

# The School-to-Work Transition of Business Graduates in Slovenia

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*In this paper, we study the characteristics of young graduates' employability while controlling for different individual abilities and a school's value added in the context of the human capital theory.<sup>1</sup> The study uses a unique matched employer-employee micro dataset for the complete cohort of the Slovenian graduates of 2007. The aim of this paper is to research the quality of education services by using a proxy not often used in the literature: the employability of graduates. In order to avoid school-to-work transitions in different fields of study, we focus solely on graduates in the field of business and administration. The results show that, on average, the probability of becoming employed after graduation differs significantly among schools that provide business and administration education. Some institutions exhibit a higher probability of employment, thereby revealing considerable differences in quality. These institutions provide their education services at a lower price per »employable« graduate in comparison to other higher education institutions. Newer private schools exhibited a significantly lower level of employability of their full- and part-time graduates, possibly indicating the lower innate ability of the students who enrol in these schools and/or the lower quality of the academic programmes involved.*

**Keywords:** school to work transition, business schools, graduates, employment.

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## INTRODUCTION

Persisting unemployment is a phenomenon that has plagued European economies since the 1980s. In the last 10 years, a worrying trend of rising unemployment has been observed amongst the ranks of the most educated yet vulnerable group – young university graduates. This poses a series of questions about the reasons and possible consequences of the quality of the university education system, over-education and a mismatch between the demand for qualified labour and supply of university graduates (see the summary of discussions in Teichler, 2002). Recently, more emphasis has been put on the transition process and supporting mechanisms, which may be more or less smooth. The transition period is often seen as a stage with its own dynamics. The topic itself is closely related to one of the most important social issues faced by Europe in the last decade, i.e. falling fertility rates, as young people with worse employment prospects postpone their decisions to have children.<sup>2</sup>

The time it takes to obtain one's first employment after graduation is often seen as a key indicator of the labour market conditions for young graduates.<sup>3</sup> When speaking

about the job searches and employability of graduates there are some considerable differences across countries. The CHEERS survey data (Schomburg and Teichler, 2006) reports that almost all Japanese respondents started their job search over 6 months before graduation so as to ensure that they have employment. However, searching behaviour among graduates varies significantly in Europe. Over one-third of British students started their job search more than 3 months before they graduated while, at the other extreme, more than a half of Italian, Spanish and French students waited until they graduated before they started searching for a job. Early searches are more likely when universities are strongly involved in the placement process. The beginning of searching varies between fields of study, with any consistent patterns across countries being rare.<sup>4</sup> The CHEERS survey reports that the length of graduates' search for their first job in 1994/95 was 6 months on average, although 66 percent of all graduates did not search for more than 3 months (Schomburg and Teichler, 2006). The shortest search was reported by the Czech and Norwegian graduates (2.9 months). A similar survey conducted by the

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<sup>2</sup> Da Rocha and Fuster (2006) find that labour market frictions (a low probability of finding a job) induce females to postpone births for two reasons. First, because children place time-intensive requirements on mothers, females are likely to interrupt their career after giving birth to smooth the consumption of leisure. A decrease in the job-finding rate increases the length of a career interruption and, thus, its cost in terms of forgone wages and human capital accumulation. By spacing out births, females can avoid a costly career interruption. Second, as children are costly in terms of goods and as income is relatively low when females are young, they may postpone births in order to smooth the consumption of goods. The importance of these two effects increases with the incidence of unemployment among young females. Earlier, Ahn and Mira (2002) find that in most OECD countries the fertility rate shows a negative response to unemployment along the business cycle (i.e., fertility is procyclical) and Adsera (2004) finds that high unemployment and unstable contracts, which are common in Southern Europe, depress fertility, particularly of younger women. To increase lifetime income though early skill-acquisition and minimise unemployment risk, young women postpone (or abandon) childbearing.

<sup>3</sup> A prolonged job search can be a sign of objective difficulties in obtaining a job in accordance with the graduates' expectations as well as a job seeker's employability. On the other hand, graduates need a certain amount of time to explore opportunities in the labour market.

<sup>4</sup> Health and engineering graduates often start their search early. Law graduates, in contrast, start late, notably in Germany and Austria. In France, business studies graduates show a much stronger propensity to start their job searching prior to graduation than other graduates.

HEGESCO consortium<sup>5</sup> shows that 12 to 32 percent of graduates started to look for a job before graduation and more than 90 percent of graduates obtained work within six months after graduation. Although the first job they obtained sometimes did not match the level and/or field of study, and involved only a temporary contract, five years after graduation most graduates had obtained a permanent contract in the field of their expertise. When comparing employment history across different fields, we find evidence that graduates from the fields of health care and engineering on average exhibit a shorter school-to-work transition than their peers (social science, business and law), while graduates from the humanities and the arts are faced with longer transition periods (Alen and Van der Velden, 2009).

The literature identifies two important institutions that primarily influence school-to-work transitions: the education system and labour market conditions (see, for example, Kerckhoff (2000) and Müller (2005)). Most surveys of the school-to-work transition usually studied the phenomenon with respect to labour market institutions, minimum wage legislation and internal labour markets in the case of school leavers. However, recent contributions emphasise the importance of the education system in the context of the perceived quality of job seekers that is closely related to the quality of the education institution (MacLeod and

Urquiola, 2009). The ability of a university to acquire and maintain a reputation for quality is a key ingredient in the efficient provision of complex goods and services in a market economy (Friedman, 1962). The difference in quality therefore leads to product differentiation. Akerlof (1970) showed that if the quality of goods (or services) is difficult to observe, then sellers with high quality goods exit the market, leaving behind only low quality »lemons« for sale. In contrast, the perceived quality of a school depends upon the quality of the **buyers** who purchase its services, resulting in a tendency for selective schools to drive non-selective ones from the market.<sup>6</sup>

While a large body of research exists on school-to-work transitions and the early careers of the youth in the EU and other Western industrialised countries, little is known about youth transitions in Central and Eastern European (»CEE«) countries. Yet the experience of post-communist countries seems to be unique since transition economies have been and still are undergoing major structural changes in all sectors (education, the economy, the welfare state) at the same time, which are incomparable with downturns in the business cycle known in Western economies (Roberts, 1998, Redek and Sušjan, 2005). The introduction of a market-based economy *inter alia* required radical changes in the system of production and consequently the skills of the labour force. (Cater and Cater, 2009) Thus, a major

<sup>5</sup> The HEGESCO survey is based on the REFLEX methodology and was carried out in 2008 in four new EU countries (Slovenia, Lithuania, Poland and Hungary) and Turkey. In total there were 8,742 responses. In Slovenia the questionnaire was mailed out to 6,000 graduates and the response rate was 49 percent.

<sup>6</sup> We have to be careful when identifying academic achievements as the only characteristics of schools. Brunnello and Rocco (2004) report in their paper that private schools can provide lower quality than public schools in certain conditions. Using a stylised model of the education market with the sequential entry of a public and a private school, they show that, depending on the underlying parameters of the model, a market structure with the private school offering at a positive price lower quality than the public school can be in equilibrium. In this case, private schools offer a combination of leisure and academic quality that attract specific »buyers« of educational services. The calibrated parameters for Italy suggest the existence of such an equilibrium in the Italian market for education. Similarly, Figlio and Stone (1997) argue that parents giving preferences to private schools may be concerned about other outcomes such as discipline, extracurricular activities, religious matters and the opportunity to interact with a certain peer group.

challenge for the school-to-work transition in transition countries has been to qualify new entrants (in addition to re-qualifying a large part of the workforce) for the labour market at a time when resources are limited and education institutions and training providers are themselves being restructured, often at a slower pace than the labour market, which complicates the task even further (Cazes and Nesporova 2003). Moreover, the rapid expansion of post-secondary and higher education that increased the number of young job-seeking graduates tenfold in the 1991 to 2008 period in Slovenia, for example, has led to a situation where there are more higher education graduates than corresponding jobs. Therefore, such an educational expansion brings a »proletarianisation« of higher education, indicating that the unemployment of young people with a higher education is growing and that there are ever more young people with a higher education who cannot find jobs that match their education level (Blossfeld, 1999).

This paper contributes to the literature in several important ways. First, it identifies university-related factors as important when studying the employability of graduates. Second, the evidence relies on the registered data on the complete cohort of graduates of 2007 matched with their labour market histories before and after graduation. To our knowledge, a similar study cannot be found in the academic literature. Third, the phenomenon of employability is analysed in the context of a former transition economy, making it even more interesting due to a specific environment related to a dual process of restructuring: restructuring of the economy and restructuring of the higher education system. Similar to other institutional trends in transition economies, there are pressures to boost competitiveness in higher education in order to increase the quality of exist-

ing universities. As most former transition economies are still lacking a sound quality measurement system, the employability of graduates could serve as the most reliable proxy for the quality of academic programmes. Therefore, our study contributes to the debate on how to measure the quality of higher education institutions. In order to include as many different schools as possible, we focused on the wide field of business education in order to compare employability outcomes in different schools.

The paper is structured as follows. The next chapter provides a literature overview and theoretical background, followed by a description of the sample and data. The empirical specification and results are presented in the third section, followed by final remarks.

## THE SCHOOL-TO-WORK TRANSITION: INSTITUTIONAL AND THEORETICAL BACKGROUND

### Impact of the education system and labour market regulation on graduates' employability in (post-) transition economies

The school-to-work transition in general has been the subject of substantial research in the last two decades (see Gangl et al., 2003, for example). Labour market entries by different education groups may vary depending on the general economic conditions and existing, nation-specific institutions such as labour market regulation, industrial regulation, the education system and the welfare system (McGinnity et al., 2005). It has been argued that the degree of **labour market regulation** influences employers' decision-making when hiring workers, and this is particularly relevant when speaking about first-time job seekers.<sup>7</sup>

<sup>7</sup> Research suggests that the response of employers in labour markets to higher costs of dismissal is that they set higher productivity reservations for potential employees. Such hiring reservations may pose particular

On the other hand, stricter labour regulation might have positive effects on school-to-work transitions, especially in the case of a strong union presence, centralised system of collective bargaining and co-operative relationships between corporate partners<sup>8</sup> that can be employed in ways that generate economically viable institutional structures for youth labour market integration (Estevez-Abe et al., 2001; Ryan, 2001; Soskice, 1994). In general, the level of employment protection legislation appears to affect youth unemployment chances, but the effect is not stable once the structure of training systems is taken into account (Van der Velden and Wolbers, 2003, Breen, 2005).

When speaking about the **role of the education system** in the employability of young graduates we have to stress that CEE economies inherited a highly centralised and state-controlled education system from the socialist period (Saar, 1997). Young people were allocated to the education system in accordance with the economic and social goals of central planning. The transition from school to work was smooth since the first workplace was often assigned by state agencies, supported by employers and secured for all school leavers virtually irrespective of the level of their education (Gerber, 2003, Helemäe and Saar 2000, Róbert

and Bukodi, 2005). The organisation of the school structure and curricula was based on the dual system model, so the link between one's education level and future job was clearly defined, although the status match was more important than the skill match (Helemäe and Saar, 2000, Róbert and Bukodi, 2005). In the period of transition we witnessed a two-fold restructuring: on the labour demand side (see for example Domadenik, Prašnikar, Svejnar, 2008) and on the side of educational and training systems.<sup>9</sup> Together with a substantial rise in participation in tertiary programmes and the emergence of new private institutions young graduates have encountered many problems when searching for their first job. As a consequence, the unemployment rates of young graduates have risen significantly in all CEE states.

Only a few studies analyse the employability of young graduates in (post-)transition economies. Apart from the surveys mentioned in the introduction (CHEERS and HEGESCO) that face a substantial sample selection bias, it is worth mentioning the study by Kogan and Unt (2005). Based on labour force data they present an empirical analysis that focuses on the transition from education to the first significant jobs, approached from an event history perspec-

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problems with regard to young people as both the job entrants' need for additional training as well as the higher level of uncertainty inherent in recruiting inexperienced school leavers work to their disadvantage (Müller and Gangl, 2003). Further, labour market regulation may have detrimental effects on youth labour market chances as employment protection tends to reduce the dynamics of the labour market and hence affects the job-finding rates among job seekers in general (Bertola and Rogerson, 1997; Gangl, 2003a; Gregg and Manning, 1997).

<sup>8</sup> Collective, corporate efforts might include wage moderation policies to enhance youth labour market integration at both the level of particular firms or industries and also across the whole economy. Other forms include efforts to establish common training standards for certain occupations or industries or to involve corporate bodies in the formulation and implementation of training curricula. Clearly, corporatist involvement in training systems is most strongly developed in the context of apprenticeship-based dual systems (e.g. Germany), where employers and unions are actively engaged in both the conceptualisation and provision of training (Smyth et al., 2001).

<sup>9</sup> After the launch of economic reforms employers have largely withdrawn from their administrative and financial involvement in education, including a reduced role in paying scholarships to students (OECD 1997). In fact, many economic branches around which vocational education was organised became largely obsolete after the collapse of the socialist system. For more about the restructuring of the educational and training system, see Saar et al., 2008.

tive. The results show that, when it comes to starting one's first significant job, the effect of education has grown in all three countries under discussion: modestly in Estonia, and more profoundly in both Hungary and Slovenia. As expected, there were smaller differences between school leavers with different levels of education at the start of the first significant employment in the early transformation period. Results of the multinomial regression analyses show that over-education became more common in Hungary and Slovenia (albeit to a slightly smaller degree) during the stabilisation years. In Estonia, the effect of over-education did not appear to be as pronounced as expected since no significant cohort effect was found. It may well be that there is a time lag between the expansion of higher education and its effects on the labour market, since only a limited number of students has graduated from the expanded tertiary education system in Estonia.

### Theoretical background

Education production functions have usually modelled educational attainments as being determined by school, parental and peer group inputs (see, for example, Brown and Saks, 1981, or Adnett et al., 2002). Despite the vast amount of theoretical and empirical contributions, many methodological problems remain with regard to research in schooling markets, particularly the construction of appropriate control groups. Associated problems are the need to adjust measures of pupil attainment both for variations in their innate ability (evidence surveyed in Hanushek, 1986) and for the impact of peer group effects (surveyed in Moreland and Levine, 1992).

Our approach highlights the »school-to-work transition« process and young persons' employability as being crucially dependant on the quality of a higher education institution and less likely to be affected by peer effects. When the difficulty of individual

transitions is reviewed from the higher education system's point of view, the focus of the analysis is typically on discovering the ways in which higher education institutions can support individuals with their studies and offer them assistance in their job searches (Teichler, 1998). The number of graduates and their employability are often used as evaluative indicators when considering the funding of higher education institutions. Accordingly, when reviewed from this point of view, poor graduate employability and even the prolongation of studies may be interpreted as indicators of inefficiency in the way the system functions.

Why do individuals invest in education? The human capital model assumes that a higher wage rate after education is correlated with an investment in education while, on the other hand, signalling models regard education as a signalling device to potential employers of an individual's enhanced ability. In our model, we assume that education increases the probability of finding employment, whereas wages have relatively smaller variance due to the collective bargaining practice in Slovenia.

MacLeod and Urquiola (2009) presented a model in which individual innate ability and effort are not directly observable, but can only be inferred from performance in tests that provide a noisy measure of individual skill. The model assumes two periods: in the first period the individual goes to school and exerts some effort. In the second period the young graduate enters the labour market and starts searching for a job. The success in finding a »proper« job is closely related to the skills and abilities acquired in the first period. Individual utility is therefore given by:

$$U_{is} = \log c_{is}^0 + \delta \log c_{is}^1 + \gamma \log z_{is} + \varphi(s_{is}, \alpha_i) \quad (1)$$

where  $i$  indexes individuals, and  $s$  stands for the school they attend.  $c^0$  and  $c^1$  denote

consumption in each period,  $\delta$  is the discount rate, while  $\gamma$  stands for one's taste for non-educational amenities, which are labelled  $z$  and are assumed to raise student welfare directly but to not produce skills. The last term reflects that individuals must choose to allocate their effort between: i) academic effort, which refers to activities like doing homework and paying attention in class; and ii) non-academic activities such as sports, student government, watching television, or community service. (Bishop (2004), for example, emphasises the importance of these activities for a future career). For the sake of simplicity we can assume that the non-academic activities do not increase the probability of employment. Consumption in the first period is related to exogenous income minus study-related costs, while consumption in the second period is closely linked with the probability of becoming employed.

An individual's skill after attending school is denoted by  $\theta_{is}$ , and is determined by their innate ability  $\alpha_{is}$ , their academic effort  $e_{is}$ , and their school's value added  $\beta_{is}$ . Specifically, skill is given by:

$$\theta_{is} = \alpha_{is} + e_{is} + \beta_{is} \quad (2)$$

We assume that academic effort and school value added enter the individual's skill-upgrading function in a separable fashion.<sup>10</sup> After graduation, individuals are looking for a job in a perfectly competitive labour market where their probabilities of becoming employed and their wages are equal to the market's best estimate of their skills. The market receives two signals of individual skill. First, it observes an individual-specific measure of learning called a *graduation test* in some countries (like Germany) and a *diploma*

in others (like Slovenia). These provide an individual-specific signal of skill and significantly influence students' labour market outcomes.

The second signal the market observes is the identity and implicitly the **reputation** of the school each student attended. The expected skills can therefore be proxied as expected ability  $E\{a_i / i \in s\}$ , average academic record in a particular school  $e_s$  and the school's value added  $\beta_{is}$ .

$$R_s = E\{\theta_i / i \in s\} = E\{\alpha_i / i \in s\} + \bar{e}_s + \beta_s \quad (3)$$

The probability of becoming employed after graduation and consumption in the second period in equation (1) will therefore be equal to the expected skills. Based on equation (3), we can measure the probability of becoming employed as the basic component of two factors: the school's value added and individual ability proxied by the deviation from the average duration of study at a particular higher education institution. This framework enables us to test whether there are any differences in employability among different business schools given that young graduates all face the same constraints when entering the labour market and controlling for individual ability. We outline the corresponding empirical model in Section 3.

## HIGHER EDUCATION IN SLOVENIA: DESCRIPTION OF THE SAMPLE

### General information about the higher education system in Slovenia

Similar to other CEE countries, Slovenia has seen an upward trend of graduates in the past two decades. The number of graduates in Slovenia skyrocketed from

<sup>10</sup> However, this assumption is hard to prove as it requires exposing arguably comparable students to different schools (with different quality levels) and then studying the differences in the measured effort.

5,951 in 1990 to 14,769 in 2007, namely a 248.17 percent increase (SORS, 2009). Higher education in Slovenia is provided by four state universities that offer both academic and professional degree programmes, one private university and 29 private institutions. In the last 10 years an increase has been particularly noticeable in the number of private colleges which in the 2008/09 academic year enrolled around 10 percent of all students (mostly in the business education field). In the 2008/09 academic year, 31,027 students were enrolled in undergraduate professional higher and academic higher programmes studies harmonised with the Bologna Declaration, namely more than one-third of all students enrolled in all higher education studies and a 28 percent increase over the preceding year. The shares of students enrolled in professional higher education programmes and academic higher programmes in the 2008/09 academic year are presented in Table A1 in the Appendix.

Higher education in Slovenia is regulated by the Higher Education Act (1993, amended 1999, 2001, 2003 and 2004). The Act creates a structure for higher education over three levels: the undergraduate level that lasts either 3 or 4 years, the master's level; and the PhD cycle. Professionally-oriented undergraduate programmes are somewhat shorter than the academic ones (usually 2 or 3 years). Slovenian tertiary education is characterised by the predominance of public financing, resulting in public expenditure on tertiary education amounting to 1.3 percent of GDP (SORS, 2009). For full-time students from Slovenia or EU countries public higher education is

free of charge, whereas part-time students and postgraduate students pay tuition fees. There are two kinds of students who study part-time: those who have a job and those who did not fall within the quota of tuition-fee-free study positions<sup>11</sup>. The latter can study at the school of their choice upon paying the tuition fee.

In 2004 the Ministry of Higher Education, Science and Technology introduced a new scheme for financing higher education that moved away from programme financing to a student-based approach. Institutions are financed according to the number of students enrolled in a specific year of study and the number of graduates, while some of the funding is still based on past financing before the new scheme was introduced (the so-called historical component). Different study fields are divided into six groups with different funds per student. The biggest drawback of the new system is that it neglects the quality of educational services different institutions provide within the same field of study. The introduction of the Bologna study programme brought new discussions of public financing. The main issue in those discussions was how to measure the quality of the education services provided by different institutions. A system that allocates the same amount of money per student and does not take account of differences in quality is unsustainable in the long run and results in a race towards the low quality provision of services.

### Description of the sample

This study uses micro data on the entire cohort of graduates in 2007 provided

<sup>11</sup> The Ministry of Higher Education, Science and Technology announce tuition-fee-free positions every year according to university supply constraints and the money available for financing higher education. Since 2007 the number of tuition-fee-free positions has exceeded the number of potential students. However, some programmes face higher demand for study positions and students can apply for part-time positions with a full tuition fee. The selection of students for full-time student positions is based on the **grade point average (GPA)** in the last two years of secondary school and matriculation exam.

by the Statistical Office of the Republic of Slovenia. The dataset provided includes data on the personal characteristics of graduates (year of birth, gender, nationality, living conditions), type of schooling (university, faculty, programme, ISCED field of education, type of study – full-time or part-time study, year of enrolment, year of graduation, previous education).<sup>12</sup> Based on an identical individual number assigned to each graduate the described dataset is matched with the data from the Statistical Register of the Labour-Active Population (»SRDAP«) which includes the entire employment history. Based on this matched dataset we could correctly identify each individual's employment history (date of starting employment or unemployment, job classification, part-time or full-time work, number of shifts). The described dataset is truncated at the end of October 2008, which allows us to examine their employment status 9 months after graduation at the latest.

In 2007 the majority of students (48.24 percent) were enrolled in the Social Sciences (ISCED 3). In 2007 48.24 percent of students in our entire cohort graduated from Social Sciences, followed by 13.22 percent enrolled in Engineering, Manufacturing and Construction; 62.70 percent of the population were females and 60.99 percent studied full-time. Due to the different school-to-work transition trends of

full- and part-time students, the analysis is divided into two separate parts.

In order to study the effect of quality education on employment prospects we limit our sample solely to graduates from Business and Administration, as this is the only field of study offered at all universities and private institutions. This corresponds to 37.38 percent of all graduates, (namely 5,505 graduates). However, we excluded observations with a unspecified month of graduation (12 observations). We also excluded from our analysis those graduates who did not enrol in the first year of study, as that would cause biased estimates (981 observations).<sup>13</sup> Finally, our sample encompassed 4,513 observations, of which 1,956 or 43.34 percent of graduates studied full-time.

In 2007 a student could obtain a Business and Administration (»B&A«) degree at four different universities, offering six different programmes: Public Business and Administration Schools 1, 2, 3, 4 and 5 (Public B&A Schools)<sup>14</sup> and several private institutions offering either a 2-year or 3-year professional degree<sup>15</sup>. In Tables 1a and 1b we report the number of graduates, the share of females and full-time graduates, the average age at graduation and the share of employed graduates before graduation for full-time and part-time students, respectively.

<sup>12</sup> The dataset of graduates unfortunately does not include the day of graduation, only the month. The research would benefit from knowing the exact date of employment as well as the grade for the thesis.

<sup>13</sup> Students are able to change their study programme under specific conditions. Moreover, they can enrol in a new study programme after they complete the first one. Due to several reasons of non-enrolment in the first year of study, we decided to exclude these individuals from our sample in order to obtain clear effects of a particular institution on employability.

<sup>14</sup> Due to the small number of graduates one public business school was excluded from further analysis. Due to the Law of National Statistics, the names of the schools cannot be disclosed (Zakon o državni statistiki – ZDSta, 1995).

<sup>15</sup> In just one private 3-year business school graduates could obtain either a professional 2-year or 3-year education; however, due to the very small number of observations of 2-year graduates we included both cohorts in the 3-year private business schools.

Table 1.

*Number, gender structure, average age at graduation and share of employed graduates before graduation for full-time graduates*

	Number of observations	Share of males (in %)	Average age at graduation*	Share of those employed before graduation (in %)
Public B&A School 1	779	33.63	25.46 (1.94)	29.01
Public B&A School 2	296	30.07	25.48 (1.97)	20.27
Public B&A School 3	196	36.22	25.85 (1.97)	31.63
Public B&A School 4	183	15.85	24.86 (1.69)	17.49
Public B&A School 5	41	26.83	25.58 (1.84)	43.90
3-year Private Schools	177	28.25	28.71 (7.11)	40.11
2-year Private Schools	284	22.89	28.02 (7.04)	40.14
Full-time graduates	1,956	29.50	26.12 (4.01)	29.81

\*(standard deviation in parentheses)

Source: Statistical Office of the Republic of Slovenia, 2008

Tables 1 and 2 reveal different transition-to-employment trends among the two types of graduates. Although one could expect that part-time students would be those who were already employed, we see that only 66.6 percent of all such graduates were employed at the time they graduated. We can assume that the one-third of part-time students opted for this type of study

after they were unable to obtain a full-time study position in their desired field of study. Therefore, commencing employment is particularly hard for them as employers perceived them as students with less ability. Further, the average age at graduation is higher for part-time graduates, as is the share of those who were employed before graduation.

Table 2.

*Number, gender structure, average age at graduation and share of employed graduates before graduation for part-time graduates*

	Number of observations	Share of males (in %)	Average age at graduation*	Share of those employed before graduation (in %)
Public B&A School 1	270	31.48	32.53 (6.02)	71.11
Public B&A School 2	151	29.14	31.70 (6.04)	60.26
Public B&A School 3	217	45.16	33.15 (5.85)	69.59
Public B&A School 4	340	30.00	33.97 (6.37)	59.41
Public B&A School 5	40	40.00	33.40 (7.40)	82.50
3-year Private Schools	407	2.95	35.26 (7.34)	65.85
2-year Private Schools	1,132	24.38	35.24 (7.50)	67.67
Part-time graduates	2,557	24.76	34.37 (7.07)	66.60

\*(standard deviation in parentheses)

Source: Statistical Office of the Republic of Slovenia, 2008

The study focuses on calculating the probability of becoming employed («the probability of employment») for the two different cohorts in different time periods after graduation: 3, 6 and 9 months. We included 1,373 full-time graduates in the analysis who were not employed before graduation and 854 part-time graduates, respectively. Nine months after graduation 57 percent of all graduates were already employed, indicating much lower probabilities than reported in the CHEERS survey. On average, only 29 percent of all graduates in the CHEERS survey reported a job search period that was longer than 9 months (Schomburg, Teichler, 2006: 62).

The study also pays some attention to the effect of living conditions on the probability of becoming employed. Tables 3 and 4 show the relative share of graduates reporting different living conditions during their studies. All graduates from Public B&A Schools 2 and 4 specified their living conditions as »Other«, in contrast to the majority of graduates from all other schools who lived with their parents.<sup>16</sup> Comparing the living conditions of the full-time graduates with the part-time graduates in Table 3b, we can observe that the majority of part-time graduates of the 3- and 2-year Private Schools already had their own family (57.55 percent and 51.64 percent, respec-

Table 3.

*Living conditions of full-time graduates*

Institution	Living conditions				
	Parents	Partner	Family	Alone	Other
Public B&A School 1	65.82	0.90	1.27	9.76	22.24
Public B&A School 2	0.00	0.00	0.00	0.00	100.00
Public B&A School 3	64.93	10.45	7.46	1.49	15.67
Public B&A School 4	0.00	0.00	0.00	0.00	100.00
Public B&A School 5	56.52	0.00	8.70	30.43	4.35
3-year Private Schools	67.92	3.77	11.32	10.38	6.60
2-year Private Schools	70.00	5.29	14.71	2.94	7.06

Source: Statistical Office of the Republic of Slovenia, 2008

Table 4.

*Living conditions of part-time graduates*

Institution	Living conditions				
	Parents	Partner	Family	Alone	Other
Public B&A School 1	33.33	6.41	28.21	10.26	21.79
Public B&A School 2	0.00	0.00	0.00	0.00	100.00
Public B&A School 3	24.24	53.03	4.55	0.00	18.18
Public B&A School 4	0.00	0.00	0.00	0.00	100.00
Public B&A School 5	42.86	14.29	42.86	0.00	0.00
3-year Private Schools	20.14	7.19	57.55	8.63	6.47
2-year Private Schools	23.22	7.10	51.64	7.92	10.11

Source: Statistical Office of the Republic of Slovenia, 2008

<sup>16</sup> We would like to thank the referee for pointing out that the dummy variable measuring other living conditions picks up the institutional effects of these two B&A schools.

tively), and only 18.50 percent of all part-time students still lived with their parents. However, it is interesting that once again all graduates from Public B&A Schools 2 and 4 specified their living conditions during their studies as »Other«.

### ESTIMATING THE FRAMEWORK AND RESULTS

Based on the institutional and theoretical background in Section 1, we derive the empirical framework of the graduates' employability that depends on a school's value added and individual ability. The dependent variable (employment) is binary coded whereby 1 indicates employment and 0 indicates unemployment. Independent variables are vector covariates, such as personal characteristics and institutional characteristics. To calculate the probability of employment we use a probit model<sup>17</sup>. According to Johnston and DiNardo (1997), a probit model has a »behavioural interpretation« that is instructive and often analytically convenient.

The probit model is defined here as:

$$\Pr_i(y_i = 1|X_i) = \Phi(X_i\beta), \quad (4)$$

where  $t$  indexes time and takes the value  $t = 0, 1, 2, 3$ ; where 0 represents graduation,  $t = 1$  represents three months after graduation, and  $t = 2$  six months and  $t = 3$  nine months after graduation, respectively.  $i$  indexes individuals,  $\Phi$  is the standard cu-

mulative normal probability distribution and  $X_i\beta$  is called the probit score or index. An individual is observed to be employed ( $y_i=1$ ) whenever the index value is greater than  $\varepsilon$ :

$$X_i\beta + \varepsilon_i \quad (5)$$

where  $X_i$  is a vector of individual and institutional characteristics,  $\beta$  is a vector of parameters and  $\varepsilon_i$  is a stochastic normally distributed error term (Johnston and DiNardo, 1997). Individual characteristics included in the model are: gender, age at graduation and living conditions, while a school's value added is controlled by institutional dummy variables. Individual ability is proxied by the deviation from the average duration of study calculated for every individual in our database. Living conditions proxies individual's tendency to move.<sup>18</sup>

The coefficients from the probit model are difficult to interpret and we therefore report marginal effects. In binary regression models, the marginal effect is the slope of the probability curve relating  $X_k$  to  $\Pr(Y = 1|X)$ , holding all other variables constant. A check of robustness is conducted by running several specifications that are presented in the following section. The control group represents a male university graduate from Public B&A School 1. We control for reported living conditions as they might serve as a push factor when searching for employment and also investigate any incidence of possible discrimination.

<sup>17</sup> Alternatively logit can be used where instead of normal distribution logistic distribution is assumed. However as Hahn and Soyer (2005) summarize and point out that unless in case of multivariate response models, both methods in most applications give the same conclusions (e.g., Maddala, 1983; Davidson and MacKinnon, 1993; Long, 1997; Greene, 1997; Powers and Xie, 2000; Fahrmeir and Tutz, 2001; Hardin and Hilbe, 2001). In addition Chambers and Cox (1967) found that it was only possible to discriminate between the two models when sample sizes were large and certain extreme patterns were observed in the data. Also, in our case the marginal effects of different Business and Administration Schools, as well as individual characteristics on the probability of employment using logit, do not differ significantly.

<sup>18</sup> This variable might indirectly measure an individual's ability. It is reported in various empirical studies that people with a higher innate ability tend to move more than others.

In Tables 5 and 6 the probability of becoming employed in the first 3 months after graduation for graduates of different business schools are presented. The different specifications include various sets of ex-

planatory variables divided into two main groups: institutional and personal characteristics (gender and living conditions). In the second and fourth specification of the model we also included a variable that measures in-

Table 5.  
Probability of employment for full-time graduates in the first 3 months after graduation

Specification	1	2	3	4
Number of observations	1,373	1,373	1,373	1,373
Average probability of employment for a male graduate from Public B&A School 1	0.372	0.370	0.368	0.367
<b>Schools</b>				
<b>Public B&amp;A School 2</b>	# -0.203 *** (0.031)	-0.202 *** (0.030)	-0.200 *** (0.040)	-0.200 *** (0.040)
<b>Public B&amp;A School 3</b>	# -0.128 *** (0.039)	-0.140 *** (0.039)	-0.138 ** (0.040)	-0.141 *** (0.040)
<b>Public B&amp;A School 4</b>	# -0.220 *** (0.033)	-0.221 *** (0.033)	-0.217 *** (0.041)	-0.218 *** (0.041)
<b>Public B&amp;A School 5</b>	# -0.092 (0.090)	-0.094 (0.090)	-0.073 (0.094)	-0.077 (0.094)
<b>3-year Private Schools</b>	-0.231 *** (0.036)	-0.230 *** (0.036)	-0.221 *** (0.037)	-0.221 *** (0.037)
<b>2-year Private Schools</b>	# -0.323 *** (0.022)	-0.323 *** (0.026)	-0.313 *** (0.027)	-0.315 *** (0.027)
<b>Individual Characteristics</b>				
<b>Gender (female)</b>	# 0.043 (0.029)	0.036 (0.029)	0.044 (0.029)	0.037 (0.029)
<b>Living with family</b>			-0.239 *** (0.056)	-0.224 *** (0.059)
<b>Living with partner</b>			0.136 (0.094)	0.145 (0.094)
<b>Other</b>			-0.008 (0.042)	-0.007 (0.042)
<b>Living alone</b>			-0.023 (0.057)	-0.018 (0.057)
<b>Deviation from average study duration</b>		-0.003 ** (0.001)		-0.002 ** (0.001)

# dy/dx is for a discrete change of the dummy variable from 0 to 1, standard errors are reported in parentheses.

Note: \* significant at 10 %; \*\* significant at 5 %; \*\*\* significant at 1 %

Source: Statistical Office of the Republic of Slovenia (2009), own calculations

dividuals' deviations from the average study duration of a particular programme.

The probability of employment in the first 3 months after graduation for full-time male graduates of the academic study programme at Public B&A School 1 in 2007 is 0.372. In contrast, graduates from other Business and Administration schools in the same period exhibit a lower probability of employment, with graduates from the 2-year Private Schools that offer a professional degree exhibiting the lowest probability of employment, holding all other variables constant. Differences in the probability of employment are significant at 1%, except for graduates of Public B&A School 5. The positive deviation from the average schooling duration has a statistically significant negative effect on the probability of employment, indicating that every extension of schooling above the average duration of schooling decreases the probability of employment. Living conditions are included in Specifications 3 and 4, where living with one's parents serves as a control variable. Graduates with their own family on average exhibit a significantly lower probability of employment in the first 3 months, indicating that having children decreases the probability of securing employment in the first 3 months after graduation. All the estimations are robust.

Differences in the probability of employment in more than 3 but less than 6 months are similar to those observed in the first 3 months after graduation, as they become smaller in the first 6 months after graduation and, with the exception of the 2-year and 3-year Private Schools, the effects of graduating from different business schools are not statistically significant (Tables A2 and A3 in the Appendix). The effect of gender did not play a significant role in the employability outcomes. The only statistically significant effect on the probability of employment from 6 to 9 months after graduation is again a negative effect

of graduating from a 2-year Private School. When we also add living conditions into the model specification, we can observe a positive effect of graduating from Public B&A School 4 and a negative one from living with a family or alone on the probability of becoming employed.

Table 6 reports the average probability of employment for a part-time male graduate of Public B&A School 1 and changes in probability for graduating from different B&A schools. Compared to full-time students we can observe a lower probability of employment in the first 3 months after graduation if a graduate was not employed during their studies. Part-time graduates of Public B&A School 4 as well as the 2-year and 3-year Private Schools exhibit a statistically significant lower probability of employment. Table 6 shows that gender does not affect the probability of employment; however, living conditions have a statistically significant effect on the probability of employment. Graduates living with their parents (the control group) on average exhibit the highest probability of employment, while graduates with a family have statistically significantly the lowest probability of employment. The duration of study that might serve as a proxy for individual ability has no effects on the employability of part-time students. Obviously, employers regard part-time students who are not employed as a homogenous group of students with lower innate ability.

Table A4 in the Appendix reports the results of employability for part-time graduates of B&A schools in more than 3 but less than 6 months after graduation. We cannot find any statistically significant differences among the schools. However, living conditions again have a statistically significant effect on the probability of employment. Due to a lack of observation units we were unable to calculate the probability of employment for part-time graduates from 6 to 9 months after graduation.

Table 6.  
Probability of employment for part-time graduates in the first 3 months after graduation

Specification	1	2	3	4
Number of observations	854	854	854	854
Average probability of employment for a male graduate from Public B&A School 1	0.056	0.056	0.036	0.035
<b>Schools</b>				
<b>Public B&amp;A School 2</b>	# -0.002 (0.029)	-0.002 (0.029)	-0.003 (0.028)	0.004 (0.028)
<b>Public B&amp;A School 3</b>	# -0.035 (0.018)	-0.035 (0.018)	* -0.023 (0.014)	-0.023 (0.013)
<b>Public B&amp;A School 4</b>	# -0.047 (0.015)	** -0.046 (0.015)	** -0.029 (0.015)	* -0.028 (0.015)
<b>Public B&amp;A School 5</b>	# -0.005 (0.064)	-0.004 (0.065)	-0.007 (0.045)	-0.006 (0.046)
<b>3-year Private Schools</b>	-0.059 (0.013)	*** -0.058 (0.014)	** -0.035 (0.012)	** -0.035 (0.012)
<b>2-year Private Schools</b>	# -0.081 (0.022)	*** -0.080 (0.023)	** -0.054 (0.018)	** -0.053 (0.018)
<b>Individual Characteristics</b>				
<b>Gender (female)</b>	# 0.002 (0.017)	0.002 (0.017)	0.009 (0.012)	0.009 (0.012)
<b>Living with family</b>	#		-0.092 (0.015)	*** -0.091 (0.015)
<b>Living with partner</b>	#		-0.037 (0.009)	*** -0.036 (0.009)
<b>Other</b>	#		-0.041 (0.017)	** -0.041 (0.017)
<b>Living alone</b>	#		0.034 (0.009)	*** 0.034 (0.009)
<b>Deviation from average study duration</b>		0.000 (0.000)		0.000 (0.000)

# dy/dx is for a discrete change of the dummy variable from 0 to 1, standard errors are reported in parentheses.

Note: \* significant at 10 %; \*\* significant at 5 %; \*\*\* significant at 1 %

Source: Statistical Office of the Republic of Slovenia (2009), own calculations

### Robustness of the Results

In order to measure the effect of graduating from different Business and Administration schools on the probability of employment at different values of independ-

ent variables (drawn from distribution) we used estimation technique Clarify (King, Tomz and Wittenberg, 2000; Tomz, Wittenberg and King, 2003). This technique uses Monte Carlo simulation to convert the

raw output of the probit model into the predicted probability associated with a change in the explanatory variables. We generated an overall change in the predicted probability associated with changes in explanatory variables along with standard errors.

We estimated schools' marginal effects based on across the whole distribution of students (separately for full time and part time students) by deviation from the average study duration. We calculated marginal effects on the probability of employment

Table 7.

Marginal effects of different Business and Administration schools on the probability of employment in the first three months after graduation by deviation from the average study duration for full-time students

Deviation from average duration		Below average or average duration		Mean	
Number of observations		1,373		1,373	
Probability of employment for a male graduate from Public B&A School 1		0.521 (0.032)		0.505 (0.028)	
<b>Schools</b>					
<b>Public B&amp;A School 2</b>	#	-0.224 (0.036)	***	-0.221 (0.036)	***
<b>Public B&amp;A School 3</b>	#	-0.154 (0.045)	**	-0.156 (0.046)	**
<b>Public B&amp;A School 4</b>	#	-0.251 (0.042)	***	-0.247 (0.041)	***
<b>Public B&amp;A School 5</b>	#	-0.102 (0.099)		-0.102 (0.096)	
<b>3-year Private Schools</b>		-0.266 (0.047)	***	-0.259 (0.045)	***
<b>2-year Private Schools</b>	#	-0.371 (0.036)	***	-0.363 (0.033)	***
<b>Individual Characteristics</b>					
<b>Gender (female)</b>	#	0.036 (0.031)		0.036 (0.031)	

# dy/dx is for a discrete change of the dummy variable from 0 to 1, standard errors are reported in parentheses.

Note: \* significant at 10 %; \*\* significant at 5 %; \*\*\* significant at 1 %

Source: Statistical Office of the Republic of Slovenia (2009), own calculations

for Business and Administration schools as well as individual characteristics at 2 different thresholds: average duration or less and the mean deviation from the average duration respectively.

Tables 7 and 8 report the marginal effects of different schools and individual characteristics on the probability of employment in the first three months after graduation for full and part time graduates

Table 8.

*Marginal effects of different Business and Administration schools on the probability of employment in the first three months after graduation by deviation from the average study duration for part-time students*

Deviation from average duration	Below average or average duration	Mean
Number of observations	854	854
Probability of employment for male graduate from Public B&A School 1	0.153 (0.047)	0.154 (0.046)
Schools		
<b>Public B&amp;A School 2</b>	# -0.000 (0.061)	-0.000 (0.061)
<b>Public B&amp;A School 3</b>	# -0.070 (0.051)	-0.071 (0.055)
<b>Public B&amp;A School 4</b>	# -0.092 (0.045)	-0.093 (0.045)
<b>Public B&amp;A School 5</b>	# 0.026 (0.143)	0.026 (0.144)
<b>3-year Private Schools</b>	-0.115 ** (0.045)	-0.115 ** (0.045)
<b>2-year Private Schools</b>	# -0.113 ** (0.044)	-0.113 *** (0.043)
Individual Characteristics		
<b>Gender (female)</b>	# 0.001 (0.038)	0.001 (0.038)

# dy/dx is for a discrete change of the dummy variable from 0 to 1, standard errors are reported in parentheses.

Note: \* significant at 10 %; \*\* significant at 5 %; \*\*\* significant at 1 %

Source: Statistical Office of the Republic of Slovenia (2009), own calculations

respectively.<sup>19</sup> It can be observed that the results calculated with probit are robust as the results calculated with Clarify in general do not differ significantly.<sup>20</sup>

### CONCLUDING REMARKS

In taking the life cycle approach promoted by European policymaking seriously, one must understand the recent changes to »youth transitions« which suggest that not only early school leavers, but also the most educated young people are subject to a prolonged transition to active labour force participation. Flexibilisation and globalisation have contributed to a decoupling of education and employment; transitions to work have subsequently become longer, diversified, unstable and uncertain. In the course of this de-standardisation, transitions have also become fragmented in the sense that the link between education and work and other transitional strands (e.g. with regard to family, partnership, lifestyle, housing or citizenship) has continuously been dissolving. As a result, the former linear status passages have changed into "yo-yo" transitions in which young people experience aspects of unstable youth employment and unemployment.

In this paper, we have studied the characteristics of the employability of young graduates while controlling for different individual abilities and a school's value added in the context of the human capital theory. The latter is the most important component of a school's reputation. MacLeod and Urquiola (2009) show that when schools are able to select students based on their innate ability there is an »anti-lemons« effect: namely entry by relatively small schools

that serve students within a specific ability range. This leads to stratification whereby the most able students attend schools with the best reputations and subsequently earn the highest incomes, while the least able remain in the worst schools. The tuition fee follows the quality principle, with the best schools charging the highest tuition fees.

In Slovenia the system of public financing represents the main source of funds for state and private higher education institutions and is based on the student per capita principle. The aim of this paper has been to research the quality of education services by using a proxy that has not often been used in the literature: the employability of graduates. In order to avoid school-to-work transitions in different fields of study, we focus only on graduates in the field of business and administration. Although employment also depends on regional labour demand factors, we can assume that young graduates are very mobile and have no problems with searching for a job in other regions as well. However, we are aware of potential shortcomings that arise from the availability of data. The biggest shortcoming is that we do not exactly know what is the value added of the education system, as we have only partially controlled for students' innate ability.

Our study shows there are significant differences in the employability of young graduates, irrespective of whether they were full or part-time students. Part-time students generally exhibit higher employability at the time of graduation, but the trend is lower in the period after graduation. Therefore, we might assume that students who did not obtain positions as full-time

<sup>19</sup> Marginal effects of different schools and individual characteristics on the probability of employment from three to six months and from six to nine months separately for full and part time students are similar to probit estimations and can be obtained from the authors upon the request.

<sup>20</sup> The only difference is calculated probability for graduates from Public B&A School 1 where Clarify calculates the predicted probability, whereas simple probit model uses the average probability.

students of business and administration due to their low level of achievement in their secondary education are faced with big problems in the school-to-work transition. However, in the case of full-time students some institutions exhibit a higher probability of employment, showing that there are considerable differences in quality. Those institutions provide their education services at a lower price per »employable« graduate compared to other higher education institutions. The new private schools exhibited a significantly lower employability of full- and part-time graduates, which might indicate the lower innate ability of the students enrolled in these schools and/or the lower quality of their academic programmes. As these schools compete for public funding and have not found private funds for their operation, we strongly advise a reconsideration of the current system of financing by incorporating »quality« as an important determinant of the allocation of budget funding.

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**APPENDIX**

Table A1.  
Higher education students by type of programme, sex and higher education institutions, Slovenia, 2008/09 academic year

Type of programme	Total		Professional higher (former)		Professional higher (1 <sup>st</sup> Bologna cycle)		Academic higher (former)		Academic higher (1st Bologna cycle)	
	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
Higher education institutions – TOTAL	86597	51837	19331	9954	15592	9324	36239	23069	15435	9490
1 University of Ljubljana	53760	32008	10962	4865	5127	3257	28122	17688	9549	6198
2 University of Maribor	20814	11494	5375	2825	4209	2003	7263	4663	3967	2003
3 University of Primorska	5590	4171	1703	1415	2004	1387	732	614	1151	755
4 University of Nova Gorica	526	283	116	32	175	64	122	104	113	83
9 Individual Higher Education Institutions	5907	3881	1175	817	4077	2613	0	0	655	451

Type of programme	Total		Professional higher (former)		Professional higher (1 <sup>st</sup> Bologna cycle)		Academic higher (former)		Academic higher (1st Bologna cycle)	
	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
Higher education institutions - TOTAL	100.00%	100.00%	22.32%	19.20%	18.01%	17.99%	41.85%	44.50%	17.82%	18.31%
1 University of Ljubljana	100.00%	100.00%	20.39%	15.20%	9.54%	10.18%	52.31%	55.26%	17.76%	19.36%
2 University of Maribor	100.00%	100.00%	25.82%	24.58%	20.22%	17.43%	34.89%	40.57%	19.06%	17.43%
3 University of Primorska	100.00%	100.00%	30.47%	33.92%	35.85%	33.25%	13.09%	14.72%	20.59%	18.10%
4 University of Nova Gorica	100.00%	100.00%	22.05%	11.31%	33.27%	22.61%	23.19%	36.75%	21.48%	29.33%
9 Individual Higher Education Institutions	100.00%	100.00%	19.89%	21.05%	69.02%	67.33%	0.00%	0.00%	11.09%	11.62%

Source: Statistical Office of the Republic of Slovenia (2009), own calculations

Table A2.

Probability of employment for full-time graduates after the first 3 months after graduation but no later than 6 months after graduation

Specification	1	2	3	4
Number of observations	850	850	850	850
Probability of employment for a male graduate from Public B&A School 1	0.240	0.240	0.237	0.237
Schools				
<b>Public B&amp;A School 2</b>	# -0.019 (0.040)	-0.019 (0.040)	-0.029 (0.054)	-0.029 (0.054)
<b>Public B&amp;A School 3</b>	# -0.031 (0.049)	-0.030 (0.049)	-0.026 (0.050)	-0.025 (0.050)
<b>Public B&amp;A School 4</b>	# -0.006 (0.049)	-0.005 (0.047)	-0.017 (0.059)	-0.015 (0.059)
<b>Public B&amp;A School 5</b>	# -0.123 (0.086)	-0.125 (0.086)	-0.099 (0.095)	-0.100 (0.095)
<b>3-year Private Schools</b>	# -0.175 *** (0.036)	-0.177 *** (0.035)	-0.166 *** (0.038)	-0.167 *** (0.037)
<b>2-year Private Schools</b>	# -0.112 ** (0.036)	-0.111 ** (0.036)	-0.098 ** (0.039)	-0.097 ** (0.039)
Individual Characteristics				
<b>Gender (female)</b>	# -0.011 (0.032)	-0.009 (0.032)	-0.007 (0.032)	-0.004 (0.032)
<b>Living with family</b>	#		-0.147 ** (0.051)	-0.157 ** (0.049)
<b>Living with partner</b>	#		-0.052 (0.101)	-0.055 (0.101)
<b>Other</b>	#		-0.002 (0.050)	-0.003 (0.050)
<b>Living alone</b>	#		-0.079 (0.059)	-0.080 (0.058)
<b>Deviation from average study duration</b>	#	-0.001 (0.001)		-0.001 (0.001)

# dy/dx is for a discrete change of the dummy variable from 0 to 1, standard errors are reported in parentheses. Note: \* significant at 10 %; \*\* significant at 5 %; \*\*\* significant at 1 %

Source: Statistical Office of the Republic of Slovenia (2009), own calculations

Table A3.

Probability of employment for full-time graduates after the first 6 months after graduation but no later than 9 months after graduation

Specification	1	2	3	4
Number of observations	640	640	626	626
Probability of employment for a male graduate from Public B&A School 1	0.156	0.156	0.155	0.155
<b>Schools</b>				
<b>Public B&amp;A School 2</b>	# 0.032 (0.045)	0.031 (0.045)	0.087 (0.074)	0.086 (0.073)
<b>Public B&amp;A School 3</b>	# 0.040 (0.058)	0.040 (0.058)	0.046 (0.060)	0.046 (0.060)
<b>Public B&amp;A School 4</b>	# 0.094 (0.058)	0.095 (0.058)	0.157 * (0.089)	0.159 * (0.089)
<b>Public B&amp;A School 5</b>	# 0.219 (0.151)	0.218 (0.151)	0.246 (0.152)	0.247 (0.152)
<b>3-year Private Schools</b>	# -0.037 (0.047)	-0.039 (0.047)	-0.028 (0.051)	-0.030 (0.050)
<b>2-year Private Schools</b>	# -0.063 * (0.038)	-0.064 * (0.038)	-0.059 * (0.040)	-0.058 (0.040)
<b>Individual Characteristics</b>				
<b>Gender (female)</b>	# -0.019 (0.032)	-0.017 (0.032)	-0.013 (0.032)	-0.01 (0.032)
<b>Living with family</b>	#		-0.101 ** (0.042)	-0.107 ** (0.040)
<b>Other</b>	#		-0.076 (0.052)	-0.076 (0.052)
<b>Living alone</b>	#		-0.103 ** (0.042)	-0.102 ** (0.042)
<b>Deviation from average study duration</b>	#	-0.001 (0.001)		-0.001 (0.001)

# dy/dx is for a discrete change of the dummy variable from 0 to 1, standard errors are reported in parentheses. Note: \* significant at 10 %; \*\* significant at 5 %; \*\*\* significant at 1 %

Source: Statistical Office of the Republic of Slovenia (2009), own calculations

Table A4.

Probability of employment for part-time graduates after the first 3 months after graduation but no later than 6 months after graduation

Specification		1	2	3	4
Number of observations		800	800	800	800
Probability of employment for a male graduate from Public B&A School 1		0.049	0.049	0.023	0.023
<b>Schools</b>					
<b>Public B&amp;A School 2</b>	#	0.098	0.098	0.205	0.202
		(0.069)	(0.069)	(0.143)	(0.142)
<b>Public B&amp;A School 3</b>	#	-0.004	-0.005	0.002	0.001
		(0.035)	(0.034)	(0.026)	(0.025)
<b>Public B&amp;A School 4</b>	#	-0.019	-0.019	0.035	0.034
		(0.025)	(0.025)	(0.051)	(0.051)
<b>Public B&amp;A School 5</b>	#	0.101	0.095	0.090	0.085
		(0.154)	(0.150)	(0.155)	(0.150)
<b>3-year Private Schools</b>		0.017	0.015	0.038	0.037
		(0.035)	(0.034)	(0.035)	(0.035)
<b>2-year Private Schools</b>	#	-0.028	-0.029	-0.007	-0.008
		(0.027)	(0.026)	(0.017)	(0.017)
<b>Individual Characteristics</b>					
<b>Gender (female)</b>	#	0.02	0.019	0.018	0.018
		(0.015)	(0.015)	(0.008)	(0.008)
<b>Living with family</b>	#			-0.089 ***	-0.089 ***
				(0.015)	(0.015)
<b>Living with partner</b>	#			-0.030 ***	-0.030 **
				(0.008)	(0.008)
<b>Other</b>	#			-0.055 **	-0.054 **
				(0.019)	(0.019)
<b>Living alone</b>	#			-0.022 **	-0.022 **
				(0.007)	(0.007)
<b>Deviation from average study duration</b>	#		-0.000		-0.000
			(0.000)		(0.000)

# dy/dx is for a discrete change of the dummy variable from 0 to 1, standard errors are reported in parentheses. Note: \* significant at 10 %; \*\* significant at 5 %; \*\*\* significant at 1 %

Source: Statistical Office of the Republic of Slovenia (2009), own calculations

### **Sažetak**

## **PRELAZAK DIPLOMANATA POSLOVNIH ŠKOLA U SLOVENIJI IZ OBRAZOVANJA U ZAPOSLENOST**

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*U ovom radu proučavaju se obilježja zapošljivosti mladih diplomanata uzimajući u obzir njihove različite individualne sposobnosti i dodanu vrijednost obrazovnih institucija u kontekstu teorije ljudskog kapitala. Studija koristi jedinstvene mikro podatke o poslodavcima i zaposlenicima za cjelovitu kohortu slovenskih diplomanata u 2007. godini. Cilj ovog rada je istražiti kvalitetu obrazovnih usluga koristeći latentnu varijablu koja se ne koristi često u literaturi: zapošljivost diplomiranih studenata. Kako bi se izbjegao problem različite dinamike zapošljavanja u pojedinim područjima studiranja, rad je usmjeren isključivo na diplomante iz područja poslovanja i administracije. Rezultati pokazuju da se, u prosjeku, vjerojatnost zapošljavanja nakon stjecanja diplome znatno razlikuje među fakultetima poslovnog smjera. Uz neke institucije veže se veća vjerojatnost zapošljavanja, čime se otkrivaju znatne razlike u kvaliteti. Ove institucije pružaju usluge obrazovanja po nižoj cijeni po zaposlenom diplomantu u odnosu na druge visokoškolske ustanove. Novi privatni fakulteti imaju znatno nižu razinu zapošljivosti svojih redovitih i izvanrednih diplomanata, što vjerojatno ukazuje na niže sposobnosti studenata koji ih upisuju ili nižu kvalitetu studijskih programa u koje su uključeni.*

**Ključne riječi:** tranzicija iz školovanja u zaposlenost, poslovne škole, diplomanti, zaposlenost.