Symposium: Skills in the labor market, choices in the working sphere, and the anatomy of risk and trust preferences

Chair
Daniel D. Schnitzlein (DIW Berlin & Leibniz University Hannover, Germany)

Room: Beethoven-Saal 1

Abstract
The papers in this symposium discuss the effects and predictive power of cognitive and non-cognitive skills in different labour market contexts as well as the relationship between cognitive skills and measures of risk and trust preferences which are important individual characteristics on the labour market. The first presentation analyses the relationship between job-related training, learning opportunities at work, and personality traits. The second contribution presents new evidence on the gender wage gap in Germany, by analysing the role of field of study, and thus skills acquired, and occupational choice. Presentations three and four analyse the relationship between measures of cognitive ability and measures of risk and trust preferences.

Presentations

- Title: Job-related training, learning opportunities at work and personality traits.
  Author: Katharina Poschmann (DIW Berlin, Germany)

- Title: The gender wage gap in Germany: Field of study and occupational choice.
  Authors: Michele Battisti (ifo Institute at the University of Munich, Germany) & Alexandra Fedorets (DIW Berlin, Germany)

- Title: The relationship between cognitive skills and risk aversion. New evidence from German panel data.
  Authors: Luise Burkhardt (DIW Berlin, Germany), Daniel D. Schnitzlein (DIW Berlin, & Leibniz University Hannover, Germany) & Jürgen Schupp (DIW Berlin, Germany)

- Title: Do cognitive skills foster trust? Evidence from 30 countries around the world.
  Author: Daniel D. Schnitzlein (DIW Berlin & Leibniz University Hannover, Germany)

- Title: The cognitive basis of trust: A cross-national analysis of the relation between education and self-reported interpersonal trust.
  Authors: Francesca Borgonovi (OECD, France) & Artur Pokropek (European Commission, France)

Title: Job-related training, learning opportunities at work and personality traits.

Author
Katharina Poschmann (DIW Berlin, Germany)

Abstract
Participation in job related training is distributed unequally over the German working population. This is seen critically since it intensifies existing structural problems regarding education and equal (job related) opportunities. Both, individual and organizational determinants play a role for job related training: from analysis on individual characteristics...
we know that educational level, occupational status, age, gender and cognitive skills are strong predictors for participation in job related training. Research on company related predictors for training shows that company size, existence of a strategy for professional development of employees, professional regulations of training, public or private sector or worker participation (e.g. the existence of a work council) explain, to some degree, training chances of employees. More recent findings show that knowledge intensity of occupations and complexity of tasks are prominent predictors for training chances.

So far, sociological work has not addressed the question in which way, and to which extent, personal attributes and personality are related to working contexts that foster training and professional development. Interdisciplinary literature implies more often analyses of personality traits, but with different research interest (e.g. impact of personality traits on job performance, information processing or future decision making in economics or personality-organization fit in psychology). Having data from both, PIAAC-L and PIAAC, my analysis relates working context to personal attributes of employees. In a first part I analyse tasks and skills that are applied among employees in both training intense working contexts and in work environments that offer poor conditions for training. A second part addresses the question whether personality traits, personal attributes and attitudes towards adult learning make a contribution to explain the choice of working context. This is analysed from a retrospective perspective. Multivariate regression models are applied to answer the research questions.

**Title: The gender wage gap in Germany: field of study and occupational choice.**

**Authors**
Michele Battisti *(ifo Institute at the University of Munich, Germany)* & **Alexandra Fedorets (DIW Berlin, Germany)*

**Abstract**
The closing of the gender wage gap that has been documented since 1980s is often explained by growing educational levels of women, their engagement in non-routine cognitive tasks or falling occupational segregation. However, the literature has been unable to relate these changes to individual skills and thusly to demonstrate to what extent women's potentials are utilized in the labour market. In the current study, we use PIAAC and PIAAC-L data for Germany to relate the gender wage gap to objective measures in literacy, numeracy and problem-solving in technology-rich environments. The observed gap in skills is particularly high in numeracy, is growing with age and can be explained by different choices of field of study and occupation made by men and women. Thus, we argue that proficiency in numeracy highly depends on time spent in activities that involve this skill and, thusly we are able to quantify to what extent the gender pay gap can be explained by skills, as well as the field of study and occupational choice.

**Title: The relationship between cognitive skills and risk aversion. New evidence from German panel data.**

**Authors**
Luise Burkhardt *(DIW Berlin, Germany)*, Daniel D. Schnitzlein *(DIW Berlin, & Leibniz University Hannover, Germany)* & Jürgen Schupp *(DIW Berlin, Germany)*

**Abstract**
Preferences for willingness to take risk are important characteristics that shape many
economic decisions of individuals. The existing literature has emphasized the positive relationship between measures of willingness to take risks and measures of cognitive ability. Based on data from PIAAC-L, we reassess this relationship. We try to replicate the positive correlation between the skill measures in PIAAC-L and the included survey measure of willingness to take risk. However, our results show that none of the skill measures has a positive significant correlation with the risk measure. This result is robust to the inclusion of the short IQ measures surveyed in the most recent wave of PIAAC-L.

Title: Do cognitive skills foster trust? Evidence from 30 countries around the world.

Author
Daniel D. Schnitzlein (DIW Berlin & Leibniz University Hannover, Germany)

Abstract
Beside risk preferences, willingness to trust in others is one of the key requirements in economic transactions. A growing literature in economics deals with the question what factors determine an individual's willingness to trust. Existing results highlight a strong and robust positive correlation between measures of cognitive abilities and trust measures. However, most of the existing literature only focuses on single country studies, or is only able to include proxies for cognitive ability. The present study applies data from the Programme for the International Assessment of Adult Competencies (PIAAC) which includes survey measures of trust for more than 30 countries around the world. In addition, PIAAC contains comprehensive measures of cognitive abilities in three domains, numerical skills, literacy skills, and problem solving skills. The results show, that the average level of trust varies substantially among the analysed countries with the Scandinavian countries ranked at the top of the scale. The evidence supports a positive correlation between trust and cognitive abilities over all countries. This result is robust to including country fixed effects or controlling for indices of democracy or corruption. However, the strength of this relationship substantially varies between countries with a group of countries showing no significant relationship at all and Indonesia with even a negative correlation.

Title: The cognitive basis of trust: A cross-national analysis of the relation between education and self-reported interpersonal trust.

Authors
Francesca Borgonovi (OECD, France) & Artur Pokropek (European Commission, France)

Abstract
Interpersonal trust is important for social and economic well-being. Studies have indicated that education is strongly associated with individuals' propensities to trust anonymous others, although such association differs across countries. We examine between-country differences in the mechanisms through which education could promote interpersonal trust using data from the OECD's Survey of Adult Skills (PIAAC). PIAAC is unique in that it contains detailed information on individuals' cognitive abilities measured through a standardised and internationally developed assessment of information processing abilities as well as information gathered through a questionnaire on self-reported interpersonal trust, socio-economic and demographic characteristics. Our analysis reveals large differences across countries in the extent to which the association between education and interpersonal trust is direct or is mediated through cognitive abilities. Using multilevel modeling we also explain cross country differences in relation between education and self-reported interpersonal trust and moderations mechanisms.