

The Economic Case for Education

Ludger Woessmann [University of Munich and Ifo Institute – woessmann@ifo.de]

From an economic perspective, the case for education is highly compelling. A large amount of recent empirical evidence reveals the crucial role of education for individual and societal prosperity. The knowledge and skills of the population are a leading determinant of economic growth, employment, and earnings in modern knowledge-based economies such as the EU.

As education can serve many goals, the case for education can be made from many perspectives. Here, we present the economic case for education.

WHY EDUCATION AFFECTS PROSPERITY

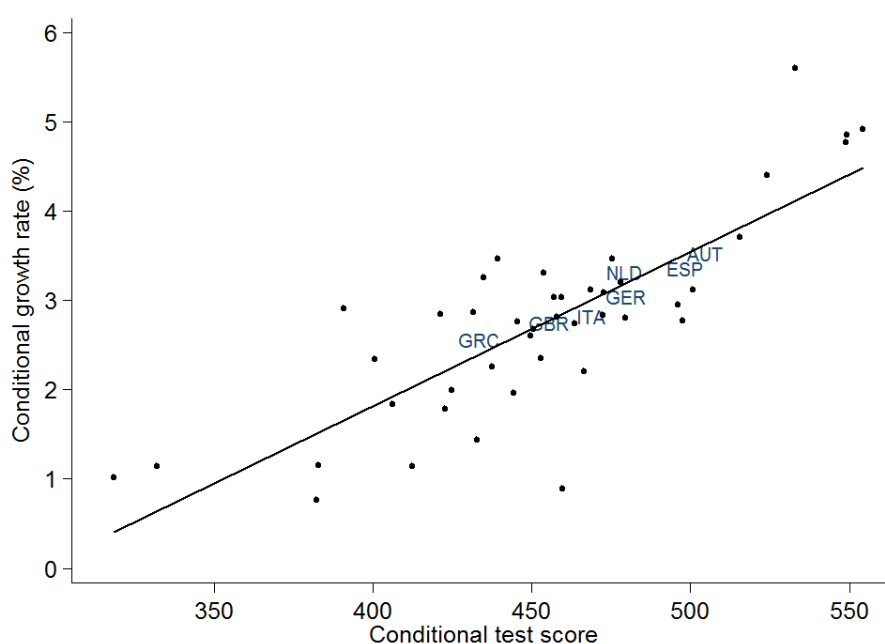
From a theoretical perspective, education can be viewed as an investment in the knowledge and skills of people. It equips people with the skills that make them more productive in performing their work tasks. It also conveys the knowledge and competencies that enable people to generate and adopt the new ideas that spur innovation and technological progress. To the extent that this increases individual productivity, educated individuals will be able to earn higher wages and less likely to be unemployed.

At the macroeconomic level, education can spur long-run economic growth by increasing aggregate productivity through accumulated human capital and by helping to generate and diffuse innovations which bring technological progress. Beyond economic benefits in a narrow sense, education also offers nonproduction benefits such as increased work satisfaction, improved health decisions, reduced crime, improved citizenship, and better parenting.

EDUCATIONAL ACHIEVEMENT SPURS GROWTH

Empirical evidence strongly supports these theoretical considerations. At the country level, education is indeed one – if not the most – important determinant of economic growth. If measured by the skills actually learned, the education of its population is very closely linked to a nation's long-run growth rate (see Figure). An increase in educational achievement by 50 PISA points translates into 1 percentage point higher

Educational achievement and economic growth rates



The graph plots the average annual rate of growth of real GDP per capita in 1960-2009 against average scores on international student achievement tests (based on regression analysis). Source: Hanushek and Woessmann (2015), *The Knowledge Capital of Nations: Education and the Economics of Growth* (see reference overleaf).

growth rates in the long run. Importantly, it is what people know and can do that matters for growth, not how long it took them to reach that achievement.

The findings mean that if the EU were successful in improving average student achievement by the equivalent of 25 PISA points, the economic gain would amount to an increase of 6% in future GDP until 2090. Put differently, this amount is the cost to the EU of not improving the quality of its school systems.

EDUCATION REDUCES RISK OF UNEMPLOYMENT

At the individual level, employment rates are very closely related to education levels. In the modern economy, widespread unemployment is predominantly a phenomenon among low-educated people. Across European countries, unemployment rates are at 6% for those with higher education, 9% for those with upper secondary education, and 18% for those who did not finish an upper secondary degree.

Over the entire employment life-cycle, there is a trade-off between vocational (occupation-specific) and general types of education programs. Vocational programs have early advantages in facilitating the school-to-work transition. General programs have later advantages in facilitating adaptability when economies change their structures and technologies over time.

EDUCATION RAISES INDIVIDUAL EARNINGS

Higher levels of educational attainment and skills also go along with substantial returns in the form of higher individual earnings on the labor market. Among those who have a job, earnings increase on average by 7.4% for each additional year of education. A substantial literature suggests that this association indeed reflects a causal effect of getting more education.

When education is measured directly as skills in the new PIAAC adult skill survey, individual earnings increase on average by 17.4% for each step on the five-step PIAAC competency scale.

IMPLICATIONS FOR EUROPEAN POLICY-MAKING

The rather lackluster performance of European adults on the PIAAC skill test signals a dire need for reforms if

the EU wants to prosper in the future. While some EU countries have seen important improvements in their young generations' achievement levels on the PISA test over the past decade, achievement trends paint a picture of complacency in some other EU countries. Such complacency endangers future prosperity in the EU. At the same time, the diverging trends in PISA show that achievement levels are not destiny, but can be improved – or let slip.

Given the crucial importance of knowledge and skills for future prosperity, the EU policy agenda should particularly focus on educational outcomes, rather than inputs or attainment. Not least in a context of tight public budgets, successful education reform calls for the need to improve efficiency. Given that most of the skill foundation is laid during youth, policy-makers should place a particular focus on schools and – as a pre-requisite – high-quality early childhood education. Available research highlights that accountability, autonomy, and choice are three dimensions of good governance that are important for increased efficiency and high levels of achievement in the school system. Similar measures appear promising for the European system of higher education. To find out the best ways to nurture the skills of adults, more research is needed to evaluate the outcomes and effectiveness of different adult education and training programs. Throughout the education system, additional research could help in closing gaps in our current knowledge about what works best to improve educational outcomes.

Of course, the crucial economic role of education does not mean that the case for education should be made solely from an economic perspective. But it would be highly irresponsible to ignore the economic dimension of education. This would endanger the prosperity of future generations, with widespread repercussions for poverty, social exclusion, and the financial sustainability of social security systems. If EU policy-makers want to foster economic prosperity for the future European population, a strong focus of the EU policy agenda on the importance of education, knowledge, and skills is warranted.

For more details see: Ludger Woessmann, *The Economic Case for Education*. EENEE Analytical Report 20, Dec. 2014, http://www.eenee.de/dms/EENEE/Analytical_Reports/EENEE_AR20.pdf.