

The value of the PhD degree on the labour market

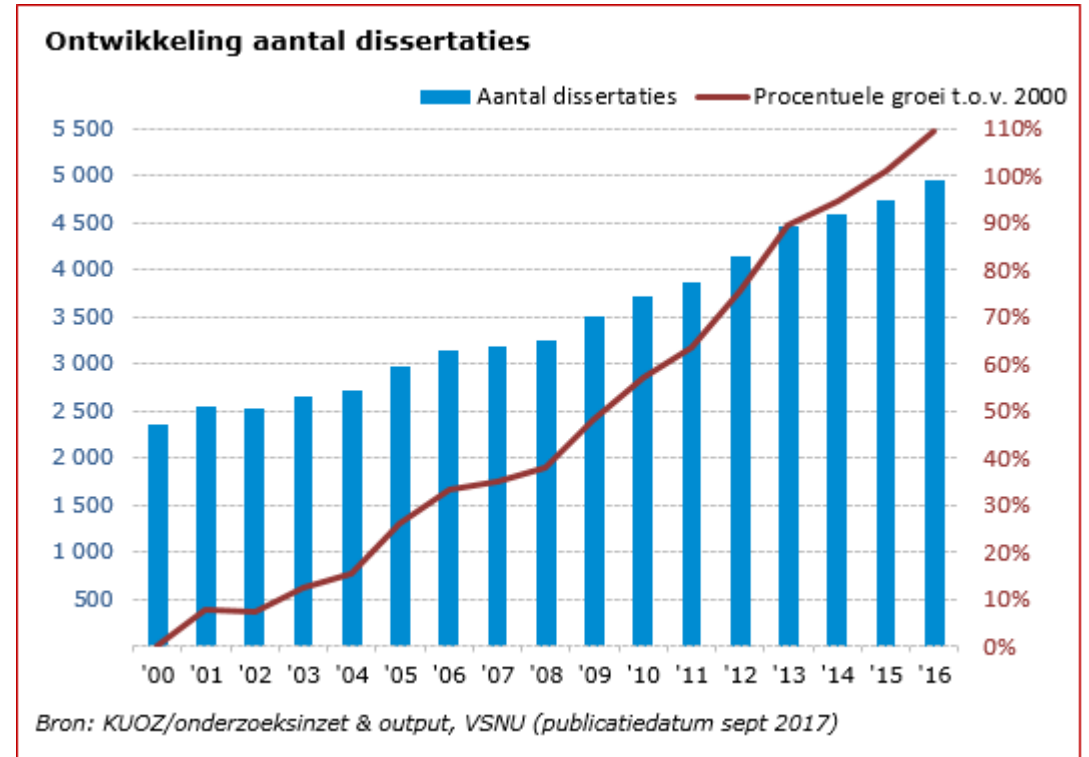
Cathelijn Waaijer (in collaboration with Julia Heuritsch and Inge van der Weijden) | EURAXESS seminar, Eindhoven



**Universiteit
Leiden**
The Netherlands

Doctoral education in the Netherlands

- PhD 'production' seen as a way to promote the knowledge economy
- Shift from master-apprentice relationship to graduate schools
- Third cycle in Bologna process
- (As a result) increase in the number of dissertations per year



Questions

- Can the increasing number of PhD graduates find employment after obtaining a PhD degree?
- Where do PhD graduates find employment?
- What do PhD graduates see as the value of the PhD degree on the labour market?
- How good is the match between the skills obtained in doctoral education and the skills required in the labour market?

A short slide on data and methods

- Survey among PhD graduates (April 2008 – March 2009) of:
 - Delft University of Technology (engineering and technology)
 - Erasmus University Rotterdam (focused on social sciences, medicine)
 - Utrecht University (all scientific fields)
 - Wageningen University (agricultural sciences, natural sciences)
- Among PhD graduates from Leiden University (January 2008 – April 2012): all scientific fields except economics, and engineering and technology
- Total: 2,410 PhD graduates (half of them from Leiden); 2,193 contacted through email or LinkedIn (Oct 2013-Jan 2014)
- 51.7% (partial) response rate (1,133 respondents)
- 43.8% progressed to the final question
- Asked about:
 - Sector of work
 - Main value of PhD degree (open question)
 - To which extent they obtained certain skills during doctoral education
 - To which extent they needed certain skills in the current job



Sector

- Academia: 63%
- Non-academic research: 26%
- Outside research: 11%
- *Determined by asking whether respondents were involved in “basic research, applied research and/or experimental development” in their main job (according to the Frascati manual definitions) and the type of employer*

	R&D in baan (% binnen wetenschapsgebied)
Medische wetenschappen	91
Natuur- en technische wetenschappen	93
Sociale wetenschappen	89
Geesteswetenschappen	80
Totaal	89

So what is it they do exactly?

	%
Education	33
of which:	
Non-academic	2
Higher vocational	4
University	94
Research	71
of which:	
Junior	23
Intermediate	53
High	22
Content specialist	39
of which:	
Consultant	15
Policy advisor	5
Medical specialist	18
Clinical fellow	12
Both medical specialist and clinical fellow	< 1
Other health care	5
Lawyers and other legal professionals	1
Other content specialist	43
Management	28
of which:	
Research management	67
General management	31
Self-employed	2
Other	< 1

Value of the PhD degree

Category	N	(%)
Knowledge and skills development	473	(41.75)
Fit with career goals & increase in job opportunities	365	(32.22)
Fit with interest	214	(18.89)
Social status	94	(8.30)
Other	73	(6.44)
No value	24	(2.12)

Some examples: knowledge and skills development

- Working independently:
 - *“I learned how to take charge of your own project. Don't depend too much on others, determine for yourself which direction is best, influence people to go with you in that direction.”*
 - *“[...] Analytical thinking, critical thinking, out of the box thinking, working independent and efficient. I have learned so much besides the science itself.”*
- Curiosity:
 - *“Time of my life! Opportunity to dive into a subject I loved [...]”*
 - *“Being able to dive into a subject for four years and learning to work in an academic environment.”*
 - *“[...] and the freedom to do curiosity driven research”*

Some examples: personal development and fit with career

- Personal development:
 - “Amazing and enriching life experience”
 - “I can respect others more than before, because [the] process of being a PhD is more important than holding a PhD degree.”
- Fit with career:
 - *“My PhD has been fundamental for my wish to develop a career in academia. I have been trained to think and write critically and analytically, and to develop a research project, skills that will feed into my future work.”*

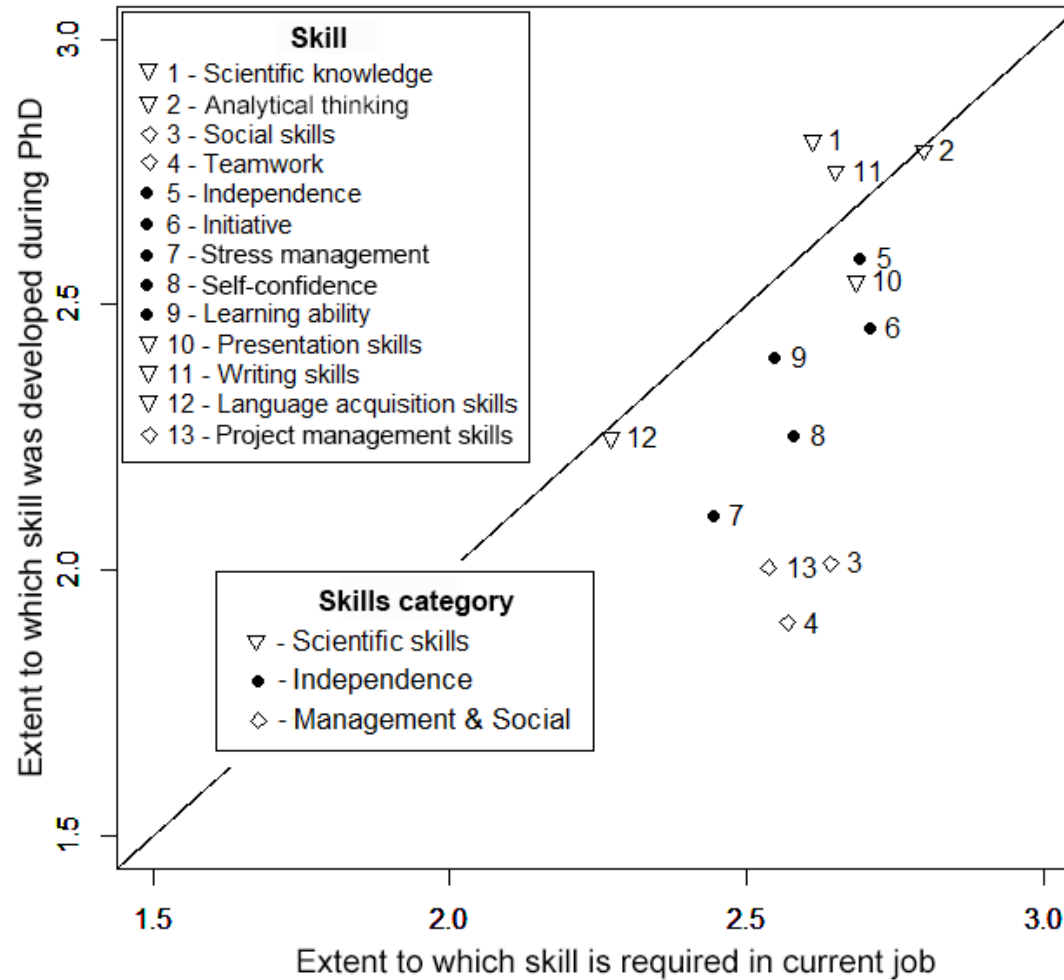
Some examples: social status

- Social status:
- *“It's been a ticket into a career in science. Without it, it would have been impossible for me to have such a career. The value of a career in science is in its intellectual challenge (the status helps as well).”*
- *“The title sometimes gives you an advantage when you are looking for a job and people take you more seriously.”*
- *“To get the manual for my car radio as well as my current job. Not in any specific order, but the manual did come in handy and I only got it after firing away an e-mail with a full Dr. blablabla signature.”*

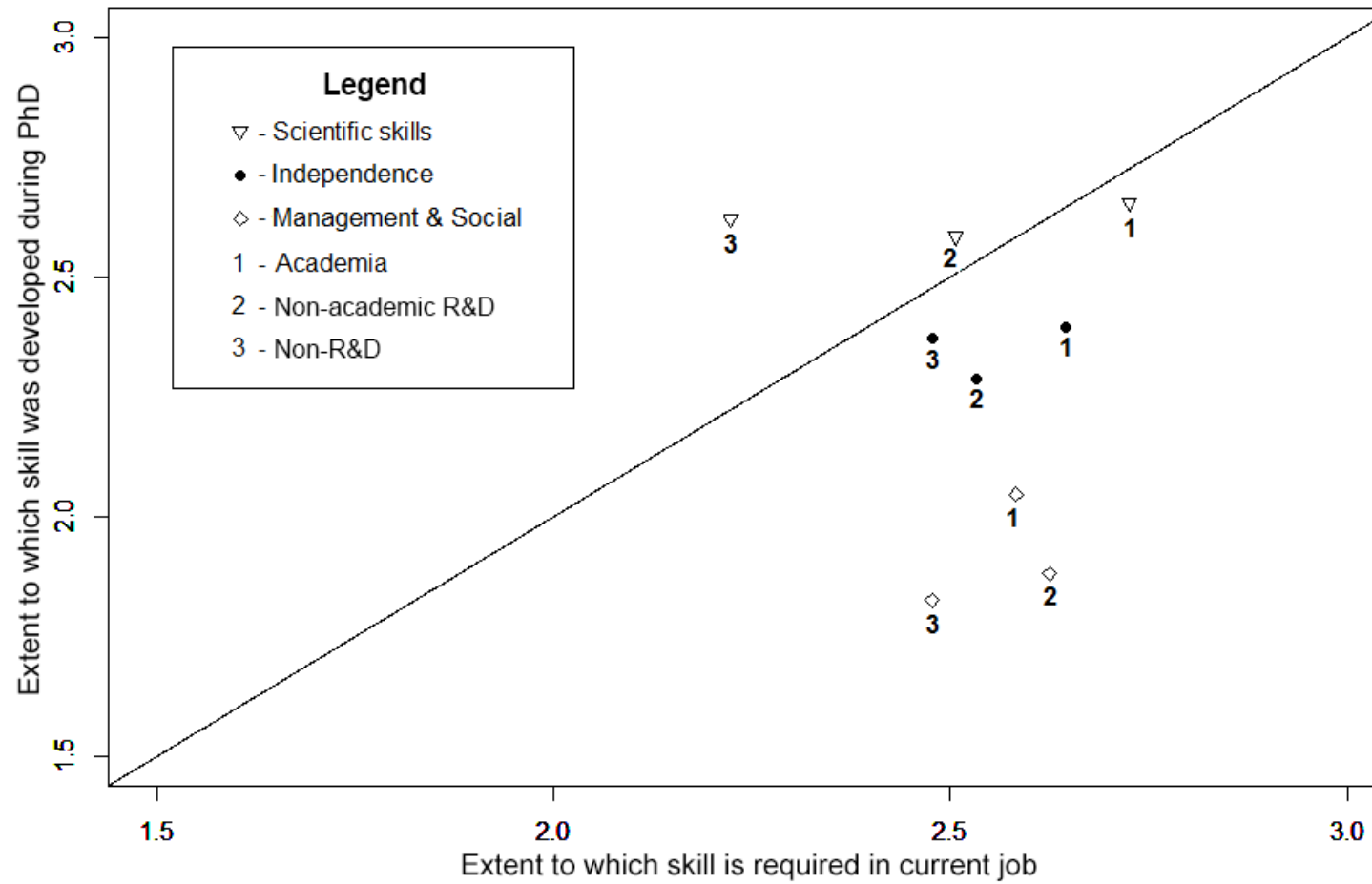
Some examples: no value

- *“Realizing that scientific research is not as objective as it should be and is perceived to be by the public.”*
- *“Little. It is a great title to predestine you for an unguided, self-made patchwork academic career, filled with uncertainty.”*
- *“The fact that people outside academia think it's important. In academia it's only important to get in. Everybody knows its value is hugely decreased i.e. counts for very little - as everybody in academia seems to have a PhD while many know not all should have 'passed the test'. The title is thus greatly devaluated. I personally don't care about this. It's just something I think academia needs to reconsider.”*
- *“I did my PhD because at that time, I believed it would be a good 'investment' and that having the PhD degree would open up more interesting job opportunities. To be honest, at the moment I'm not sure about that anymore, but I do not regret doing my PhD research.”*

Skills (mis)match



Skills (mis)match by sector



Conclusions

- Most PhD graduates employed
- Majority working in academia 1-5 years after PhD degree
- Only ~10% working outside research -> more often when PhD degree was in the humanities

- Value of the PhD degree lies mainly in:
 - Knowledge and skills development
 - Fit with career goals & increase in job opportunities
 - Fit with interest
 - Social status

- Good skills match of scientific skills
- Mismatch of management and social skills, regardless of sector
- Mismatch is even greater outside of academia

Implications for PhD candidates

During PhD research and directly afterwards

- Involve the practice of your field in your research: what does your field need and could you find a job in that after your PhD?
- Invest in broad development -> it is not just scientific skills that are needed after the PhD
- Obtained skills are transferable to many different jobs
- The PhD degree carries status that can be used on the labour market

Questions?



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