

Determinants of graduates' labour market success across domains: a comparative analysis

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Theoretical links between education and the labour market

- Human capital theory (Becker et al.):
 - education adds to one's **productivity** and generates positive returns (education as investment)
- Signalling theory (Spence et al.):
 - education as a **signal** of unobservable characteristics that are correlated to education (*ability*)
- Search and matching (Diamond, Mortensen, Pissarides et al.):
 - education plays a role in increasing the **effectiveness** of the search and quality of job matches

The idea of the labour market success

- Labour market success may be understood in terms of:
 - being employed
 - having high quality employment contract (labour code protection)
 - having stable employment
 - relatively high wage level
 - having possibility for human capital accumulation
 - opportunity for utilisation of the skills and knowledge acquired during one's education
 - having good career prospects
 - having opportunity for personal development
 - the degree to which an actual job matches one's expectations
 - the balance between professional life and personal life
 - overall work satisfaction

Modelling labour market success

Labour market success measures

(type of employment contract, employment stability, wage level, human capital accumulation, personal development, career prospects ...)

PCA

Dependent variables

(six factors of the labour market success)

Explanatory variables

(personal characteristics, learning process, teaching modes, mobility, personal attitudes, current employment characteristics)

Regression

6 new dependent synthetic variables

■ **Job satisfaction:**

- high earnings, social status of the job, the opportunity to learn new things, career prospects, new challenges faced at work, job satisfaction, a match with expectations

■ **Education appropriateness (*matching education and skills*):**

- years of education and field of study most appropriate for the job, utilisation of knowledge and skills, and the fact of whether a respondent would choose the same programme again given such a possibility

6 new dependent synthetic variables

- **Job as a challenge** (*career development opportunities*):
 - the innovative character of the job, the extent to which the current work demands more knowledge and skills than the respondent can offer
- **Job security** (*employment status and security*):
 - job security and the type of employment contract

6 new dependent synthetic variables

- **Independence** (*creativity and autonomy of work*):
 - the extent of freedom in deciding how to do one's own job, the level of performance monitoring and work autonomy
- **Work-life balance**:
 - discrepancy between the desired leisure and the actual features of one's current employment

Explanatory variables

■ **Sociobiographic characteristics:**

- gender, number of children, country of origin, level of parents' education and the fact of whether the respondent is living alone or sharing a flat (with parents, flat mates, a partner etc.)

■ **Study process characteristics:**

- type of study programme (part-time or full-time studies), providing access to a PhD (BA or MA programme), additional HE programme, education programme obtained before undertaking HE (general secondary education or vocational secondary education)

Explanatory variables

- **Study programme characteristics**, the extent to which a programme:
 - has been a good basis for the graduate's personal development;
 - has been a good basis for performing current work tasks;
 - has been a good basis for starting work;
 - was academically prestigious;
 - may be considered to be known by employers;
 - may be considered to be demanding;
 - may be considered to be a broadly focused programme;
 - may be considered to be a vocationally-oriented programme; and
 - allows students any freedom in shaping their study programme.

Explanatory variables

■ Teaching modes:

- multiple choice exams, lectures, oral presentations, written assignments, problem-based learning, having the teacher as the main source, theories and paradigms, internships and work placements, research projects, and group assignments

■ Personal attitudes:

- average grade, effort put into the study process (striving for the highest marks or extra work put into studies above what was required)

Explanatory variables

- **International mobility experience:**
 - during the study period or after graduation for study purposes or for work purposes
- **Experience with work:**
 - before the HE period or during HE period with a job not related or related to later studies
- **Current job characteristics:**
 - level of competence required by the current job (analytical thinking, coordination of others' work, teamwork, and language skills)
 - firm characteristics (referring to market competition and job stability)

Econometric modelling

- 36 models – one for each of 6 factors in each domain
 - dependent variables obtained as PCA factors of the labour market success measures, were standardized with 0 mean and unitary standard deviation
 - OLS regressions (logit regressions in some cases) on a set of explanatory variables with stepwise procedure of model reduction by removing the least significant variables
 - controlling for heteroscedasticity (robust SE) and functional form (Ramsey test)

General conclusions

- Generally most important **determinants** belong to one of three categories:
 - programme characteristics
 - modes of teaching
 - firm or current job characteristics
- Factors under control of HEI found out to be relatively **significant** determinants of job satisfaction → very important role for HEIs → need for high-quality information on graduates career paths

General conclusions

- There are significant differences in the determinants of professional success across study domains:
 - in terms of statistical significance of particular variables
 - in terms of the sign of the coefficients
- Why??
- One of the possible answers: **dissimilarities in the labour market conditions** where graduates from different domains of study search for work (in terms of employers' requirements, working conditions, workers' rotation etc.)

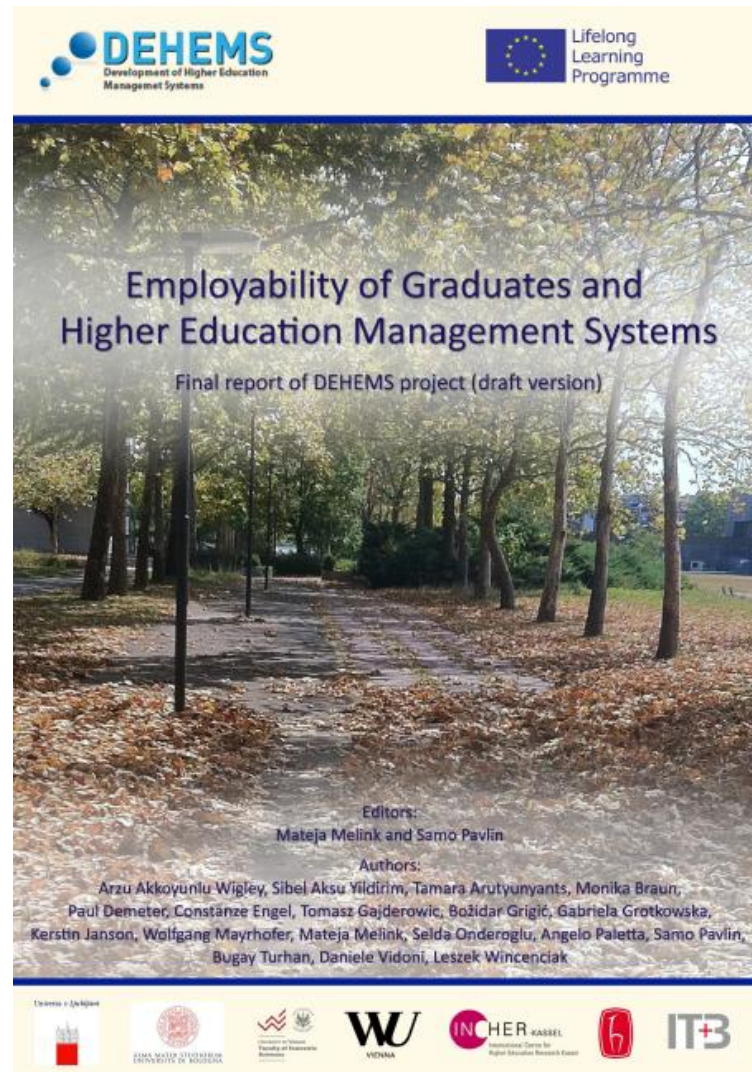
General conclusions

- Three groups of graduates – similar in terms of their broadly defined educational experience and labour market success factors:
 - analytical domains: **Science, Engineering, and Medicine**
 - **Social Sciences and Business Studies**
 - **Educational Studies**
- Challenge for HE management systems!

Three types of domains

Cluster number	1	2	3
	Analytical domains	Educational studies	Social science and business
Education process characteristics			
Number of students in recent years	Stable	Increase	Massive increase
Cost of education	High	Low	Low
Vocationally oriented programme	Medium	High	Medium
Occupational career path	Partly defined	Narrowly defined	Broadly defined
Share of active teaching modes	High	Low	Medium
Share of part-time studies	Low	Medium	High
Entry study requirements	High	Low	Low
Programme requirements	High	Low	Medium
Prestige of the programme	Medium	Low	High
International mobility	High	Low	High
Degree of feminisation	Low	High	Medium
Employment characteristics			
Dominating ownership sector	Private	Public	Private
Competitiveness of market environment	High	Low	High
Need for analytical skills	High	Low	Medium
Wage level	High	Low	High
Wage dispersion	Medium	Low	High
Type of labour market	Supply driven	Demand driven	Demand driven

More detailed conclusions



Thank You!