Overeducation, labor market dynamics, and economic downturn in Europe

Camilla Borgna, Heike Solga, Paula Protsch

International Conference on PIAAC and PIAAC-Longitudinal
Symposium ‘Overeducation and skill mismatch in labor markets’

Dorint Hotel, Mannheim
April 5–6 2017
Economic conditions and overeducation

• Overeducation generally detrimental for:
  ➢ Societies: wasted skill resources (CEDEFOP 2010; Kampelmann and Rycx, 2012; McGuinness 2006)
  ➢ Mismatched workers:
    o lower wages (CEDEFOP 2010; Korpi and Tåhlin 2009; Hartog 2000; Levels et al. 2014)
    o lower job satisfaction (Allen and van der Velden 2001; Verhaest and Omey 2009)
    o higher turnover rates (Battu, Belfield, and Sloane 2000; Sloane, Battu, and Seaman 1999)

• During economic downturns:
  ➢ Workers are more likely to take up non-matching jobs due to increased job competition
  ➢ Employers might upgrade skill requirements and lay off well-matched workers more often (Bulmahn and Kräkel 2002, Modestino, Schoag, Balance, 2016)

⇒ Overeducation might increase
Research on overeducation determinants

• Mostly focusing on individual- and job-related factors
  (Groot and van den Brink 2000; McGuinness 2006)

• Recent cross-national studies on the role of educational systems and labor market institutions
  (Allen, Levels, and van de Velden 2013; Levels, van der Velden, and Allen 2014; Levels, van der Velden, and Di Stasio 2014; Prokic-Breuer and McManus 2016)

• Generally does not consider labor-market dynamics, except for job mobility as a way for workers to attain a better match
  (Alba-Ramirez 1993; Alpin et al. 1998; Groot and van den Brink 2000)

! These dynamics are likely altered during economic downturns e.g. the one following the 2007 financial crisis, with heterogeneous repercussions across countries
Overeducation and skill heterogeneity

• Skills vary between individuals with the same educational qualifications

• Overeducation = `real´+ `apparent´ (Alba-Ramírez 1993; Ghignoni and Verashchagina 2014; Green and McIntosh 2007; Groot and van den Brink 2000; Rohrbach-Schmidt and Tiemann 2016; Rumberger 1981)

Workers with higher qualifications and skills than required by the job

Workers with higher qualifications than required by the job, but adequate skills

• Linkage between (general) skills and educational qualifications varies across countries (Heisig and Solga 2015)

! Skill heterogeneity within formal qualification levels might affect cross-country differences in overeducation rates
Research questions

How are national overeducation rates of prime-age workers related to economic conditions?

- To what extent is overeducation apparent (i.e. explained by skills heterogeneity) in different European countries?
- Do (real) overeducation risks vary between individuals hired before and after the outbreak of the economic crisis?
- Do (real) overeducation risks vary with respect to the severity of the economic downturn?
Research design

• First round of PIAAC (2011/12)
• 16 European countries
• Prime-age employees (35-to-55 year-olds)

• Movers (hired 2008-2012) vs. Stayers (hired 1990-2007)
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Stayers

Movers

1990
2007
2012

previous job

current/last job

overeducated

well-matched

not-employed

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Research design

• First round of PIAAC (2011/12)
• 16 European countries
• Prime-age employees (35-to-55 year-olds)

• Movers (hired 2008-2012) vs. Stayers (hired 1990-2007)

• **Direct measures of general cognitive skills**
  Ideally: occupation-specific skills but very hard to measure (especially internationally)
Hypotheses

To what extent is overeducation apparent in different European countries?

H1: In all countries, overeducation will be partly explained by the heterogeneity of (general) skills within educational levels

H2: After controlling for individual skills, cross-country differences in overeducation will decrease

Do (real) overeducation risks vary between movers and stayers?

H3: Movers will have higher overeducation risks than stayers in all countries, even after controlling for skills

Do (real) overeducation risks vary along with the severity of the crisis?

H4: Overeducation risks will be higher for both movers and stayers in countries where the economic downturn is more severe, even after controlling for skills
Analytical strategy

Mixed-effects linear probability models (random-intercept, random-slopes)

\[
\Pr(OE_{ij}) = \beta_0 + \beta_1 MOV_{ij} + \beta_2 LIT_{ij} \\
+ \alpha_1 DOWN_j + \alpha_2 MOV_{ij} \times DOWN_j + \gamma_x X_{ij} + \gamma_z Z_j \\
+ u_{0j} + u_{1j} MOV_{ij} + u_{2j} LIT_{ij} + u_{3j} X_{ij} + \varepsilon_{ij}
\]

DV (i level) = Overeducation (Having a higher qualification than required to get one’s job)
IV (i level) = Mover (Hired 2008-2012 vs. 1990-2007), Literacy skills (z-standardized)
IV (j level) = Degree of downturn (Share of non-employed adults in 2012)

X Control variables (i level): educational level, gender, migrant status, years of work experience, skilled vs. non-skilled occupation), temporary vs. permanent contract, part-time vs. full-time, public vs. private, unemployment rate when hired, EPL for temporary contracts when hired
Z Control variables (j level): share of dual VET in upper-secondary education
**Results**

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<td>Intercept</td>
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<td><strong>Variance components</strong></td>
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<td>Slope of mover</td>
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Conclusions

• General-skills-adjusted overeducation rates are positively associated to poor economic conditions

• Comparative studies on overeducation should account for labor market dynamics even when using cross-sectional data

• However limitations:
  o General skills vs. occupational skills
  o Not all European countries are included (Greece, Portugal...)
Thank you!

camilla.borgna@wzb.eu