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Article

Peering over the Hedge: How Do the Neighbours Do It?

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Panel 1

PEERING OVER THE HEDGE: HOW DO THE NEIGHBOURS DO IT?

LUDGER WOESSMANN

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With once cheap-labour countries such as China, India and others moving rapidly up the value chain, the only way for Europe to secure its prosperity is to remain innovative. Therefore, it comes as no surprise that businesses are clamouring for top-notch education and training systems that can tap, foster, cultivate and stimulate knowledge and talent. But Europe's educational outcomes are still quite uneven. How can we identify the best approaches for improving the education system?

Learning from cross-country analyses

Countries differ widely in their education policies and outcomes. As a consequence, cross-country comparisons provide a huge opportunity to learn which education policies work and which do not. As Arthur W. Foshay, a pioneer in international testing, said in 1962 on the first pilot study of international student achievement: "if custom and law

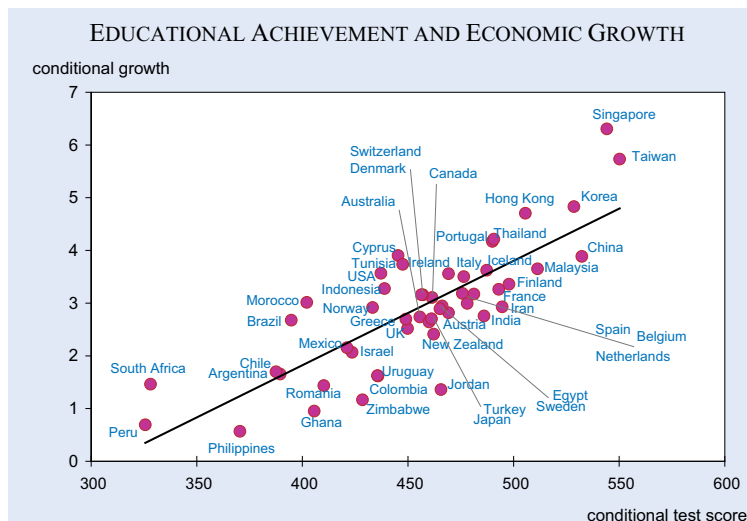
define what is educationally allowable within a nation, the educational systems beyond one's national boundaries suggest what is educationally possible".

Rather than comparing any given country to just one other country, we should look at a whole sample of countries to see whether countries with certain policies perform *systematically* differently – rather than being exceptions to the rule. This report is thus based on such systematic econometric cross-country research.¹

Educational achievement is the key to economic prosperity

Empirical research clearly shows that the cognitive skills of the population, measured by international student achievement tests such as TIMSS, PISA and their predecessors, are indeed leading predictors of countries' long-run growth in GDP per capita (see Figure 1). Because of this crucial role of basic skills, the following analysis concentrates on educational policies at the school level.

Figure 1

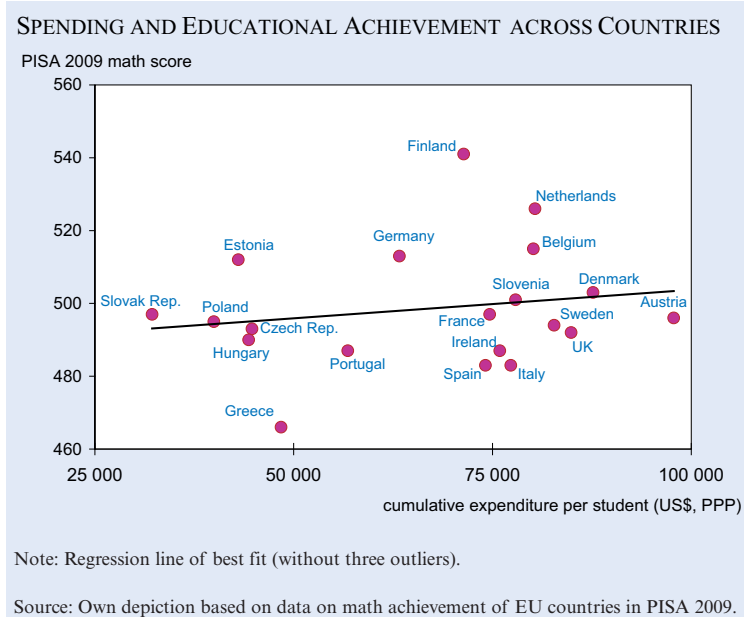


Note: Added-variable plot of a regression of the average annual rate of growth (in percent) of real GDP per capita in 1960-2000 on the initial level of real GDP per capita in 1960, average years of schooling in 1960, and average test scores on international student achievement tests (mean of unconditional variables added to each axis).

Source: Own depiction based on Hanushek, E. A. and L. Woessmann, "Do Better Schools Lead to More Growth? Cognitive Skills, Economic Outcomes, and Causation", *Journal of Economic Growth*, forthcoming.

¹ For a detailed survey of underlying cross-country research, see Hanushek, E.A. and L. Woessmann (2011), *The Economics of International Differences in Educational Achievement*, in: Hanushek, E.A., S. Machin and L. Woessmann (eds.), *Handbook of the Economics of Education*, Vol. 3, Amsterdam: North Holland, 89-200.

Figure 2



The incentives to produce high-quality education, in turn, are created by the institutions of the education system – the rules and regulations that explicitly or implicitly set rewards and penalties for the people involved in the education process. Therefore, it is important to get the rules and regulations right. Changes in the institutional structure and incentives of schools are also fundamental to improving teacher quality, a crucial ingredient in determining student achievement. What does this mean in practice? Existing research has shown that the following interrelated policies are important for better results.

‘Throwing money at schools’ is not the answer

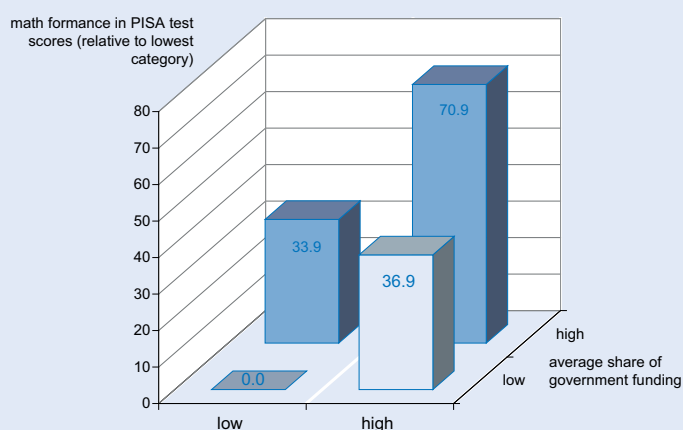
According to extensive available evidence, simply providing more resources – direct spending, reductions in class size, and the like – within the context of current school organization is very unlikely to lead to noteworthy improvements in student outcomes. Contrary to what one might intuitively expect, countries with higher spending or smaller classes simply do not perform systematically better (see Figure 2 for an example).

Competition

First, countries that have a large share of privately operated schools and government funding for all schools perform systematically better on the international achievement tests. That is, students perform better in countries with more competition from privately operated schools and where public funding of

Figure 3

PRIVATE VS. PUBLIC OPERATION AND FUNDING OF SCHOOLS AND STUDENT ACHIEVEMENT



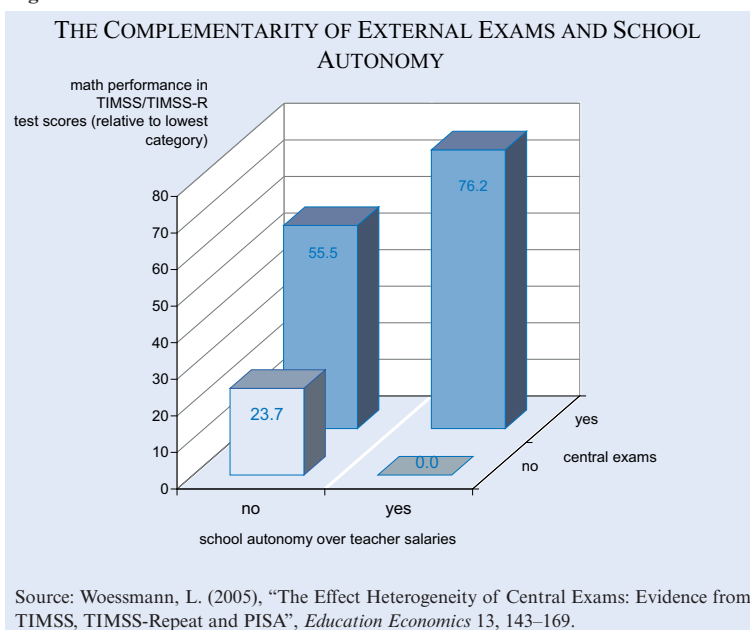
Note: Based on cross-country student-level multiple regressions using the PISA 2003 micro database. ‘Low’ and ‘high’ refer to the first and ninth decile on the international distribution of the two variables (0% and 55% in the case of private operation and 55% and 100% in the case of government funding).

Source: Woessmann, L., E. Luedemann, G. Schuetz and M.R. West (2009), *School Accountability, Autonomy and Choice around the World*, Cheltenham: Edward Elgar.

Focus on institutions, incentives and teacher quality

So, if more money or smaller classes will not work, what would? The existing evidence suggests that what matters is the institutional structure of schools. Foremost, the performance of a system is affected by the incentives that all the people involved in the education process face: if they are rewarded (extrinsically or intrinsically) for producing better student achievement – or otherwise face negative consequences for not producing high achievement – achievement is likely to improve.

Figure 4



such schools ensures that all families can make choices (see Figure 3). Thus, a crucial aspect of successful school systems lies in the promotion of competition, so that parental demand will create strong incentives to individual schools.²

Accountability

Second, countries with central school-leaving exams and other means that hold students, teachers, and schools accountable for the achieved outcomes perform significantly better (see Figure 4). Another feature of successful school systems is thus accountability systems that identify good school performance and lead to rewards based on this. There is also some indication that students perform better in countries that allow for teacher salaries to be adjusted based on teaching performance.³

² For recent evidence that the effect of competition on educational achievement is likely causal, see West, M.R. and L. Woessmann (2010), "Every Catholic Child in a Catholic School? Historical Resistance to State Schooling, Contemporary School Competition and Student Achievement across Countries", *Economic Journal*, 120(546), F229–F255.

³ See Woessmann, L. (2011), "Cross-Country Evidence on Teacher Performance Pay", *Economics of Education Review* 30, 404–418.

Autonomy

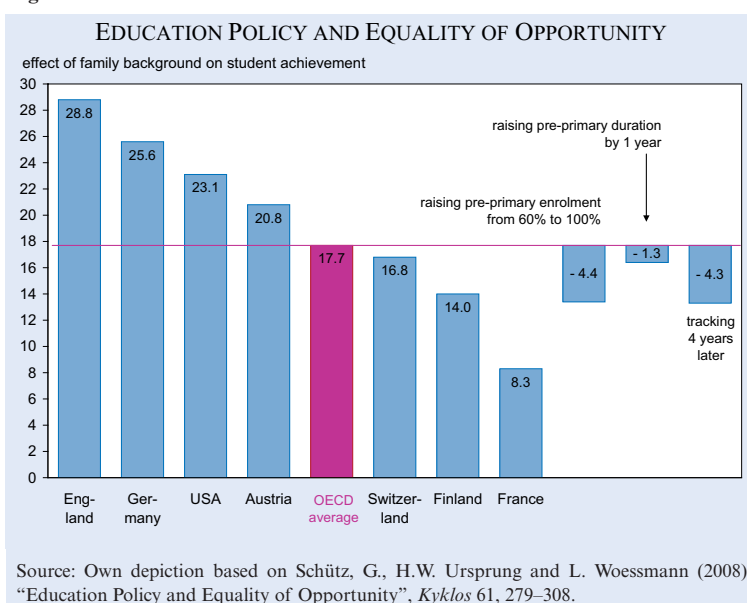
Third, once schools are held accountable for their outcomes, and once a country operates at a reasonable level of development, school autonomy leads to improved student achievement, in particular in decision-making areas related to academic content and to personnel (see Figure 4 for an example).⁴ Thus, autonomy in local decision-making can help to ensure that individual schools and their leaders take action to promote student achievement.

De-tracking

Apart from the overall level of achievement, education systems also tend to aim for equality of opportunity for children from different family backgrounds. Thus, the cross-country evidence suggests that tracking students into different types of schools at an early age leads to a stronger dependence of ultimate achievement on family background, without any positive effect on achievement levels (see Figure 5).

⁴ For the most recent evidence on school autonomy stressing that a reasonable level of development is a precondition for successful autonomy reforms, see Hanushek, E.A., S. Link and L. Woessmann, "Does School Autonomy Make Sense Everywhere? Panel Estimates from PISA", *Journal of Development Economics*, forthcoming.

Figure 5



Therefore, when aiming for equality of opportunity, the practice of early tracking should be eliminated.

Early childhood education

Finally, the cross-country research suggests that countries with more extensive early-childhood education systems achieve more equal outcomes for children from different socioeconomic backgrounds at the end of secondary school (see Figure 5).

In summary, the most recent evidence from cross-country comparisons proves that improving educational outcomes is possible without spending large amounts of extra taxpayer money. What is called for is rather a focus on institutions and incentives in the areas of competition, accountability, autonomy, de-tracking, and early childhood education. In this age of austerity, that is a message governments should take to heart – and focus on the necessary institutional reforms.

PANEL

John Peet of *The Economist* who chaired the first panel once again emphasized that educational achievement is the key to economic prosperity. But Europe's educational landscape is uneven as is the quality of educational outcomes, and their contribution to economic performance.

Looking at the problem of education in pictures, the first panel speaker **Marc-Michael Bergfeld**, Professor of Global Entrepreneurship and Family Firms, Munich Business School, who presented the findings of the Young Experts Group, depicted Europe as a smoking house with education at its centre. In Europe “we are all aware of the problems, but we are getting few results”, said Mr. Bergfeld. In his view, changing the education system represents a political risk, and expenditure on education is a long-term measure that does not lead to immediate success or win votes. This, in turn, is blocking innovation. The Young Experts proposed a solution involving setting up educational entrepreneurs as an alternative to the state to create an incubator for entrepreneurs who can influence the system from the outside

Marius Möller, Executive Board Member and Head of Human Capital, PriceWaterhouseCoopers AG

Deutschland, joined Mr. Bergfeld in stressing the importance of flexibility and innovation when it comes to education. He described knowledge and people power as the one way for Europe to set itself apart from Asia in the future and called for a common European education situation. Marius Möller berated the fact that the education system remains Länder-based in Germany and said that there was still a long way to go before achieving educational integration. Despite the Bologna process of university exchanges, Europe's job markets remain local. Mr. Möller highlighted the need to increase mobility and to send people to learn in other countries and about other countries. He ended by raising the question of how far businesses should dictate what students learn in universities.

Margaret Suckale, Executive Board Member and Industrial Relations Director, BASF, agreed with Mr. Möller that Germany has some catching up to do when it comes to education. “In Germany we drive great cars, but when it comes to education we are still driving with the brakes on”, warned Ms. Suckale. Companies are very good at benchmarking and comparisons, and these are the principles that Germany's education system should be based on, she argued, emphasizing the importance of the OECD studies. If Germany really opens its education up to competition then the federalist system opens up opportunity. Education is a mobility blocker. Asians think that their education system is much better in Asia than in Germany and don't want to move here. The good news is that the German states are moving towards a common standard for the Abitur. “From a chemicals company point of view we need to get more children interested in sciences, maths, etc. and we need to make Germany more attractive to overseas professionals” explained Ms. Suckale. Citing the German Chancellor Angela Merkel she urged support for a vision of greater integration to turn Germany into a *Bildungsrepublik*.

The panel's fourth speaker, **Brett Wigdortz**, Chief Executive Officer and Founder, Teach First, London, focused on education at a micro level. Citing the example of a school in West London with an intake of over 90 nationalities, he argued that outstanding school and system leadership are needed to ensure that people achieve their maximum potential. Training teachers to be excellent leaders and to raise the performance expectations of their children serves to close the education gap for low income children, he concluded.

Panel chairman Mr. Peet opened the discussion up to the floor by asking how the quality of teachers can be improved and by raising the issue of teacher pay. He highlighted the potential danger of excessive external examination, which may encourage schools to teach for the test and make examinations easier in order to boost their results. Ludger Woessmann recognized this pitfall and emphasized the need to check that the bodies controlling accountability are not the government, as this could lead to conflicts of interest.

Mortimer von Plettenburg, Co-Founder und Regional Managing Director, Teach First Deutschland GmbH, asked how much teacher quality plays into the equation. In his experience, one of the best routes to getting top teachers is establishing competition, autonomy and improving teacher education. He highlighted the lack of research into teacher education systems and noted that these systems are very outdated in most German states. Money is not everything, he noted. “Finnish teacher pay is lousy, but it [teaching] is a very prestigious job and Finnish teachers have to pass tough exams. That creates an incentive to belong to an intellectual elite”.

Peter Dolton, Professor of Economics at the University of Sussex, nevertheless insisted that, “if you pay more, you get better quality teachers”. Hans-Werner Sinn confirmed the correlation between teacher pay and quality. “There is a rich body of econometric results looking at cross-country data which shows that pay does matter” commented Mr. Sinn. The real problem, added Mr. Dolton, is retaining brilliant teachers. In view of the high returns on early education, Margaret Suckale argued that nursery school teachers in Germany should be paid higher salaries. She also stressed the lack of recognition for teachers in today’s society. “Germany has high burn-out rates among teachers, but this is not because they aren’t earning enough, it is because parents are disrespectful towards teachers. These attitudes need to change” warned Ms. Suckale. Given the more attractive working conditions in companies and the lack of recognition for teachers, she does not expect many women to opt for a teaching career in the future.

Peter Thiele from the German Federal Ministry of Education and Research in Bonn asked how Europe can become more competitive in the future compared to other regions of the world. The results of the PISA tests created such shockwaves in Germany that it now

invests 10 percent of GDP in education. Germany’s main problem, in Mr. Thiele’s view, is that there are now too many programmes and measures to help disadvantaged people in education; the real challenge now lies in coordinating these programmes effectively, he concluded.