

Johannes Gutenberg University Mainz
MIEPP Seminar

The Importance of Cognitive and Noncognitive Skills for Economic Outcomes

List of Semintopics

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Early childhood development - The starting point

Cognitive as well as non-cognitive skills have a noticeable effect on the well-being of an individual. Both of these skills can be influenced strongly, especially at a very young age. That is why interventions at the childhood-level have the highest returns for the later life of individuals. It is the objective of this introductory seminar paper to provide a general overview of the conceptual distinction between and measurement of cognitive and non-cognitive skills. Standard examples for the former are IQ and other test scores (school marks). For the latter one can, inter alia, think of personality parameters (the 'Big 5' from psychology). The paper(s) should also present the idea of and the evidence for falling returns to investment in non-cognitive skills. The overview should limit its attention to studies about the US and the emphasis is on wage effects of noncognitive skills.

- Doyle et al. 2009
- James J Heckman 2006
- James J. Heckman and Kautz 2012

Studies about Europe

These studies also focus on the impact of early childhood development but concentrate on projects undertaken in Europe. Havnes and Mogstad (2011) study the impact of preschool education in Norway. Berger et al. (2021) evaluate the impact of preschool education especially on child development using a representative birth cohort in France.

Do the findings for Europe differ from the findings for the US? If yes, by how much and why? Are returns to classic education in Europa larger or smaller than returns to investment in noncognitive skills? As is true for all other seminar papers, extending the list of evidence beyond the references and studies provided here is welcome. EconLit or WebOfKnowledge are good tools.

- Berger, Panico, and Solaz 2021
- Havnes and Mogstad 2011

Studies about developing countries

These papers focus on studies done in developing countries. Gertler et al. (2014) look specifically at early childhood interventions in Jamaica and their labour market implications. Engle et al. (2011) assess the effectiveness of childhood interventions on early child development while focusing on low- and middle-income countries.

Here, the comparison should be between developed and developing countries. Is there a difference between OECD and non-OECD countries in returns? The analysis can also focus on the channel through which wages are influenced. As an example, Heckman, Stixrud and Urzua (2006) show that noncognitive skills influence wages (amongst other things) through schooling decisions.

- Engle et al. 2011
- Gertler et al. 2014

Theoretical foundation of cognitive and noncognitive skills

Any data analysis requires theoretical guidance and interpretation. This seminar paper looks at models that depict the growth process of developing cognitive and noncognitive skills. Cunha and Heckman (2010) estimate a multistage production function for childrens' cognitive and noncognitive skills. Their theoretical model can form the basis of the model presentation in the seminar paper. Alternatively, the model in Cunha and Heckman (2007) can be looked at, as it constitutes the basis for the paper in 2010. The theoretical model in Heckman and Kautz (2012) can also be presented.

- Cunha and J. Heckman 2007
- Cunha, James J Heckman, and Schennach 2010
- James J. Heckman and Kautz 2012

Life cycle effects of cognitive and noncognitive skills

Seminar papers so far have focused on the effect of skills on wages. It is well-known, however, that skills also have an effect on health and job choice. These findings illustrate that cognitive and noncognitive skills influence the life of an individual beyond labour income. Heckman et al. (2006) study this aspect as do Heckman and Kautz (2012).

- James J. Heckman, Stixrud, and Urzua 2006
- James J. Heckman and Kautz 2012

Production, growth and noncognitive skills

This topic tries to connect cognitive and noncognitive skills with models of output and economic growth. A simple static model of investment in different skills will be presented. This model will be provided by the chair. Concerning the literature, Balart et al. (2018) have established a connection between skills and growth. They show that noncognitive skills can influence test scores which in turn are correlated with economic growth. It would also be possible to find models of economic growth where cognitive and noncognitive skills are part of human capital.

- Balart, Oosterveen, and Webbink 2018

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