

The Impact of SSH Doctorates in Various Contexts The Case of Hungary

Dr. Annamária Inzelt¹ and László Csonka PhD²

^{1,2} IKU Innovation Research Centre, Financial Research Co., H-1023 Budapest, Felhívizi u. 24.

ASSUMPTIONS AND QUESTIONS

Assumption:

- PhD is a value not only for individual career and satisfaction but for employing organisation and the society as a whole.
- PhD graduates fuel economic and social development.
- SSH PhDs are increasingly important - not only for humanity in general, but for innovative society also

Research questions:

- What is the main impact of the SSH PhD degree on an individual's career and satisfaction? How useful the doctoral education for the PhDs?
- What are the main impacts of SSH PhDs on employing organisations in academic sector and in non-academic sector?
- Are SSH PhDs beneficial for local, national or for the global society? Is there any value for society of the availability of SSH PhDs?

According to scholars: difficult to study the impact of SSH PhDs because of shortage of relevant measures

METHODS

Collecting facts: e-survey (and structured interviews)

- Outline of e-survey questionnaire
 - General information on PhD
 - Current employment
 - The reason not in paid work
 - Unemployment
 - International activity
 - Working across disciplines
 - **Impact by areas, activities**
 - Personal information
 - Additional comments, readiness for interview, contact details

Potentially influencing variables

Surveying period: 2012-2013

Confidentiality guaranteed to respondents

Processing collected information

- SPSS (data cleaning, data treatment)
- MS Excel

Analytical tools

- Descriptive statistics (Frequencies, crosstabs, weighted averages)
- Chi-square tests (Monte Carlo simulation and Fisher's exact test), Cramer's V value, and Pearson correlation

SOME CHARACTERISTICS

The main features of the Hungarian sample

Number of respondents:	242
(from SSH doctorate schools of 8 high performer universities)	
% of female respondents	
• Social science	57%
• Humanities	48%
Proportion of born after 1970	76%
% of working in academic fields by mobility	*
• Immobiles	75%
• Mobiles	53%

Classifying variables by their characteristics

(1) Suitable for measuring correlation in original or re-coded form (22→15 factors), such as current time research, teaching or administration, period of graduation

(2) Not quantifiable for calculating correlations from (17→5) factors, such as sector, region, disciplines and organisations of current job.

Findings of the Chi-square test's and Cramer's V values of variables (Examples)

- Relatively far from independence: (Cramer's V value above 0.4) between working time spent on research or administration and their impact on personal satisfaction and / or career
- Near to independence (Cramer's V value below 0.19): between personal satisfaction and medium-length international mobility.

AVERAGE IMPACTS OF PHDs BY LEVEL AND FIELD OF SCIENCE

	Social sciences	Humanities	Total SSH
	Weighted averages		
Impact of PhD degree on			
○ Personal satisfaction	1.43	1.36	1.40
○ Personal career	1.30	1.25	1.29
Impact on			
○ Employer organisation	1.25	1.09	1.19
Impact on Society			
○ Local level	0.53	0.48	0.51
○ Country level	0.52	0.59	0.55
○ Globally (internationally)	0.80	0.84	0.82

Notes:

- Graduates with multidisciplinary degree are included in the 'Total' numbers.

- Calculating the average values the following formula was used:

$$\frac{(X1+2)+(X2+1)+(X3+0)+(X4+(-1))}{X1+X2+X3+X4}$$

where X1=Nr of very beneficial responses, X2=Nr of beneficial responses, X3=Nr of neutral responses, X4=Nr of negative responses

EXAMPLE: VARIABLES' RELATEDNESS TO IMPACT ON PERSONAL SATISFACTION

	Not independent	Borderline	Independent
			Period of birth
			Period of PhD graduation
			Gender
			Time at current employer
			Current working time spent on:
			research
			administration
			teaching
			management
			other
			International collaboration
			Yearly salary

The significance value of the chi-square test for 15 variables → 3 selected for further analysis on personal satisfaction → 1 the 'periods of unemployment' shows significant positive correlation with the impact (0.234) Relatively strong comparing to others.

The respondents without unemployment problems judge the impact of their degree more positively

PEARSON CORRELATION VALUES BY VARIABLES ON DIFFERENT LEVELS OF IMPACT

Determining factors	Impact on				
	Personal career	Organisation PhD work for	Local society	Country	Global society
Current working time:					
• Research	0.235*	0.205*			0.137*
• Other	-0.196*	0.237*			
• Administration	-0.154**				-0.140*
• Management	-0.154**				
Periods of unemployment				0.133**	
Time spent at current employer					
International collaboration	0.141**				0.196**
Period of birth	0.129**				

Notes: ** p=0.01, * p=0.05

By the Pearson correlation values that there is a significant and positive relationship between the impact (on several levels) and the working time spent on research.

On a weaker significance level - there is a significant but negative relationship between the impact and the working time spent on other activities (administration/management) at the various levels.

The international collaborations are showing significantly positive correlation with the impact perception on personal career and global level.

LESSONS FOR SURVEYING AND RECOMMENDATIONS

Result 1:

Academic databank -- added values to predecessor Hungarian investigation

Result 2:

Better than previous registers for e-surveys (more complete list on PhDs and larger number of up-to-date e-mail addresses were identified)

Result 3:

Relevant data and indicators to fact-based policy-making

Contribution to develop further the questionnaire

- type of impacts
- influencing factors of impacts

Empirical analysis highlighted:

PhD is a value not only for individual career and satisfaction but for employing organisation and the society as a whole.

The impact of SSH PhDs is very limited on

- non-academic employing organisations
 - very few non-academic organisations see the PhD degree as a positive and important asset of their employees
 - PhDs are educated for academic jobs
- the society
 - below beneficial in each employing sector
 - PhDs felt more impact on the global level than on the country level and further limited on the local society

Recommendations

- Policy makers have to develop measures to improve knowledge absorption capabilities of non-academic sectors.
- Complement PhD curricula with the skills, capabilities, competencies that are required for knowledge-based non-academic jobs.

Project was funded by EU FP7 Mapping the population, careers, mobility and impacts of advanced research degree graduates in the Social Sciences and Humanities (POCARIM) project.
<http://www.salford.ac.uk/nmsw/research/research-projects/pocarim-home>