
Teaching quality, education, economic growth and prosperity in the Czech Republic²

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Summary of key issues

- This study reports in detail on how Czech society will suffer financially in the future if it is unable, or unwilling, to invest greater resources and systemic efforts into improving teaching quality. Our simulated estimates demonstrate that the financial impact of foregoing potential improvement would be huge. The paradox of this high level of unrealized societal gain can be explained in various ways. Either Czech society is still insufficiently aware of the extent of the societal advantages that they forgo by failing to improve teaching quality, or a substantial part of the society is currently failing to consider the long-term impact. It may also be that the Czech political-educational system is currently unable to translate a realization of the extent of this loss into concrete measures and investments.
- Good quality schooling is a fundamental precondition for any country's future economic and social development, its prosperity and its inhabitants' quality of life. That is the case despite the fact that this connection is not immediately obvious to us as we go about our daily lives. The time period over which causes and effects in education are measured is not a few months or years but several decades, by which time it is too late to change the observed effects. This study sets out those potential effects.
- By far the most important determiner of the quality of education is, and will long continue to be, the quality of teachers' work. That, in turn, is dependent on the quality of teachers' initial and further training and on the teaching profession's ability to attract the very best and most talented candidates into teaching, to retain them and to keep them motivated. It is thus a question both of the financial attractiveness of the teaching profession and of the way in which initial teaching qualifications and further training for teachers are organized.

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- While it is difficult to put figures to the non-financial gains that better education brings in the form of better health, longer life, cultural development, and so on, it is much easier to estimate the financial gains. The latest findings from the social sciences enable us to do so based on three essential phenomena: **(i)** The extent to which teacher quality differs across the country, **(ii)** How those differences in teaching quality impact the level of pupils' education and **(iii)** How those pupils' education later affects the country's economic growth, once they have entered the labour market. This study presents estimates of the long-term effects of various scenarios for the development of teacher quality on the Czech Republic's GDP.
- We work with three non-reform scenarios. The more optimistic non-reform scenario supposes that the current downward trend in the level of education and in teacher quality will come to an end and teacher quality will stagnate. The middle scenario supposes that pupils' results and teacher quality will continue to fall at the current rate for 15 years. The pessimistic scenario supposes that as teachers retire they will be replaced by younger teachers of substantially less-than-average quality.
- The reform scenarios with which we work differ in respect of which group of teachers we expect to improve in quality, how large we expect the improvement to be and how long the change would last. Teacher quality can be improved by improving the quality of teachers' initial education, by raising the quality of their further training, or by raising the requirements for selection into the teaching profession. Our simulation of the effects takes into account the fact that raising teacher quality is a gradual process that may take years or decades, that primary education lasts ten years, that better-educated pupils enter the labour market only much later, and that their better education will then translate into greater productivity throughout their active careers lasting several decades.
- The economic advantage of the reform scenarios in which teacher quality and pupils' education are improved is expressed as an additional accumulated value of gross GDP that is produced purely as a result of the improvement in teacher quality over a period of 80 years from the (simulated) implementation of the reforms in 2020. That additional GDP value can then be considered the value the society is currently sacrificing by failing to invest in teacher quality. We can also compare this additional potential GDP value with the amount that is currently spent on schooling. The figures give us an upper estimate of how much it would make sense to invest into improving teaching quality. The estimates of the gross long-term gains from investment in teacher quality improvement are very high and it is hard to find any other areas of public investment with such a high level of return. Even the most conservative scenario, representing a slight improvement in all teachers' work, would lead to a gross gain that diametrically exceeds the return on any commercial investment product.