



Innovation
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*Productivity, investment in human capital
and the challenge of youth employment*



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THE CAREERS AND IMPACT OF DOCTORAL DEGREES IN THE SOCIAL SCIENCES AND HUMANITIES

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POCARIM (Mapping the Population, Careers, Mobilities and Impacts of Advanced Research Degree Holders in Social Sciences and Humanities) financed by **EU FP7**, performed in 13 countries



It is time to examine, because...

- **PhD education has 20 years history in Hungary**
 - Appearance of Doctoral schools in Hungary:
 - 1994 (1993/LXXX)
 - 2000 (EHEA, Bologna process)
 - PhD degree, as condition for certain jobs
 - Higher Education (2005 CXXXIX)
 - Hungarian Academy of Sciences (1994 XL)
- **International experience:**
 - Available choices of PhD courses are broadening
 - Academic sphere (HEIs, public funded research organizations) still the main employing organization
 - Need for non-academic sphere is growing employer -- – differences by fields of science



Outline

- State-of-the-art
- National context
- Empirical results
 - Career characteristics
 - Impact
- Conclusions



State-of-the-art

- Growing importance of advanced skills and competences of employees creating demand for PhDs (Brown, Green & Lauder 2001, EUA 2009, OECD 2010 & 2013, Fábri 2008)
- Internationalisation & mobility of HRST (Brain drain project, EC 2009, Avveduto 2010, Hansen 2007, Inzelt 2012)
- Impact assessment – knowledge utilisation (Landry et al. 2001, Jeffrey 2010, UNESCO 2010)
- Impact assessment – personal development (Burgess & Wellington 2010, Campostrini 2011, Schwabe 2011)



Lessons from previous empirical studies

- **According to examinations of OECD (2010, 2013) :**
 - Unemployment rate is the highest among doctorate holders in humanities,
 - Unemployment rate is higher than the average among PhDs in social sciences.
- **In several countries PhD graduates in SSH believe that getting an appropriate job by their qualifications is uncertain.**
 - Even if they are able to get a job by their professions, they only have *temporary* contracts in many cases.
 - Some times they have to accept jobs/contracts that may perform with *lower level of qualification*.

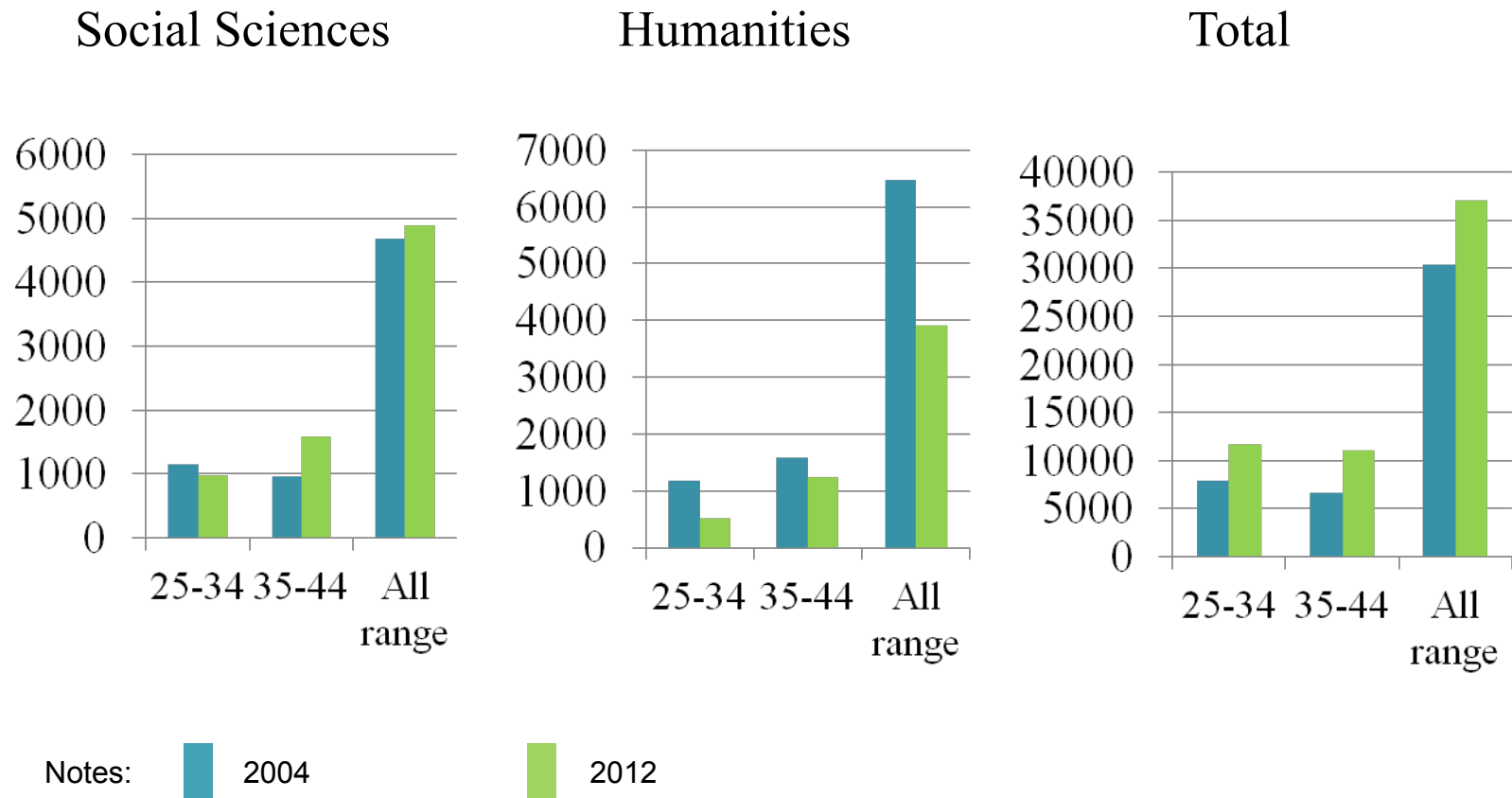


National context



Demand-related data on PhDs

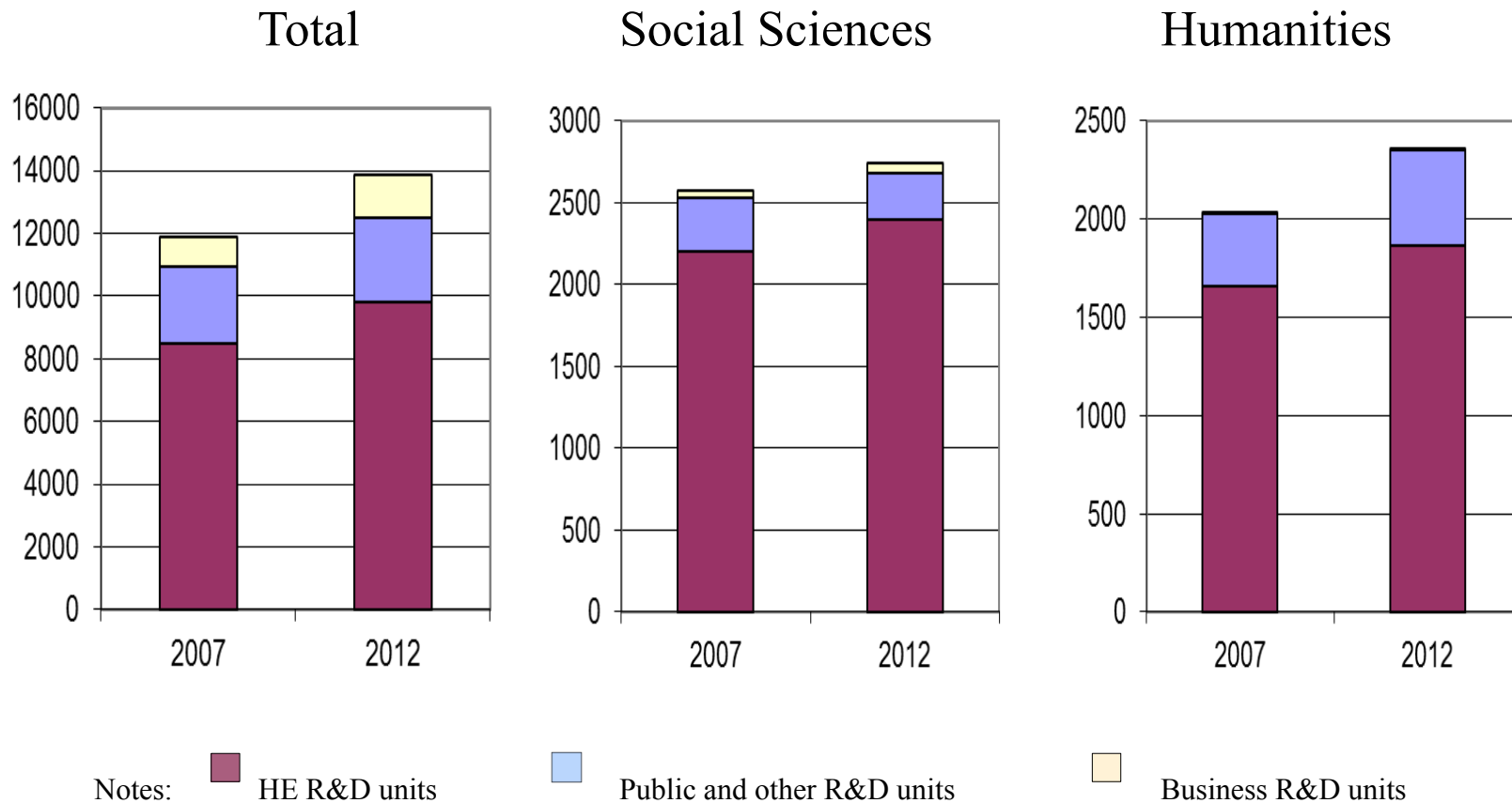
Changes in SSH R&D personnel by age-groups under-45



Source: Authors compilation on the base of HCSO databank



Changing sectoral structure of R&D personnel with SSH PhD



Source: Authors compilation on the base of HCSO databank



Non-statistical information on demand

(33 interviews with different types of employer organisations)

- **Museums, libraries, archives** are looking for SSH PhDs but *with accumulated working experiences*
- **Governmental organisations** remain ‘*neutral*’ with SSH PhD degrees
- **Business** has some interests in PhDs from STEM fields but *extremely limited for SSH*
- Advantages of the PhDs are recognized in the **academic sphere** –but *demand depends on financial conditions*



Empirical results

Main characteristics of the sample

Total nr of responses: 242

of which **145** in social sciences, **86** in humanities & **11** in multidisciplinary

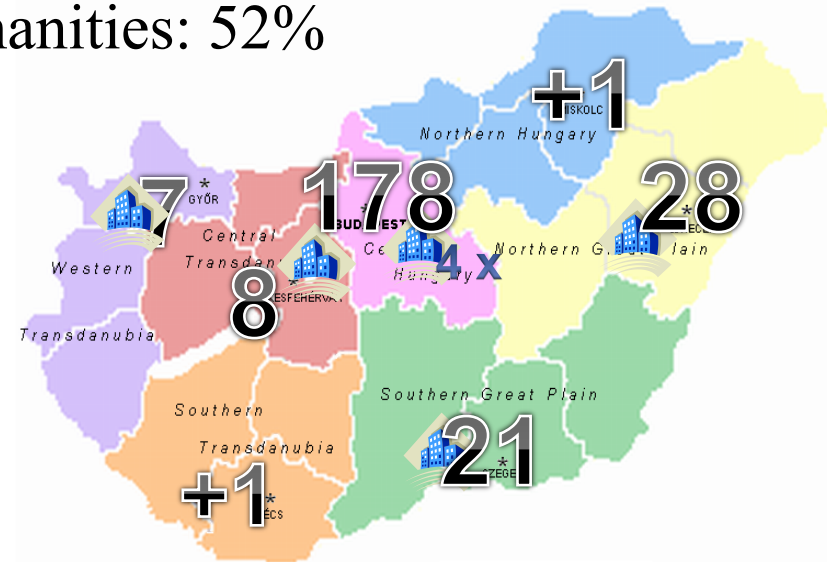
♂ social sciences: 57%; humanities: 48%

♀ social sciences: 43%; humanities: 52%

Year of birth	Proportion of respondents (%)
1947-1960	9 (over 50)
1961-1970	15 (40-50 yrs old)
1971-1980	69 (30-40 yrs old)
1981-1984	7 (below 30)

$\frac{3}{4}$ below 40 year old

Respondents by region

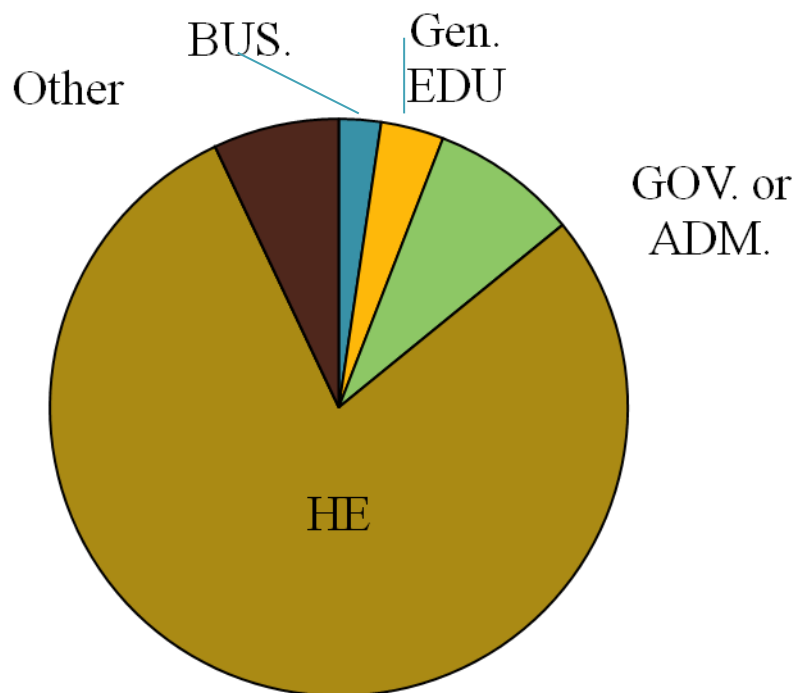


Year of graduation:

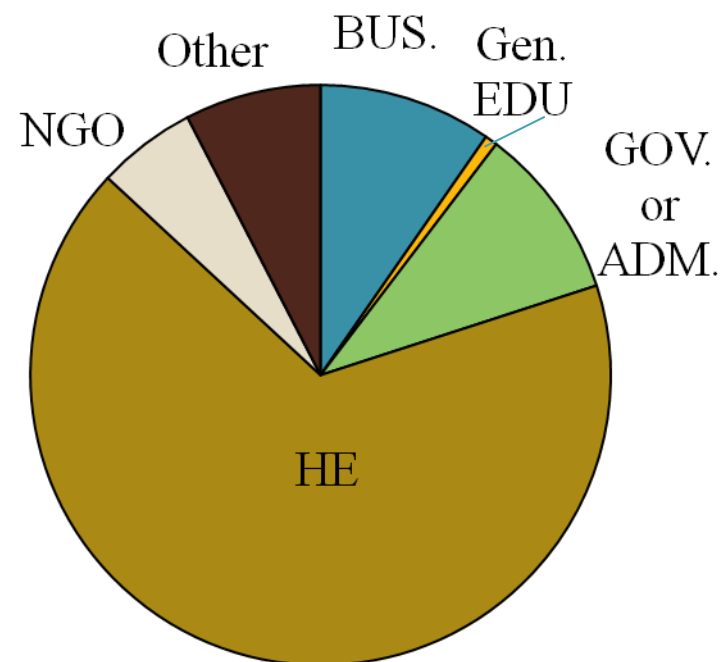
2001-2007: 11%

2008-2012: 89%

Structure by employing sectors



Humanities



Social Sciences



Career paths

Rate of immobile and mobile respondents by their current jobs

Sector and type of organization	Immobile (185) 79%	Mobile (51) 21%
Public total	88	74
•HE or research organization	74	54
•Gov. Administration	9	12
•General education	2	-
Private total	9	22
•Business/Commercial entity	5	14
NGO	1	2
Other and no response	3	4
Total	100	100

Source: Pocarim survey database



Direction of mobility

Inter- / Intra-sectoral mobility of those who changed job once since graduation (N=36)

Change between types of organisations		Current position						
		HE (pub)	HE (priv)	BUS	GOV	NGO	Gen. EDU	OTH
1st position after graduation	HE (pub)	→	→					
	HE (priv)	→	→			→		
	BUS	→		→				→
	GOV			→		→		
	NGO			→	→			
	Gen. EDU					→		
	OTH	→						→

Multiple mobility - changed their jobs more than once after PhD (N=15)

- No NGO employee who changed at least twice
- No HE job can be found among multiple mobiles.



Main types of PhD careers

- **Job keepers of pre-doctoral occupations**
 - **Immobile post doctorate**
 - Mobiles within the sector
 - Mobiles between sectors
 - Others (unemployed, career changers)
- Nationally and internationally



Impact of PhD

- What is the main impact of the PhD degree on individual's career?
- Do PhDs have any positive effects
 - on their own organisation,
 - on local / national / global society?



Impact of SSH PhD *on individuals* by types of frequent employers.

Organisation	Nr of respondents	Personal satisfaction	Personal career
HEIs or research organisations	167	2.4	2.4
Social sciences	92	2.4	2.4
Humanities	67	2.4	2.4
Government or admin. org.	23	2.4	1.9
Social sciences	14	2.4	2.0
Humanities	7	2.1	1.7
Business / commercial entity	17	2.3	1.7
Total	242	2.4	2.3
Social sciences	145	2.4	2.3
Humanities	86	2.4	2.3

Note: Sectors included with more than 5% share in employment. Multidisciplinary SSH graduates are included in the total data. Humanities graduates are hardly employed in business sector.



Impact of SSH PhD *on employer and on society* by types of frequent employers.

Organisation	Nr of respondents	On employer	Local	National	Global
			society		
HEIs or research organisations	167	2.3	1.6	1.6	1.5
Social sciences	92	2.4	1.6	1.6	1.5
Humanities	67	2.2	1.4	1.6	1.5
Government or administrative organisation	23	1.7	1.5	1.8	1.5
Social sciences	14	1.6	1.4	1.5	1.5
Humanities	7	1.9	1.6	2.0	1.4
Business / commercial entity	17	1.7	1.4	1.4	1.2
Total	242	2.2	1.5	1.5	1.5
Social sciences	145	2.3	1.5	1.5	1.5
Humanities	86	2.1	1.5	1.6	1.5

Note: Sectors included with more than 5% share in employment. Multidisciplinary SSH graduates are included in the total data. Humanities graduates are hardly employed in business sector.



Impact of PhD on personal career

(summing the interviews)

Year of grad.	Impact of PhD on	
	Personal satisfaction	Personal career
2001-2007	2.2	2.1
2008	2.3	2.3
2009	2.4	2.2
2010	2.4	2.3
2011	2.6	2.3
2012	2.5	2.3
Total	2.4	2.3

- Graduates during the recent economic crisis are *more positive* about the impact of their PhD
- Importance of PhD:
 - *Prerequisite* for a career in certain sectors
 - Provides opportunity for *permanent employment*
 - *Opens up new possibilities* (higher income, prestige, acces to state or research grants)
 - Broadening of *research opportunities*
 - Better *international networking*

Note: Table contains the average of responses. In calculating the averages the following weights were used:

Very important (3), important (2), neutral (1) and negative (0).



Impact of PhDs on the current employing organisation

(Insights by the interviewees)

Year of graduation	Employer (Average value)
2001-2007	2.0
2008	2.4
2009	2.1
2010	2.1
2011	2.2
2012	2.4
Total	2.2

- „...the international contacts of our faculty are becoming more active at institutional level thanks to my personal contacts...” (FE)
- „There is no strict scientific work but my experience, skills and the abilities acquired whilst doing my PhD are needed here.” (GHum)
- „But I have much deeper knowledge about the background of the fields that we are working with... it is also useful for the office because I can assist other people in the office... (IL)



Impact of PhDs on the society 1/2

Year of grad.	Local	National	Global
	society		
2001-07	1.3	1.5	1.4
2008	1.4	1.6	1.5
2009	1.7	1.5	1.4
2010	1.5	1.6	1.5
2011	1.4	1.6	1.6
2012	1.7	1.4	1.4
Total	1.5	1.5	1.5

- Impact on the *new generation* (local)
- Impact on the *professional society* (national, global)
- Impact on *business sphere* (local, national)
- Improving *science popularity* (local, may become national)
- Impact on *policy* (national)



PhDs' impact on society 2/2

(Insights by the interviewees)

Academic

- „I now have *citations* which shows that people have read my work and used it which is an important indicator in research.” (KRe)
- „I find the impact of publications very limited; it is hard to break through because so many other things are being published all the time.” (FE)

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Non-academic

- „...if we get a new draft law from the Ministry it generally goes to this department for review... So definitely I comment on ... Of course, whether or not they take my opinion into account is quite another story...” (JHist)
- „...we were commissioned to carry out a two-step feasibility study for [a government agency]. Since then, the [organisation] was set up and has been operating. The focus of this new organisation is the same as we proposed but its conditions are very different from our proposed one.” (BS)





Conclusions

- SSH PhDs are still mainly employed in the **academic sphere**
- **PhD education** mainly serves the interest of the academic sector
 - – here the degree does not provide labour market advantages because it is common among the employees
- **Knowledge accumulation in Hungarian non-academic sectors** is lagging behind to international trends - limited demand
- Students are entering the PhD education **without prior work experiences** thus the usefulness of their degree is limited in the non-academic sectors
- **Impact** of the degree is clearly evaluated positively for personal and career opportunities, less so for their employers and they were much less sure about their own impact on local, national or global societies.



Policy recommendations

(To improve the usefulness of SSH PhDs)

- Need to *upgrade absorption capabilities in public administration*
- Need to *encourage the business sector, NGOs to employ PhD graduates* / publicize the advantages of the PhD degree
- Improve collaboration with business sector representatives to *identify common topics of interest* also on this level of education
- *Add to the teaching curricula* of doctoral education topics which are important to non-academic jobs



**Thank you for your
attention!**

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