Doctorate holders: competent and employable?

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ECOOM
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Centre for Research & Development Monitoring

OECD, Paris, November 28th 2011
Human Capital

OECD = “Human capital is productive wealth embodied in labour, skills and knowledge.”

CDH questionnaire investigates knowledge (Ph.D. degree), labour (employment, sector and function), but what do we know about skills and competencies?

Competencies: crucial in applying knowledge to labour context
THE PHD FACTORY

The world is producing more PhDs than ever before. Is it time to stop?

Nature, 21 april 2011
Multi stakeholders approach

Senior Researcher Survey 2010

Ph.D. Supervisors

Universities

Employers

Ph.D. Holders

Ph.D. Students

ECOOM: Skills gap industry sector

Survey of junior researcher 2008

Research & Development Survey (KU Leuven) 2008

Careers of Doctorate Holders Survey Belgium (Belspo) 2010
Key research questions

- What is the value of a Ph.D. degree outside academia?
- Are Ph.D. degree holders sufficiently prepared for their future career (inside or outside academia)?
- Is there a compency gap between what Ph.D. holders possess and what they need in the labour market?
- Who is responsible for labour market readiness?
Employment of Ph.D. holders

- Science
- Agricultural - Engineering
- Medical
- Social
- Humanities

N=4190, Source: CDH (2010) Belgium
Ph.D. minimum level required?

- Service sector
- Public sector
- Industry
- Private non-profit
- HE Outside Uni
- University

N=4190, Source: CDH (2010) Belgium
What’s a Ph.D. worth outside academia?

My PhD allowed me to bring additional benefits into the company/organisation where I work now.

My Ph.D. degree was an asset in the labour market.

If I could start all over again, I would make the same career choices.

After obtaining my Ph.D. I had a good picture of my career possibilities.

I was sufficiently prepared for a career outside academia.

Cooperation with other sectors made the transition from the university easier.

N=1083 Source: CDH (2010) Belgium
Transition scale: moving from university to other sectors of employment

Humanities | Natural sciences | Medical and health | Social sciences | Applied sciences

N=1083, Source: CDH (2010) Belgium
Competencies

• When Ph.D. holders make the transition from university to other sectors, not everyone experiences this as a smooth transition.
  – Fields of study
  – Research vs. non-research jobs

• Competency development = a tool to improve the transition from Ph.D. to further career destinations
## Research skills

<table>
<thead>
<tr>
<th>Skill items:</th>
<th>Learned during Ph.D.</th>
<th>Needed in the current job</th>
<th>Discrepancy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Mean</td>
<td>Mean</td>
</tr>
<tr>
<td>Technical skills</td>
<td>7.35</td>
<td>6.84</td>
<td>+0.51</td>
</tr>
<tr>
<td>Research skills</td>
<td>8.64</td>
<td>7.63</td>
<td>+1.01</td>
</tr>
<tr>
<td>Specific scientific knowledge</td>
<td>8.71</td>
<td>7.49</td>
<td>+1.22</td>
</tr>
<tr>
<td>Knowledge of data analysis or synthesis</td>
<td>7.92</td>
<td>7.88</td>
<td>+0.04</td>
</tr>
<tr>
<td>Critical reflection</td>
<td>8.67</td>
<td>8.99</td>
<td>-0.32</td>
</tr>
</tbody>
</table>
Which skills do you need in your current job?

N= 4190, Source: CDH (2010) Belgium
Conclusions?

Easier transition from academia to other sectors for research-related jobs

Perceived skills needs of Ph.D holders: greater variation between sectors of employment than between fields of study

“Added value” of Ph.D. degree seems to be there for most Ph.D. holders, but is difficult to measure

- Responsibility shared between university, employer and individual researcher
- Ph.D. holder perspective must be compared with employer perspective
- Correlation with meso/macro-level structures?
- ECOOM is planning to publish this study in 2012
Feedback welcome!

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