

# Higher Education and Employability Issues<sup>1</sup>

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Over the last decade, several European projects such as TUNING Educational Structures in Europe<sup>2</sup>, Careers after Higher Education (CHEERS)<sup>3</sup>, Flexible Professional in the Knowledge Society (REFLEX)<sup>4</sup> or “Higher Education as a Generator of Strategic Competences” (HEGESCO)<sup>5</sup> have sought to compare graduates in the transition from education to the world of work in a country-comparative fashion. One of the key issues in these projects was to learn about the relative impact of higher education programmes on acquired competencies and professional success. Indicators of graduates’ transition and early career success are attracting increasing attention on the policy agenda, accompanied by international surveys such as Education at a Glance (OECD, 2010) or the Programme for the International Assessment of Adult Competencies (OECD, 2011-). The prevailing motive for these attempts is based on the assumption that a high level of acquired competencies related to employability is the most desirable result of the higher education system.

In this way, the empirical findings from graduate surveys related to career success and the evaluation of HE programmes are expected to hold strong potential for demystifying the real contribution HE institutions make to graduates’ professional work either by way of generating new knowledge (i.e. the push principle) or providing skills (i.e. the pull principle adjusting graduates to suit employers’ needs). In light of the current economic crisis, the importance of graduates’ employability is expected to grow. However, developments in academic rankings (e.g. the Shanghai ranking) and (inter)institutional evaluations of study programmes require further clarifications.

One of many relates to the fact that the employability of HE graduates is influenced by phenomena external to higher education. Past graduate career survey projects (see above) all found evidence that the determinants of professional knowledge, along with general competencies, do not have exclusive links to just educational curricula but also to work experience, family backgrounds and general societal trends. Moreover, and as usually stressed by international comparative surveys, the varieties of professional domains, practical knowledge and training not only differ in scope but also in kind (e.g. Abbott, 1988; Burrage & Torstendahl, 1990 ...). The general recommendation on fostering the acquisition of competencies found in international surveys such as the need to obtain relevant work experience during higher education, to make higher education more demanding, forging links with employers, promoting HE programmes in the world of work and establishing the link between HE and the world of work, questioning problem-based learning etc. might lead to contradictory explanations once applied to a particular field of studies.

## Application of the model to HEGESCO data – a domain comparison

The theoretical considerations and model developed in previous sections have been applied to two domains in the Republic of Slovenia: business and economics, and teaching. In this section, we first provide a basic overview of basic frequencies, we then adjust the template according to domain particularities and in a descriptive manner present the result of the preliminary analyses and, third, by using selected variables we compare studied domains with others.

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<sup>1</sup> This paper is aimed to be presented at the International Conference on Human Capital and Employment in the European and Mediterranean Area; 10/11. March 2011 and DEHEMS project contoritum meeting.

<sup>2</sup> <http://tuning.unideusto.org/tuningeu/>

<sup>3</sup> <http://www.uni-kassel.de/incher/cheers/index.ghk>

<sup>4</sup> <http://www.fdewb.unimaas.nl/roa/reflex/>

<sup>5</sup> <http://www.hegesco.org/>

Based on the findings, in the last section we provide some further recommendations for the data analysis and interpretation of results. In particular, we consider how to compare several domains.

*i) Data and elaboration of professional domains*

The data set for Slovenian graduates 5 years after their graduation is acquired from the HEGESCO international survey conducted in 2008. The gross research framework in Slovenia was 6,000 graduates, roughly half of all 12,000 individuals who graduated in 2003. The survey was conducted by mail with a final response rate of 50 percent, giving a net sample of one-quarter of the total Slovenian graduate population in 2003. To a large extent the net sample reflects the distribution of fields of study. The HEGESCO survey acquired information on more than 400 different items such as modes of teaching and learning, first job and current job particularities, as well as acquired and required competencies.

For the purpose of this paper we sampled graduates from education and teaching (405 graduates) and business and economics (868 graduates), both presenting the largest identifiable (field of study) groups. Following the DEHEMS workshop conducted at the University of Ljubljana in February 2011 and earlier discussions within the DEHEMS project, we identified four factors of graduate success using Principle Factor Analyses:

- a) *Status and earning* (type of contract, experiences job security, gross earnings, experienced earnings and status);
- b) *Skills & qualification matching and development* (vertical education match, horizontal match, utilisation of knowledge and skills, opportunity to learn new skills, career development and professional role);
- c) *Creativity, autonomy and innovation at work*: (experiences, innovation in work organisation, autonomy at work, responsibility at work, and experiencing new challenges); and
- d) *Professional satisfaction*.

Predictors of success were related to sociodemographic characteristics, characteristics of work organisation, modes of teaching and learning, programme/institution characteristics and type of HE qualification/study.

Before conducting the analysis we carefully considered the match between the field of study and of jobs and the consequences this relationship holds for data interpretation. In the case of graduates from the teaching and education domain, 366 were employed and 15 were unemployed. Out of the 366 graduates, 309 (85.4 percent) were working as teachers. In the case of graduates from business and economics (868 in total), 173 were employed as managers, 426 as professionals, 254 were employed as technicians or below technician level (ISCO 3-9) and 15 were unemployed.

*ii) Identifying field of study particularities*

The main differential issue in comparing both groups dwells on the fact that graduates of teaching and education predominantly occupy highly regulated occupations (teachers), which is generally not the case of graduates from the business and economics domain. This caused differences in the composition of success factors: in all cases we reduced the number of items for teaching and education graduates as follows: earnings as a component of the *status* career success factor, horizontal and vertical educational match in the case of the *skills and qualification* career success factor and items related to implementation of innovation and methods in the case of the career success factor *creativity and autonomy*: we assumed the meaning would be completely incomparable to graduates from business and economics. Lastly, in the case of professional satisfaction career facts items<sup>6</sup> remained the same for both domains.

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<sup>6</sup> Job satisfaction and choosing a programme once again.

Also in the case of career success determinants some variations occurred. While in the case of sociobiographic determinants, international experiences and modes of teaching and learning, programme and institution characteristics and study success all the selected items were fully comparable among both domains, this was not the case with the job context variables. In the case of teachers, stability of demand, competition and sector selection was omitted as this showed uncomparable meaning in comparison to business and economics.

We started the analysis by considering graduates' employability preferences and what are the actual job preferences (mis)matches. The results could lead to further differences in the model's design and data interpretation.

**Table 4: Percentage of graduates (selected domains) with a strong preference for certain job characteristics, by field of study**

	Grad. of teaching & education	Grad. of business and economy
Work autonomy	67.8	46.6
Job security	68.8	48.4
Opportunity to learn new things	64.3	51.9
High earnings	27.0	29.4
New challenges	44.2	40.0
Good career prospects	25.2	34.1
Enough time for leisure activities	55.5	39.3
Social status	24.3	13.5
Chance of doing something useful for society	50.5	19.8
Good chance to combine work with family tasks	55.8	41.7

Own analysis.

**Table 5: Percentage of graduates (selected domains) experiencing shortage of selected work attitudes, by field of study**

	Grad. of teaching & education	Grad. of business and economy
Work autonomy	40.3	36.4
Job security	40.2	33.8
Opportunity to learn new things	42.8	50.0
High earnings	61.3	65.0
New challenges	45.1	53.6
Good career	56.5	60.2

prospects		
Enough time for leisure activities	57.3	54.5
Social status	46.3	39.4
Chance of doing something useful for society	29.5	45.4
Good chance to combine work with family tasks	53.5	52.9

Own analysis.

Tables 4 and 5 show that teaching and educational graduates significantly more highly appraise work autonomy, job security, the opportunity learn new things, enough time for leisure activities and family, and the chance of doing something useful for society than the business and economics graduates. On the other hand, graduates from business and economics have somewhat higher aspirations regarding higher earnings and good career development.

Faced by the reality of the work situation, the proportion of teaching and education graduates experiencing enough work autonomy, job security, social status and time for family and leisure activities is significantly smaller than the business and economics graduates. Conversely, graduates of business and economics perceive they have fewer chances to learn new things, good earnings, new challenges and the possibility to do something useful for society in comparison to the teaching and education graduates. These results highly impact on the importance of the subjective perceptions of graduates' career success.

The provisional regression analyses<sup>7</sup> indicate that for the business and economics graduates statistically significant determinants for *status success* relate to their organisational characteristics such as stability of demand, quality orientation, competition and linkage to public funding. Of all teaching and learning modes only non-relevant experiences appear to have a negative effect. In addition, a positive effect was noted by those graduates who experienced a high level of academic prestige and a strong work orientation. In the case of the teaching graduates' *status*, success is more influenced by modes of teaching and learning (e.g. problem-based learning, multiple choice exams, study effort) and long-term skill development. In this group, employers' environmental factors were not significant since employment in this domain is highly regulated.

In the case of the second success factor of "*skills & qualification match*", the significant determinants for business and economics graduates involved the quality orientation of the organisation, study effort and readymade skill development. In the case of the teaching graduates, the determinants of skill & qualification match were related to programme characteristics such as personal development and a good basis for starting work.

In the case of the third success factor of "creativity and autonomy at work", the most important factors appeared to be organisational quality orientation, private domain, and readymade skills for business and economics graduates, while influential factors for this factor in the case of the education graduates was striving for the best possible marks (scoring negatively), doing extra work for passing exams and good personal development. Professional satisfaction (the fourth success factor) was most strongly influenced by good teachers and readymade skills in both groups.

When comparing the frequency data from the teaching and business and economics graduates with other domains, some relevant observations in this discussion are the following (see Appendix 1 for detail information):

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<sup>7</sup> The first official analytical results produced within the DEHEMS project are expected to be available by June 2011.

- The level of study workload and the level of study demands for both groups of graduates seem to be on an average level, or slightly below it. Slovenian students spent on average 23.7 hours studying per week (the EU average is 32.5 hours!), which is almost an exact match for the graduates from education and teaching, whereas the graduates from business and economics spent just 20.9 hours. 40 percent of the graduates from teaching and education reported their study programmes were demanding, which is very similar to the share of business and economics graduates (41 percent). In Slovenia, on average every second graduate finds his or her field of study to be demanding.

- The share of graduates who reported that the academic prestige of their study programmes is high (19 percent in the case of business and economics, and 16 percent in the case of teaching) is lower than the Slovenian average of 26 percent. However, larger differences are reported in the case of vocational focus: 56.7 percent of the graduates from teaching and education reported their programmes had a strong vocational focus, while in the case of the business and economic graduates the share was only 31.6 percent.

- Almost 80 percent of graduates from the teaching and education domain reported they had been involved in practical training, representing the highest percentage from all domains. The figure for business and economics graduates was 45 percent (the Slovenian average is 55.2 percent). Interestingly, the average duration of practical training in the case of the teaching and education graduates is the lowest among all study fields (2.3 months). The average reported duration in Slovenia was 4 months (3.3 months in the case of business and economics graduates).

- In the case of job security the results differed from the expectations. The proportion of graduates from teaching and education with insecure temporary contracts was among the highest in comparison to other domains (25 percent), which also corresponds to the relatively small share of graduates reporting they had high job security. Graduates of business and economics have among all domains the smallest proportion of graduates with temporary contracts (13.6 percent) as well as a high level of reported job security.

- Large differences were also reported in the case of salaries. The average reported gross salary in the case of teaching and education was EUR 1,471 (the lowest among all fields of study), and only one out of five graduates reported they regarded their salary as high. The gross salaries of business and economics graduates were among the highest (EUR 1,838) and so too was the proportion of reported satisfaction.

- Surprisingly, even though low salaries and low job security were reported in the case of teaching and education graduates, these graduates reported the highest level of satisfaction with their work (77.5 percent). The share of satisfied graduates in the case of business and economics (63.6 percent) was despite their relatively high salaries and secure jobs slightly below the country average (64.8 percent).

- This paradox might be partially explained by the large share of teaching and education graduates reporting they utilise knowledge and skills to a large extent (83.6 percent), unlike the case of the business and economics graduates (64.4 percent).

On this basis, in the last section we provide some overall conclusions relevant to designing a cross-domain comparison in relation to the career success of various graduates.