germany or Austria, in which this tradition originated from and in which the whole system of employment relations is designed to support it, whereas dual system is less transferable and adoptable in other institutional contexts.

3.2. Labor market integration of youth with post-secondary level of education

In this section, we will give a detailed look at the performance of post-secondary graduates in a comparative perspective. A general research question we pose in this section is how the labor market chances of tertiary graduates vary in countries that differ in the degree of tertiary expansion and diversification. In the following we formulate a set of concrete research hypotheses and confront these with the empirical results of the country studies from a comparative perspective.

The expansion and differentiation of tertiary education should have been accompanied by a greater social openness of these former exclusive tracks. However, due to the binary or diversified structure within second-tier institutions that are shorter in duration and more

vocationally and labor market oriented, a new line of differentiation may have emerged or strengthened that maintained social inequality in the access to different tertiary education institutions. Students from disadvantaged family backgrounds, who gain the permission and have the aspiration to enter post-secondary education, may be attracted into second-tier institutions. While this perspective emphasizes the “diversion” aspect, one could also argue that the emergence and expansion of post-secondary vocational and lower tertiary tracks provide new opportunities particularly for students from non-academic family backgrounds. From both perspectives, we can expect in general a stronger selection of students from non-academic family backgrounds into post-secondary vocational and lower tertiary tracks, while long-term university programs should be more dominated by students whose parents have an academic background (*Hypothesis P[ost-secondary]1*).

The labor market performance of lower tertiary and higher tertiary graduates should also differ for several reasons. First, related to the previous hypothesis, students in higher tertiary institutions should possess higher abilities and supporting family backgrounds which facilitate the learning process through peer effects and ease labor market success. Second, students in long-term tertiary tracks have more time to acquire productive and marketable skills than students in short-term tracks. Third, the academic, research-oriented programs at universities foster the development of complex analytical reasoning, i.e. general skills, which should qualify graduates for high status positions. Post-secondary or lower tertiary programs equip students with more specific skills that are closely oriented to performing concrete tasks at students future workplaces in companies, which should facilitate rapid labor market integration and guarantee better matching quality making job quits less probable. Along these dimensions relating to job search and job mobility, this skill specificity and labor market orientation should countervail the other advantages of higher tertiary education. Thus, we would expect that post-secondary vocational and lower tertiary graduates start in lower status

positions but there should be no differences in terms of entry speed into the first job and its stability compared to their counterparts from long-term university-type programs (*Hypothesis P2*).

Labor market returns to tertiary education may vary according to the degree of tertiary education expansion and differentiation. Whereas social exclusiveness and homogeneity guaranteed the successful labor market integration of higher educated graduates in the case of a small tertiary education sector, it is often argued that returns are lower in an expanded sector due to credential inflation (Gangl 2002, Müller and Shavit 1998). However, expansion might be the reaction to or accompanied by a strong demand for higher education that counteracts the devaluation of tertiary degrees. Hence, from a theoretical perspective, the relationship between labor market returns to tertiary education and degree of tertiary education expansion remains unclear. Regarding the degree of diversification within tertiary education, one could argue that higher tertiary graduates secure strong labor market advantages compared to their counterparts from lower tertiary and post-secondary vocational institutions if the higher tertiary education sector remains relatively small whereas second-tier institutions dominate (*Hypothesis P3*).

Country differences in social selectivity and labor market attainment of highly educated school leavers

Table 4 summarizes results with regard to social selectivity and labor market performance of post-secondary graduates (either at post-secondary and lower tertiary or higher tertiary level), which allows the test of the first two hypotheses. With regard to the social selectivity of access to post-secondary education a uniform finding is that low-level tertiary education is a very open track of post-secondary education, which supports hypothesis P1. Young people originating from families in which parents do not possess tertiary education are more likely to

attain lower-level tertiary education, whereas children of tertiary educated parents are more likely to follow their parents' steps. Apparently, youths whose parents have no academic background are able to make use of opportunities that have emerged with the introduction or expansion of second-tier tertiary educations. These educational tracks are characterized by a greater permeability and a larger degree of openness than higher tertiary education programs.

Related to the issue of social selectivity we would like to stress one general finding about the gender inequality in post-secondary education attainment. Interestingly, in all countries under study we find a clear dominance of young women among all post-secondary graduates in the most recent cohort. Thus, gender-inequality in post-secondary education attainment is high in CEE countries but works to the disadvantage of men. Obviously, young women make better use of the old and new opportunities that lead to a post-secondary degree.

[Table 4 about here]

Analysis of the speed of entry to the first employment position and its quality by the type of post-secondary education shows that graduating from longer university programs ensures higher status employment in all countries analyzed, except for Eastern Germany, and quicker labor market entry is guaranteed for the university graduates in the majority of countries covered by our analysis. Graduates of second-tier higher education never enter employment more quickly. However graduating from longer and more challenging university education does not warrant a speedier job entry in the Balkan countries, Slovenia, Serbia and Croatia, as well as Eastern Germany – countries that are characterized by a stronger relative dominance of higher tertiary graduates among post-secondary graduates. As expected, there seem to be hardly any difference between graduates from lower- and higher-level tertiary education with regard to the stability of first employment. Only in Poland and Ukraine are young people with

post-secondary and lower secondary education more likely to exit jobs to non-employment (either unemployment or inactivity, such as re-entering higher education). In sum, the empirical evidence supports hypothesis P2 for the most part. The empirical pattern of the more privileged status of higher tertiary graduates and equal job mobility found fits our expectations. However, the expected equality of job entry speed is only confirmed in four countries, while higher tertiary graduates could secure also faster labor market entries in the rest of countries.

Labor market attainment of the highly educated and structural characteristics of the CEE countries

In the following we explore whether the variation in the relative advantage of university graduates as compared to the leavers of the lower-level tertiary education can be related to the degree of tertiary education differentiation. To explore hypothesis P3 we correlate the relative advantages of the school leavers from higher tertiary education as opposed to those from post-secondary and lower tertiary tracks in the speed of entry to first employment and ISEI of the first job with the relative proportion of highly educated among all post-secondary school leavers. We find strong support for hypothesis P3 in Figure 2a with regard to labor market entry speed. Results show that in countries in which higher tertiary education remained a more exclusive branch of the post-secondary education system higher tertiary graduates enjoy bigger advantages over those with just post-secondary or lower tertiary education in the speed of entering first stable employment. A similar but less clear cut relationship can be found for the first job quality in Figure 2b. Thus, diversification of the post-secondary sector in terms of a relatively dominant second-tier sector and an exclusive higher tertiary sector secures a strong labor market advantage for higher tertiary graduates. Or in other words, diversification through large second-tier post-secondary institutions comes along with strong heterogeneity in rewards among post-secondary graduates.

[Figures 2a and 2b about here]

While the previous hypotheses have related the tertiary education institution setting to the labor market chances, we will complement these supply-oriented mechanisms with an analysis that accounts for labor demand-oriented influences. A better labor market performance of the most educated might also be influenced by the economic structure and the resulting labor market demand. Specifically, the observed growth in services in the course of de-industrialization may have increased the labor demand for the highly educated. Thus, we explore whether expansion of the service sector can account for a quicker job entry and higher status employment among university educated. To this end we compare the university educated with leavers of vocational secondary education. This contrast is chosen in order to show advantages of those who are most likely to profit from service sector expansion (highly educated university graduates) in comparison to those who are less likely to profit from the expanding services (instead being able to reap most gain during expansion of the industrial sector).

[Figures 3a and 3b about here]

Even with the outlier Hungary, results confirm that growing service economy eases entry to the first job and improves jobs quality among highly educated (as opposed to those with vocational secondary education). We find also a positive association for job quality. The correlation between job quality and growth in services could have been stronger if East Germany were excluded from the calculation. According to the World Bank online database, the growth in the service sector has been quite modest in East Germany, but its absolute level

of services is the highest among all CEE countries analyzed here – at the level of 69% (to compare: service sector has been 53% of the GDP in the Ukraine in the analyzed period).

Heterogeneity of tertiary education and labor market integration of highly educated

While the previous analyses highlighted important general differences between first and second-tier institutions, some of our country studies drew a more detailed picture of heterogeneity within tertiary education institutions. Due to the pronounced diversification of higher education in CEE countries we expected to find heterogeneous outcomes along further lines of institutional differentiation such as tuition-based study places or part-time education.

For example, in Poland, Serbia, and Ukraine, we examined the role of tuition systems that became of central importance for the expansion of tertiary education through privatization and marketization of higher education. In almost all CEE countries institutions of higher education admit state-financed regular students, tuition-paying regular as well as tuition-paying part-time/per correspondence (i.e. so-called irregular) students. Thus tuition-based study programs exist both at private and public institutions. There is normally a fixed quota for the number of students in each type of the program. Admission test ranking complemented with the grades from selected subjects of secondary education or average matriculation grades serve as determinants for the candidate's entering ranks of state-budgeted students. Those who do not pass a necessary threshold enter fee-paying programs. Competition is much fiercer for entry into tuition-free tertiary education. Only the highest ranked candidates with the most profound competencies are sorted and self-select into tuition-free college placements and, thus, we can expect a better labor market performance of graduates who did not pay fees.

Contrary to our expectation, we find no indication that the type of the program, budget- or tuition-financed, is of any importance for the youths' labor market integration in the Ukraine

and Serbia. In Poland we even observe somewhat quicker job entry among tuition-paying MA graduates. Either employers ignore these competence signals when hiring workers or these aspects are already accounted for with other graduates' characteristics, for example, their graduation grades. It might also well be that the education path academic achievements of fee-paying and fee-waved students do not systematically differ, as both groups undergo the very same education process (i.e. same courses, same lecturers, and same peers).

The distinction between part-time and full-time students is another dimension that has always been very pronounced and further gained importance with the tertiary education expansion in CEE countries. Part-time education is a path left open for the youth least inclined towards time-consuming academic studies and/or for those who are already employed and are thus have less time to complete education. Thus, many part-time students have already a first job that they keep after graduation, which exempts them from a long job search process. However, due to the double burden of work and studies, the time of skill instruction and learning opportunities should be lower in part-time organized studies. Furthermore, we expect that more selective and hence better-performing students will be found in full-time programs, while the least academically motivated ones will end up in part-time courses. In our data, this should manifest by quicker job entry but somewhat lower occupational status for young people enrolled in schooling provided part-time or per correspondence. If so, we might indeed find evidence for higher probability of these youth staying longer in the same job.

Significant differences are observed between graduates from full-time programs and those studying part-time in the countries, for which such a differentiation was made, i.e. in Ukraine, Serbia and Croatia. While in Serbia there are no difference with regard to the entry speed, in Croatia and Ukraine part-time students are quicker in landing employment. But part-time students enter employment of a lower occupational status in Serbia and Ukraine. Apparently

there is a trade-off between quality of the jobs and a quick entry to any employment among part-time students, a finding that might partially be an artifact of these students entering employment while still in education. In line with these results and our expectations, mobility is lower for part-time students if any differences exist at all.

3.3. Comparison of education-job linkages across Central and Eastern European countries

In this section we analyze the difference between various levels and types of education in the CEE countries in a single comparison. In doing so we are not interested in comparing the overall speed of entry to first employment or absolute levels of occupational status of first jobs across the countries, but rather focus on the relative position of school leavers with different education degrees in the overall distribution of job attainment. The average country differences are undoubtedly interesting and worth of exploring, but might be less comparable due to an existent, albeit slight, variation in definitions of the dependent variables in the data at hand. In addition, comparing within-country variation in the importance of education degrees for job entry and status of the first jobs, we account for those country differences which influence all country's school leavers in a similar way.

Figures 1a and 1b plot the effects of qualifications for the first job entry and for the status of the first job (measured in standardized ISEI scores) in eight countries⁵. Data for Russia is not shown in either figure, whereas for Slovenia we do not analyze the first job entry due to a different specification of the duration model in the country analysis and for Hungary results of

⁵ The reference category in this analysis (as well as in the country chapters analyses) is the group of young school leavers with general secondary education. From Table 1 it is evident that the reference group is relatively small and select in the Balkan countries and the Czech Republic, whereas it is very large and heterogeneous in Estonia and Hungary. Hence the relative performance of other educational groups might be affected by the choice of the reference group, which is inevitable, irrespective what reference group is selected.

the income analysis cannot be compared with the ISEI scores estimated in the rest of the countries.

In all countries even low-level tertiary tracks provide better payoffs (both in terms of the quicker first job entry and its quality) compared to secondary education. In how far the lowest level of education is a handicap to labor market integration, however, varies across countries. With regard to the chances of landing first employment quickly the least educated are at odds in all of the countries analyzed here except for Ukraine and Serbia. Apparently conditions of labor market demand coupled with shrinking school leaving cohorts in these two late-comers in the transition process are still favorable for the least educated, and the labor market can absorb these least educated school leavers to the same degree as the graduates from the secondary general education. Ukraine is also the single country, in which the least educated do not significantly differ from those with secondary general education with regard to the occupational status of their first jobs.

Even though a speedier entry to employment is also documented for leavers of vocational tracks at the lower secondary level as compared to the least educated, vocational education as a rule results in similar or even higher status occupations, when compared to those with minimum education. The finding that secondary qualifications provide access to more prestigious occupations than those at the elementary level accords with Müller and Shavit's (1998) results for the Western societies.

Although the effects of education on labor market attainment are by no means linear, one could still try to identify countries, in which the overall educational gradient is steeper, or in other words, education matters more for the labor market entry. Estonia and Hungary are the two countries in which differences between the least educated and the tertiary educated are

mostly pronounced when it comes to the job entry. In the Ukraine, Poland, and Croatia the first job entry processes are less determined by the level and type of educational attainment. For the occupational status of the first employment position education appears to be the most powerful predictor in Slovenia and the Czech Republic. Lesser differences between the least and the most educated are observed in the Ukraine and Estonia when it comes to the quality of the first significant job attained.

4. Risks and opportunities of the transition from socialism to capitalism

In this section, we will directly address the question how the rise of capitalism in Central and Eastern Europe, and connected to that changes in the institutional set-up of education system and the labor market, affected the transition from school to work. In three countries, we had the opportunity to observe young people entering employment both under socialism and capitalism. Estonia and Russia represent two post-Soviet Union countries, where lower vocational education was relatively unpopular, and enrollment has shifted more strongly towards general and higher forms of education. While Russia spiraled into deep economic crisis and experienced a troubled transformation to capitalism and democracy, liberal economic reforms in Estonia and the Czech Republic were relatively successful and both countries were soon under way to enter the EU. While the manufacturing sector in Russia was hollowed out during economic crisis (King 2007), the Czech Republic was comparatively successful in acquiring foreign capital and technology to restructure its manufacturing industries (Bohle and Greskovits 2007). A persisting demand of manufacturing workers corresponded to the educational output in the Czech Republic characterized by a strong vocational orientation at the secondary level and, for the period analyzed, a small tertiary sector.

In keeping with much research (Nee 1989, Svejnar 1999), we expect that the role of education as a determinant of employment outcomes has been changing. Focusing on wages, much of the literature has shown that with the transition to capitalism education has become a more important predictor of earnings or income (Brainerd 1998, Campos and Joliffe 2007, Munich, et al. 2005, Svejnar 1999, Verhoeven, et al. 2008).⁶ However, it is not clear if these results can be generalized to outcomes besides earnings. Here, we focus on the speed of labor market entry for young adults.

While under socialism, persistent worker shortages virtually guaranteed employment for young people (see Chapter 1), economic crisis after 1989 meant that jobs became scarce. We therefore expect that the process of entering a first significant job has generally slowed down. Not least due to the shortage of labor at all levels of the skill distribution and mandatory work allocation programs, the differences between education groups under socialism were small. After 1989, we expect that the rising scarcity of jobs should lead to increasing inequalities between education groups. The degree of inequalities should depend on the country context, specifically on the success of market reforms.

The key motivation of economic liberalization after 1989 has been that emerging markets would provide incentives for firms to restructure and adopt efficiency-oriented production technologies and managerial practices. Those firms failing to restructure would be eliminated. However, several preconditions are necessary for competitive markets to emerge, and they have not all been met equally across the region. Particularly Russia (but also the Ukraine and Serbia) suffered from a problematic transformation (Burawoy and Krotov 1992, Gerber and Hout 1998, King 2007). Russia struggled with setting up a legal infrastructure enforcing

⁶ Flabbi et al. (2008) found mixed evidence in a comparative analysis of CEE countries. Gerber and Hout (1998) also found no evidence that system change has benefited highly skilled in Russia in the first half of the 1990s.

central principles of a market economy. Furthermore, concentration of economic power and survival of non-market based means of economic exchange and coordination (networks, cronyism etc.) may have dampened market discipline. Hence, competition was effectively curbed such that efficient production, maximizing benefits and minimizing costs were no preconditions for firm survival, and could be compensated, for example, by political patronage. Given comparatively weak incentives to make profits or cut costs, the incentive for firms to pay, hire and fire according to individual productivity were weakened. In contrast, we expect that economic and political reform have been more effective in Estonia and the Czech Republic, not least to the countries aspiration to join the European Union.

As a consequence, to the extent that education is correlated with individual productivity, we should expect that education plays a more important role if market reforms have been successful. Particularly, in Estonia and the Czech Republic, we expect that education has become more important in access to employment, while we expect less if any change in Russia. For Estonia and the Czech Republic, rising returns to education should be driven among other factors, by rising returns to tertiary education and declining returns for the least educated. Highly skilled are likely to benefit from market reforms in these countries in a period of rapid technological development and especially since the relative share of tertiary graduates has been low in these countries.⁷ Furthermore, the least educated are likely to be disadvantaged due to declines in labor demand in the course of globalization and technological change.

Given that economic restructuring strongly affected industry and the manufacturing sector, we expect that particularly graduates from vocational courses have been affected by declining

⁷ We observe a particularly strong increase in the relative share of tertiary graduates in Russia (see Bühler and Konietzka, this volume, Table 1). To the extent that this generated a surplus of tertiary graduates, their chances in finding employment should be attenuated in Russia.

employment opportunities. Furthermore, graduates from lower vocational programs have been affected by the breakdown of employer-involvement in vocational education, especially the provision of firm-based training. In Russia, further declines in enrolment in lower vocational programs should have led to stronger adverse selection in these programs, attracting only the least motivated and able individuals. Hence, we should generally expect a deterioration of the position of especially lower vocational graduates in the Czech Republic and Russia⁸. Particularly in Russia where lower vocational graduates have become more adversely selected and where their employment opportunities in industry have deteriorated the most, we should observe rising difficulties for graduates from lower vocational programs in finding a first, significant job. However, to the extent that productivity-related considerations are less important in finding employment in Russia, this effect may be mitigated.

Summarizing the findings from the cohort analyses in the specific country chapters, we indeed find distinct developments across countries. Under socialism in both Estonia and the Czech Republic, the speed of entering a first significant job did not differ much between education groups. Thereafter, we find rising inequalities. In both countries, general secondary graduates have been facing increasing difficulties in entering the first job. In the Czech Republic, this trend commenced already under socialism and accelerated after 1989. Furthermore, in Estonia and the Czech Republic, individuals who obtain only lower secondary education or less experience the strongest deterioration in their speed of entering the first job. After 1989, we also observe a relative improvement in the chances of the tertiary educated to enter a first significant job in the Czech Republic, although this trend is not statistically significant. We thus find empirical support for our expectation that education would become more important with the rise of capitalism in Estonia and the Czech Republic. Particularly those without vocational or higher qualifications, i.e. the least educated and

⁸ As a consequence of enrolment shifts, this group was too small to analyze separately in Estonia.

general secondary educated, appear to be the losers of this process in Estonia and the Czech Republic. However, at least when considering the speed of employment entry, tertiary graduates have not made significant gains.

Consistent with our expectation, we observe rising difficulties for vocational graduates in the Czech Republic. Lower and upper vocational graduates lose in the second half of the 1990s, while losses seem more persistent for lower vocational graduates. We also find similar results for lower vocational graduates in East Germany. In Hungary lower vocational graduates also experienced disadvantages, but their relative losses compared to tertiary graduates were least pronounced compared to all other secondary education graduates.

The Russian case differs in interesting respects from the Czech Republic and Estonia. Similar to the Czech Republic, we also observe declining speed of entry into the first job for general secondary graduates, a trend that already began under socialism but sped up around 1989. At the same time, however, we observe hardly any educational differences otherwise. Instead, entry speeds into first employment are rather converging for tertiary and vocational graduates across cohorts under socialism. Similar to Estonia, we observe hardly any change at all in the entry speed for tertiary and upper vocational graduates. The only significant trend can be observed for general secondary graduates. We also monitor rising difficulties for graduates from lower vocational programs, but this trend already began in the early 1980s and abated in the late 1990s.

In summary, we can say that the role of education in determining access to the first job, with the exception of general secondary graduates, has not changed much in Russia after 1989, which may be attributed to the problematic transition to capitalism. In contrast, differences between education groups have increased more strongly in the course of transformation in

Estonia and the Czech Republic. Furthermore, we observe that in the Czech Republic, and also in East Germany, vocational graduates have indeed had increasing difficulties in entering the first job, consistent with the decline in industry work as well as broken links between vocational schools and employers. Finally, in all countries, we observe rising difficulties for general secondary graduates. Despite difficulties experienced by vocational graduates, the relative disadvantage of general secondary graduates, at least in terms of entering the first job has not only persisted, but even grown larger.

5. Concluding remarks

Two decades after the breakdown of socialism in Central- and Eastern Europe the analyses presented in this book addressed the consequence of system transformation on young people's labor market integration. Our study draws upon substantial variation both across time and countries in educational institutions, which are central to understanding processes of social stratification and mobility. We move beyond simple contrasts of socialism vs. capitalism as modes of social organization by putting into focus the institutional diversity in post-socialist societies, in which stratification processes are embedded.

Unlike other comparative studies of labor market entry that relied solely on standardized educational classifications, in this book we addressed the structuring effect of education in much greater detail. All country studies used detailed national education classifications, complemented with additional information on educational characteristics. As a result, we are able to more precisely measure the effect of different educational degrees, and thereby the structuring effect of the education system. Furthermore, we have contributed one of the first systematic comparisons of the process of labor market integration for tertiary educated, which is becoming a central issue not only in CEE, but also in Western countries.

For the majority of CEE countries we analyze, we can document educational expansion and differentiation of tertiary education at a speed hardly ever observed in Western societies, with substantial variations across countries in the quality of providers and in the role of market-based financing of higher education. At the same time, we observe a decline in the role of low-level vocational schools at the secondary level, which had formed a crucial part of skill supply under the socialist production regime. While these post-transformation trends are general, we show that their dynamics and consequences differ depending on the national historic and institutional context.

The main part of our analyses addressed the consequences of these institutional changes and other transformation-related phenomena for youth labor market integration. Under socialism access to employment could be taken for granted. While there existed substantial differences in the occupational status of graduates with different types of education, variation in the speed of entering the first job was minor. With economic transformation and the emergence of labor markets, this relatively smooth transition become more risky, precarious and uncertain. Unemployment emerged on a mass scale.

While the pattern and dynamic of inequality in outcomes varies across countries, we generally observe a superior performance of tertiary graduates in terms of speed of entry and quality of the first job across CEE countries. However, more detailed analysis have shown that the relative advantage of tertiary graduates varies with the degree of expansion and differentiation of the tertiary sector. At the secondary level, we find that particularly general secondary graduates have experienced increasing difficulty in entering the labor market. The cohort analyses also indicate rising difficulties for lower vocational graduates in some countries. Nonetheless, we find that vocational education still facilitates labor market entry in all CEE countries. Even lower vocational programs generally lead to faster entry into the first job,

although the status of this job is often much lower than the status obtained by general secondary and upper vocational graduates.

Stimulated by existing comparative studies (Müller and Shavit 1998, Shavit, et al. 2007, Shavit and Blossfeld 1993), our project continues the research tradition aimed at examining processes of stratification embedded within particular institutional contexts. In doing so our work moves beyond existing comparative studies on the school-to-work transition (e.g., Blossfeld, et al. 2009, Müller and Gangl 2003, Müller and Shavit 1998) by extending their work not only geographically, but also conceptually and in terms of research design. We have matched the richness of the longitudinal data used, as well as the theoretical and methodological sophistication of the analyses covering a crucial aspect of the evolution of social stratification in the transition from state socialism to capitalism. We hope that this book can make an important contribution to theory-driven, comparative research on social stratification in the transformation societies of Central and Eastern Europe and will be an inspiration for future research in the field.

Tables and Figures

Table 1: Distribution of educational degrees among recent school leavers, percentages

	Lower secondary or less	Lower vocational	General secondary	Upper vocational	Post-secondary, lower tertiary	Higher tertiary
East Germany	17.6	42.1	9.1	12.0	6.7	12.6
Czech Republic	6.0	66.6	14.4	19.0	34.7	65.3
		42.9	8.8	48.3	37.0	10.2
Croatia	1.5	31.0	3.0	23.5	13.1	27.9
		53.9	5.3	40.9	31.9	68.1
Serbia	3.2	27.1	3.2	27.1	13.4	26.0
		47.2	5.6	47.3	34.1	65.9
Slovenia	9.8	22.8	4.5	27.2	2.8	33.1
		41.9	8.2	49.9	7.7	92.3
Hungary	16.2	13.4	24.9	20.7	18.4	6.4
		22.7	42.2	35.1	74.3	25.8
Poland		18.3	18.0	27.7	16.8	19.2
		28.6	28.1	43.3	46.7	53.3
Estonia	43.8		30.8	12.6	8.7	4.1
			68.2	31.8	68.0	32.0
Ukraine	8.6	1.9	16.9	18.3	29.8	24.7
		5.0	45.7	49.3	54.7	45.3
Russia		4.2	12.5	17.7	26.0	38.4
		12.2	36.3	51.5	40.4	59.6

Source: Calculations on the basis of the data used in the country studies. For Russia, the data are taken from Table 1 in chapter 12, omitting the category "other education". Samples include recent labor market entrants from the abovementioned cohorts according to the standardized definition of labor market entry as implemented in the country chapters.

Note: The first row comprises the percentage of graduates in a specific group among all graduates. The second row contains the percentage of graduates with a specific degree among secondary graduates (Lower vocational, Upper General and Upper Vocational) as well as post-secondary/tertiary graduates (Post-secondary/lower tertiary, Higher Tertiary). Information is provided for the following school-leaver cohorts: 2001-06 (East Germany), 2001-07 (Czech Republic), 2000-04 (Hungary), 2001-05 (Poland), 2003-08 (Croatia), 2001-05 (Serbia), 2000-06 (White Book on Education in Slovenia), 1997-2003 (Estonian Centre for Examination and Qualification), 2001-06 (Ukraine), 2000-05 (Russia). For Poland and Russia no information is available for the least educated as the surveys cover individuals older than 18 years old, thus excluding early school leavers. For Russia, higher tertiary education also includes vocationally oriented colleges otherwise grouped as lower tertiary, while post-secondary/lower tertiary comprises of graduates from secondary specialized schools (*SSUZ*). For Slovenia, higher tertiary also includes three year, higher professional education programs. For East Germany, lower secondary education are *Haupt-* and *Realschule*, whereas lower vocational education refers to general education attained *Haupt-* or *Realschule*, followed by training in vocational schools or in the dual system. For the other countries, education groups are largely comparable.

Table 2: Differences between general secondary and upper vocational programs

	Social selectivity (%)		Job search	ISEI
	Persistence of social origin	Downward mobility		
Eastern Germany	>	<	>	≈
Czech Republic	<	<	>	<
Croatia	>	<	≈	≈
Serbia	>	<	>	≈
Slovenia	n.a.	n.a.	≈	≈
Hungary	>	<	>	≈
Poland	<	<	>	≈
Estonia	>	<	>	<
Ukraine	>	<	>	≈
Russia	n.a.	n.a.	>	n.a.

Source: Country chapters

Notes: > pertains to a larger and < to a smaller effect for upper vocational as compared to general tracks, whereas ≈ signifies no difference between the tracks. Persistence of social origin measures the share of graduates whose parents hold a secondary degree. Correspondingly, downward mobility measures the share of graduates who enters the specific secondary track whose parents have post-secondary education. For Hungary the information in the last column pertains to income

Table 3: Differences between lower and upper vocational programs

	Social selectivity (%)		Job search	ISEI
	Persistence of social origin	Downward mobility		
Eastern Germany	<	>	≈	>
Czech Republic	<	<	>	>
Croatia	<	<	<	>
Serbia	<	<	≈	>
Slovenia	n.a.	n.a.	≈	>
Hungary	<	<	<	≈
Poland	<	<	≈	>
Ukraine	>	<	(>)	≈
Russia	n.a.	n.a.	≈	n.a.

Source: Country chapters

Note: > pertains to a larger and < to a smaller effect for upper vocational as compared to lower vocational tracks, whereas ≈ signifies no difference between the tracks.

Persistence of social origin measures the share of graduates whose parents hold a secondary degree among youth with an upper vocational degree, or whose parents hold less than a secondary degree among young people with a lower vocational degree. Correspondingly, downward mobility measures the share of graduates who enters the upper vocational track and whose parents have post-secondary education or young people with lower vocational education whose parents have a secondary degree. For Hungary the information in the last column pertains to income. Results in brackets are significant at the 10% level

Table 4: Higher tertiary vs. lower tertiary and post-secondary

	Social selectivity (%)		Job search	ISEI	Job stability	
	Upward mobility	Persistence			Job-to-job mobility	Employment exits
Eastern Germany	<	>	≈	≈	n.a.	≈
Czech Republic	<	>	>	>	n.a.	n.a.
Croatia	<	>	≈	>	≈	≈
Serbia	<	>	≈	>	≈	≈
Slovenia	n.a.	n.a.	≈	>	≈	≈
Hungary	<	>	>	>	≈	≈
Poland	<	>	>	>	≈	<
Estonia	≈	≈	>	>	≈	≈
Ukraine	<	>	>	>	≈	<

Source: Country chapters

Note: > pertains to a larger and < to a smaller effect of higher tertiary tracks as compared to lower tertiary, whereas ≈ signifies no difference between the tracks.

Upward mobility measures the share of graduates who enters the specific post-secondary track whose parents have no post-secondary education. Correspondingly, persistence measures the share of graduates whose parents hold a post-secondary degree.

For Hungary the information in the fourth column pertains to income

Figure 1a: Effects of education on hazard rates of the 1st job entry by country

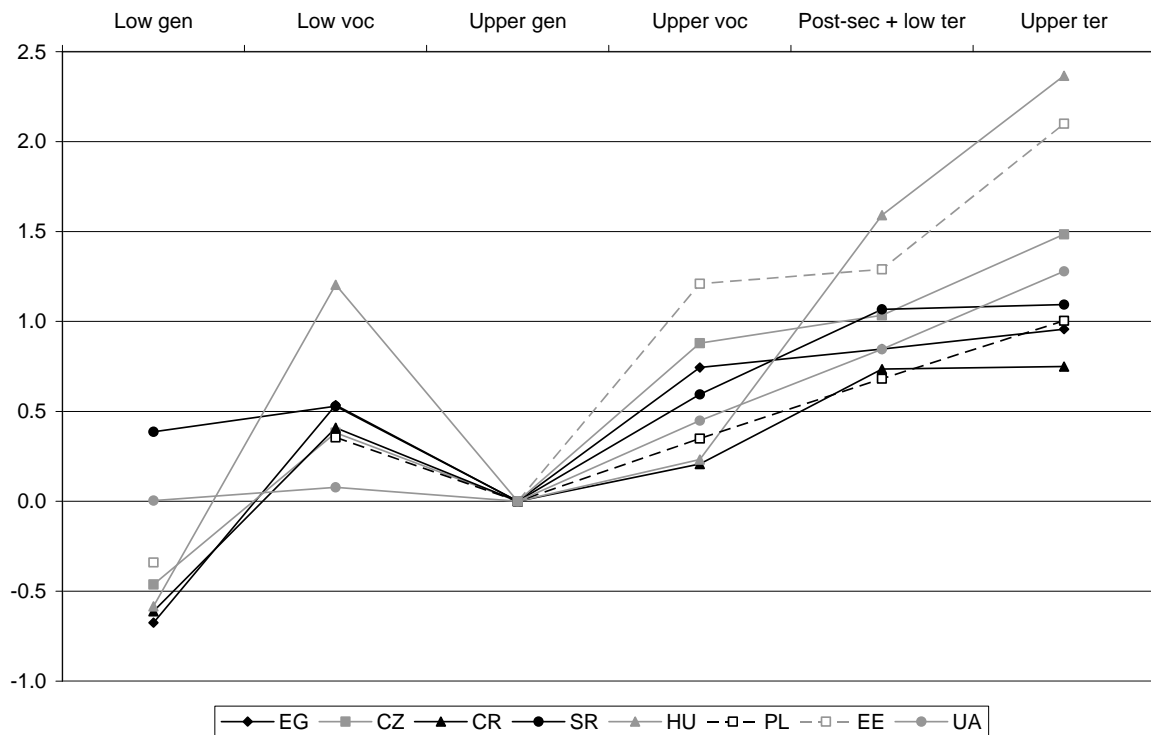
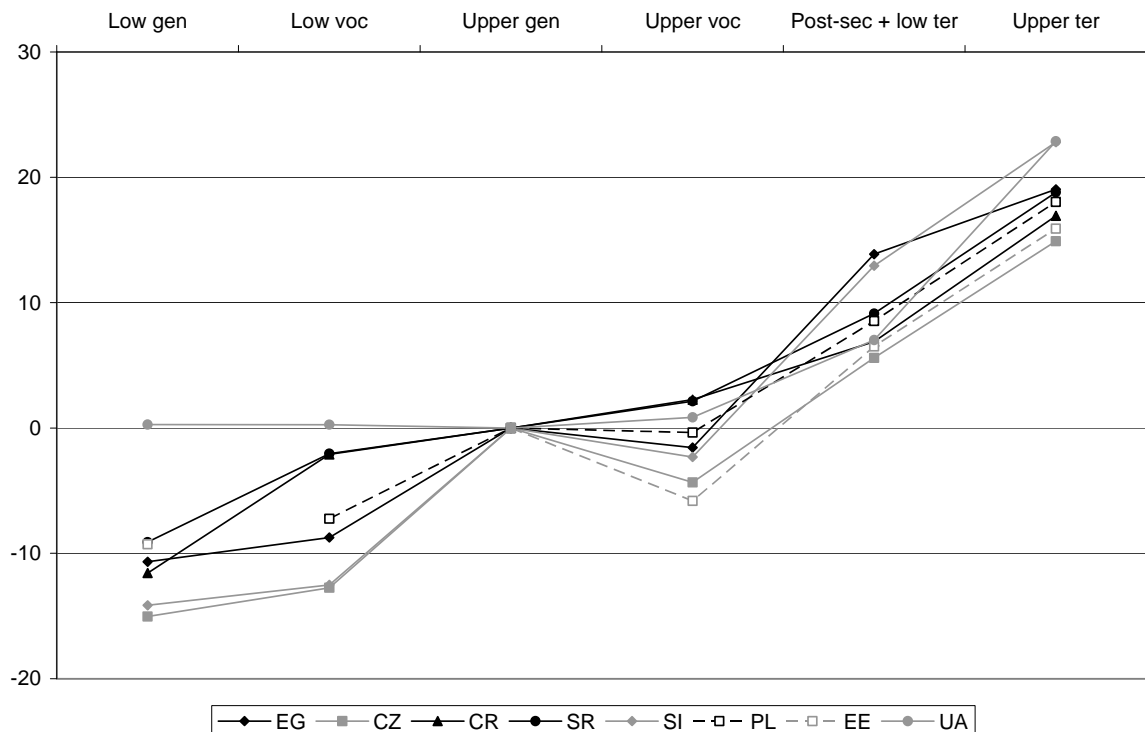


Figure 1b: Effect of education on the 1st job status (ISEI) by country



Note: In this and subsequent presentations, the countries are labeled by their acronyms: EG, East Germany; CZ, Czech Republic; CR, Croatia; SR, Serbia; SI, Slovenia; HU, Hungary; PL, Poland; EE, Estonia; UA, Ukraine; RU, Russia.

Presented are effects of education from individual country regressions controlling for parental education, gender and minority status. For Slovenia parental education, whereas for Poland minority status are not controlled for.

Figure 2a: Relative performance of higher tertiary educated school leavers compared to graduates of post-secondary and lower tertiary education with regard to the speed of the first job entry depending on the size of higher tertiary sector

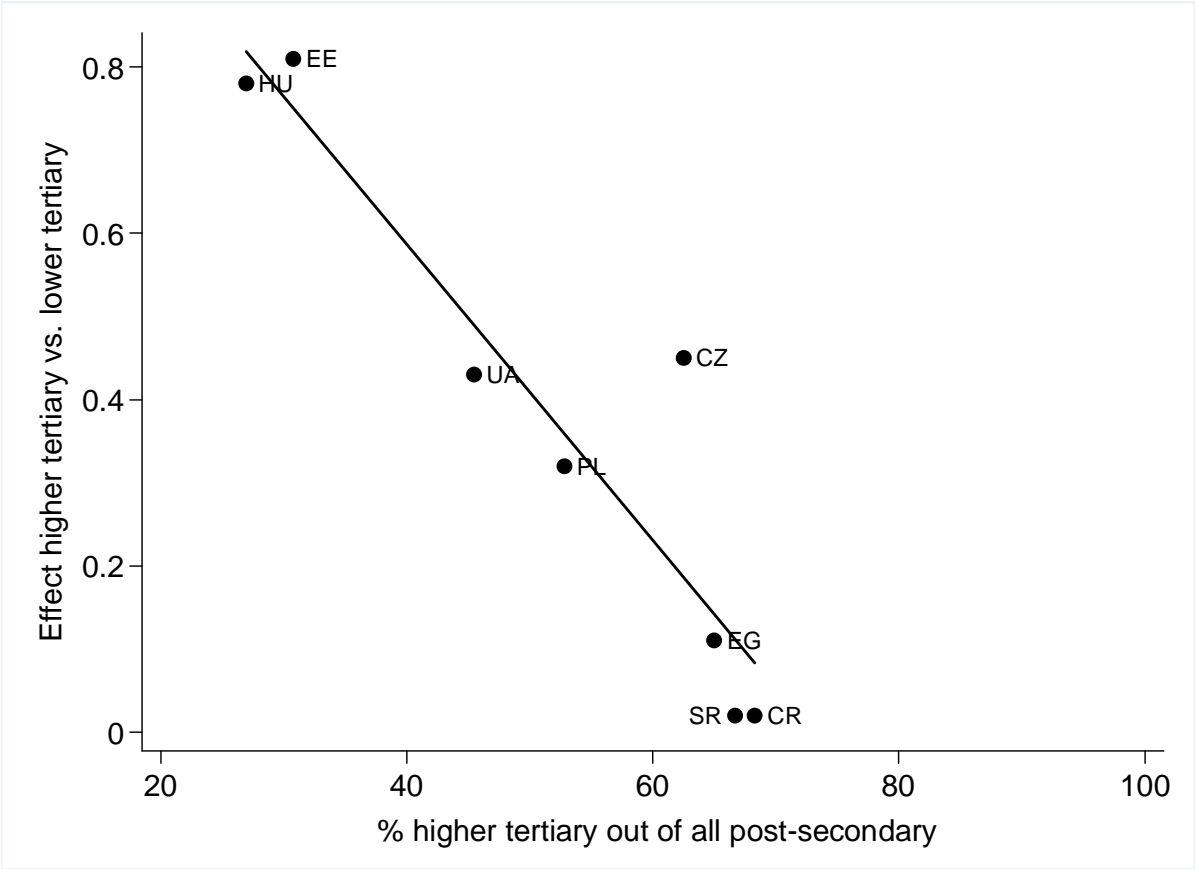


Figure 2b: Relative performance of higher tertiary educated school leavers compared to graduates of post-secondary and lower tertiary education with regard to the status of the first job depending on the size of higher tertiary sector

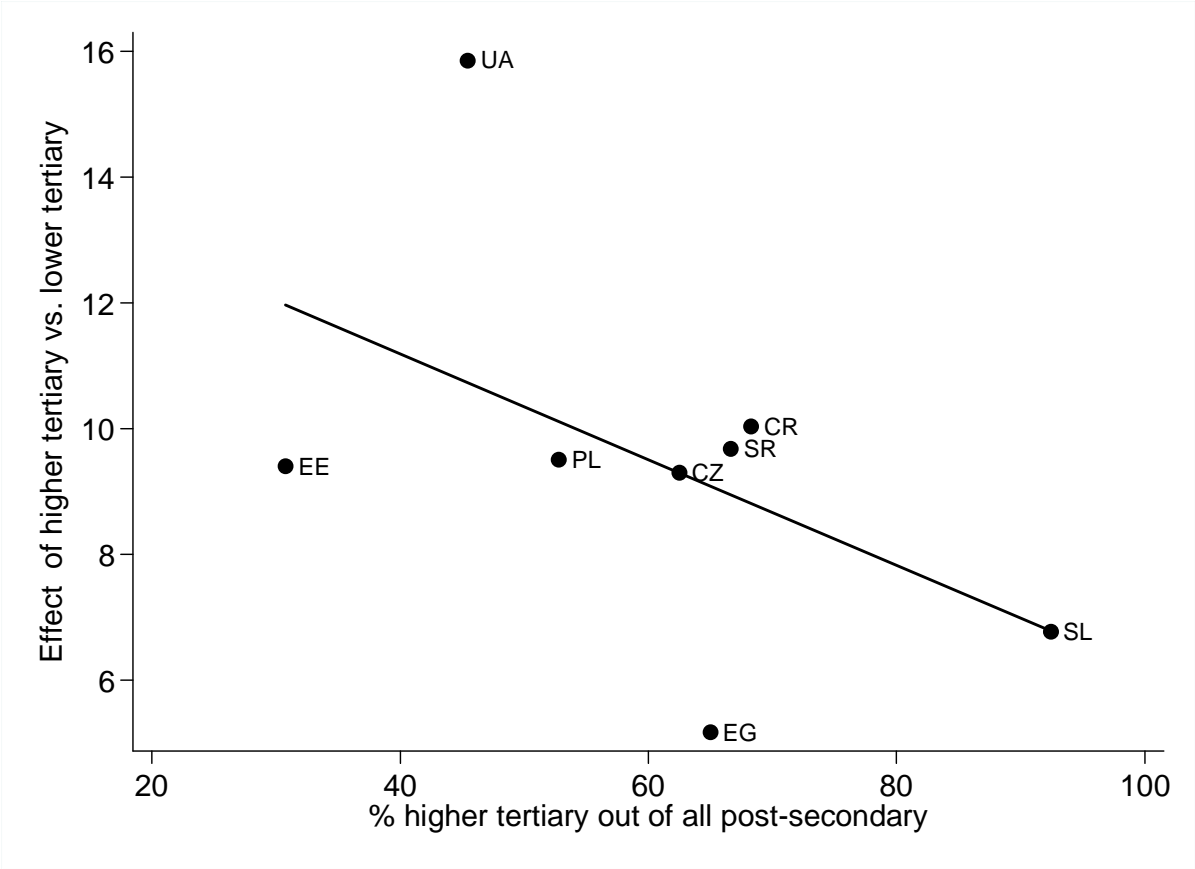


Figure 3a: Relative performance of higher tertiary educated school leavers compared to graduates of post-secondary and lower tertiary education with regard to the speed of the first job entry depending on the GDP growth in the service sector

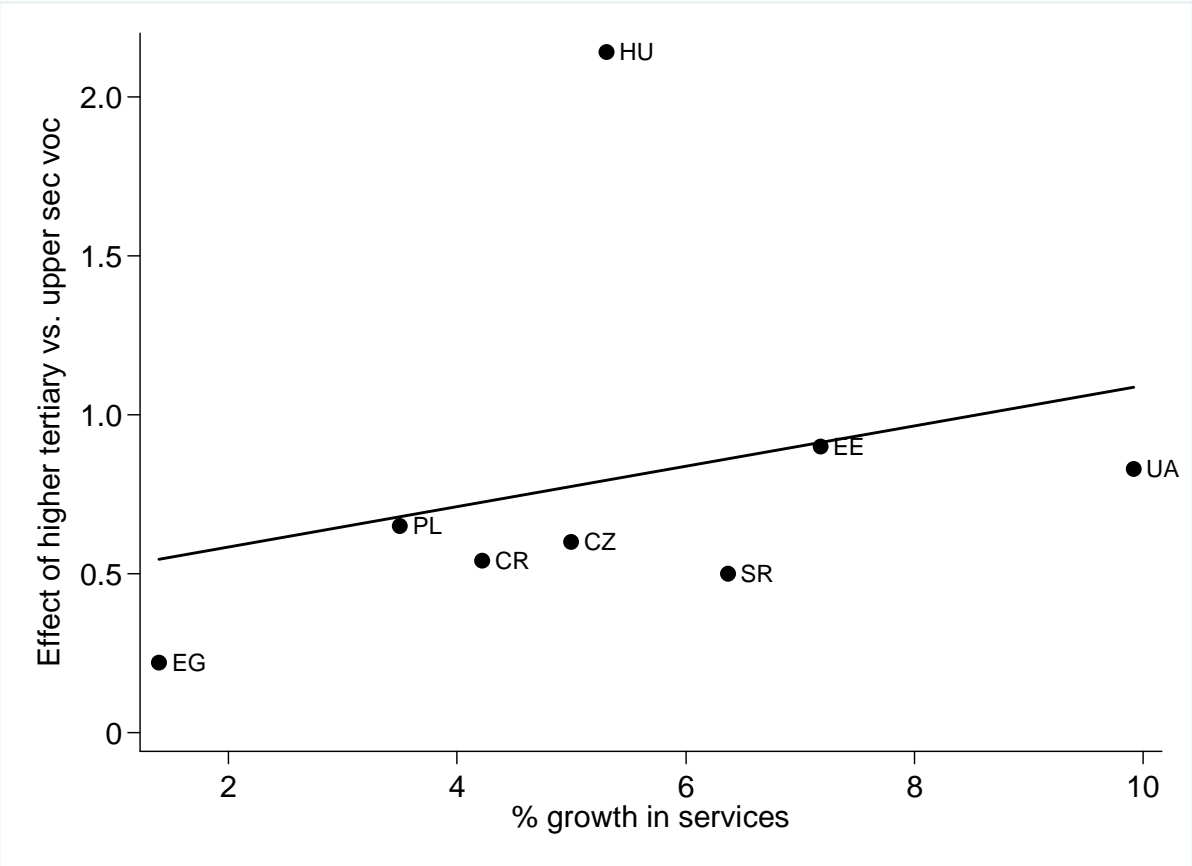
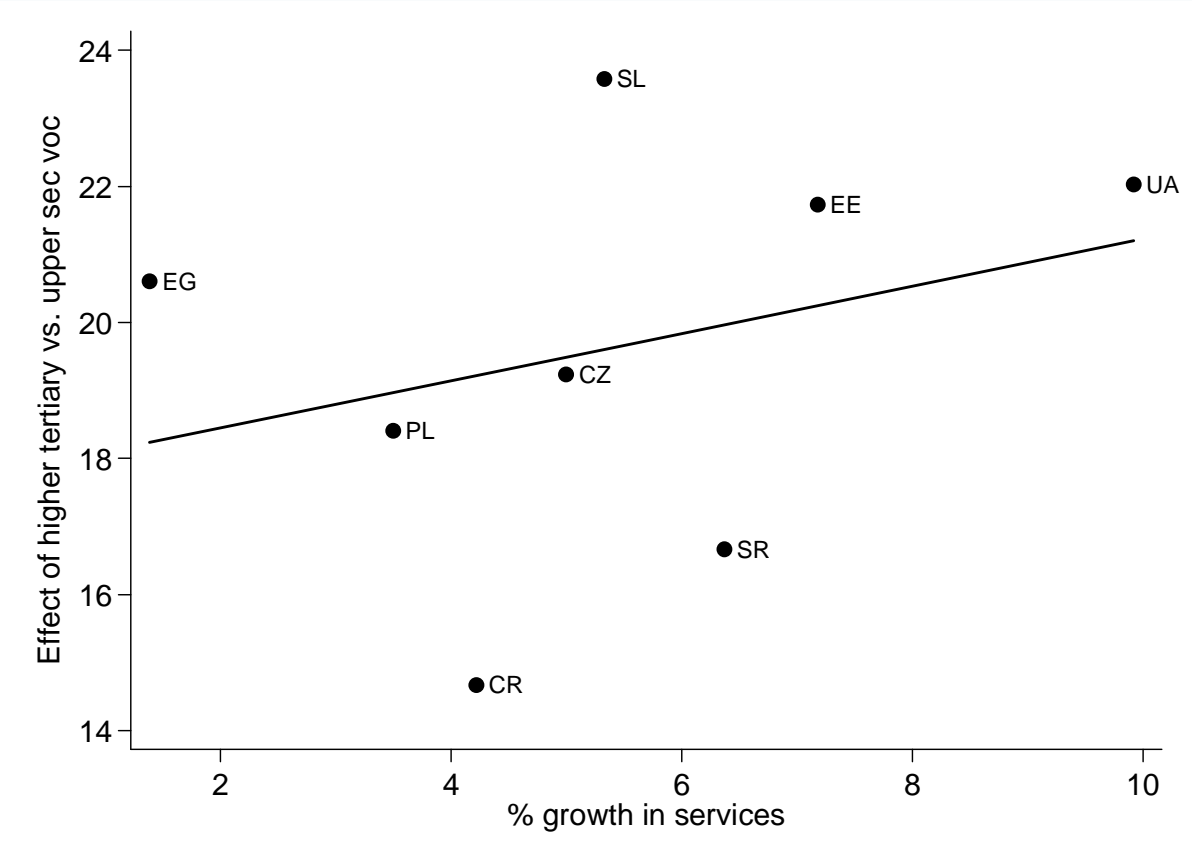


Figure 3b: Relative performance of higher tertiary educated school leavers compared to graduates of post-secondary and lower tertiary education with regard to the status of the first job depending on the GDP growth in the service sector



Source: For sectoral growth indicators, the World Bank Online Database is used:
 (<http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20535285~menuPK:1192694~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html>).