

---

# The high costs of low literacy in the Czech Republic

DECEMBER 2020<sup>2</sup>

JANA KRAJČOVÁ AND DANIEL MÜNICH

---

## Summary

- By means of projections, we quantify the hypothetical impact of providing better education to insufficiently literate fifteen-year-old pupils on the Czech economy's long-term growth in the coming decades, using a number of scenarios. Our projections are not predictions of future trends, but represent hypothetical projections of future trajectories based on what is currently known about the causal relationships between educational achievements and economic growth.
- Insufficiently literate fifteen-year-olds – those who do not achieve score enough in functional literacy tests – face substantial economic and social difficulties later in life. Across the OECD countries, 24% of pupils fall into this category. In the Czech Republic the proportion is slightly lower (21%), and this represents some 20 thousand pupils in an age cohort. Only a negligible share of these pupils attend four-year or extended *gymnazia* (academic upper-secondary schools). These pupils represent about a third in elementary schools, while they represent almost half of vocational / apprenticeship secondary schools (without the *Maturita / Abitur* school-leaving exam). School closures during the covid-19 era will likely increase unequal access to quality education and thus the proportion of under-literate pupils.
- Our projections show that even a relatively small reduction in the proportion of insufficiently literate pupils can, through its positive impact on the productivity of the workforce in the future, have a non-negligible impact on the country's long-term economic growth. Considering the impact over a whole lifetime, even

---

<sup>2</sup> This study represents the authors' views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). The authors thank Tomáš Protivínský, Dan Prokop, Jana Straková, Arnošt Veselý, Václav Korbel and Štěpán Jurajda for their valuable comments and advice. Any errors are the authors' responsibility. The study was produced in cooperation with PAQ Research and with the support from the Česká Spořitelna Foundation and the Czech Academy of Sciences as part of its Av21 Strategy Programme. The study was published in abbreviated form as part of the monograph „Inequalities in Education as a Source of Inefficiency“ published in cooperation with PAQ Research, and with the support of the Česká spořitelna Foundation.

the least ambitious reform scenario represents an annual GDP addition of 18 billion CZK. This potential impact is far greater than, for example, current expenditure on what is known as “inclusion”, which is close to 10 billion CZK per year. More ambitious reform scenarios yield GDP impacts in the range of hundreds of billions of CZK per year. The gross return on measures to reduce the proportion of insufficiently literate pupils is thus substantially or very substantially higher than the conceivable costs of implementing such measures. Our estimates of the gross return on such reforms may serve as an upper bound when considering how much public spending on measures to raise literacy is worthwhile or acceptable.

- The more substantial impacts of these scenarios are noticeable only after the year 2050, in other words from around 30 years after the intervention. This is because the gradual increase in literacy among low-skilled fifteen-year-olds over a period of ten years as a result of targeted measures will only begin to contribute to an increase in workforce productivity over the course of the following decades, once these more literate year-groups have entered the labour market and once they begin to make up a greater share of the workforce.
- In this study we do not propose or evaluate any specific measures or reforms to raise literacy levels of low skilled. Our analysis is primarily focused on potential returns, rather than costs. Any measures should, nevertheless, be based on more detailed data and analysis of the incidence of insufficient pupil literacy and its causes than the Czech Republic has so far obtained only thanks to international selective surveys such as the OECD’s PISA. Measures should also undergo pilot testing and an analysis of their costs and benefits should be carried out.
- Besides lower future earnings and foregone GDP growth, insufficient literacy among fifteen-year-olds also represents an obstacle to their full integration into society, their enjoyment of the benefits of technological development and globalization more generally, and increases their risk of poverty, unhealthy lifestyles, criminal tendencies, etc. Targeted higher quality education for these pupils would, in addition to the economic returns we have estimated, also result in financial savings on public expenditures, for example through savings on social benefits and spending on security and addressing criminality. Reducing the incidence of insufficient literacy would also give those affected a chance to gain even higher levels of education and thus transmit the positive effects to future generations.