

Introduction by

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Dear Mr. Chrobog,
Excellencies,
Ladies and Gentlemen,

Some years ago the Summit focused on Europe and the Demographic Challenge, which helped lay the foundations for this year's Summit on Education and Training.

Education and Training: the European Economy's Best Hope.

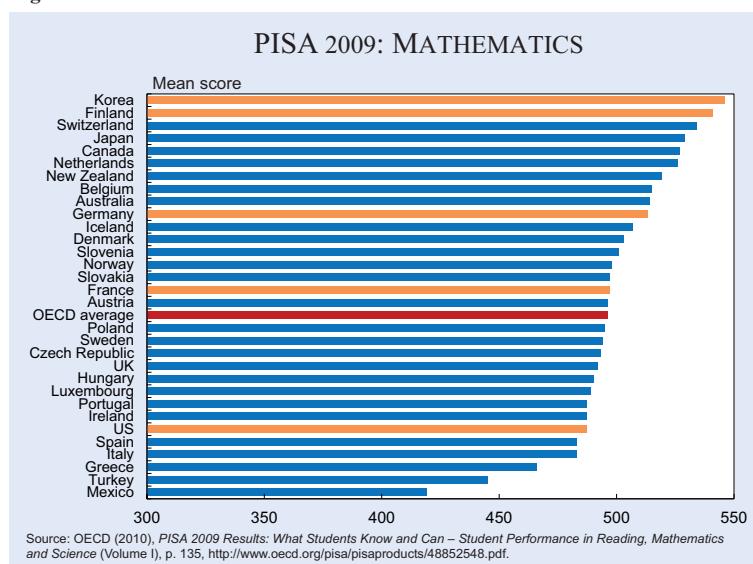
Let us begin by looking at the OECD's well-known PISA tests of 15-year-old school pupils. Figure 1 shows the results of the 2009 PISA test in mathematics. The champion is South Korea followed closely by Finland. Germany and France are above the OECD average, but Britain and the United States are below it. The 2009 results were met with some relief in Germany, the country having fallen below the average in the first tests. This sent a shock wave through

German society, giving rise to an ongoing debate on the quality of education. In the meantime German teachers seem to have learned how to prepare their pupils for these tests as they are now performing somewhat better.

Whatever the hypothetical reasons given by economists for these score differences, it is important to recognise that their explanatory power is limited. This is clearly illustrated by the 2006 PISA tests as shown in Figure 2. For the sake of comparison, the German Länder, represented in yellow, are treated as states and compared with the OECD states. According to this graph, the German Länder are among the best and the lowest performers, despite the fact that they all basically share the same education system. This shows that a state's performance depends on a wide range of subtle factors, including the degree of care put into education, the extent the system is monitored and the money invested in it, etc. Bavaria, ranking number nine among the OECD countries, can be proud of its performance, while Bremen at the other end of the spectrum has less to celebrate. Thus it is quite clear that the German system cannot be viewed in a monolithic manner and that simple explanations for a country's overall performance cannot easily be found.



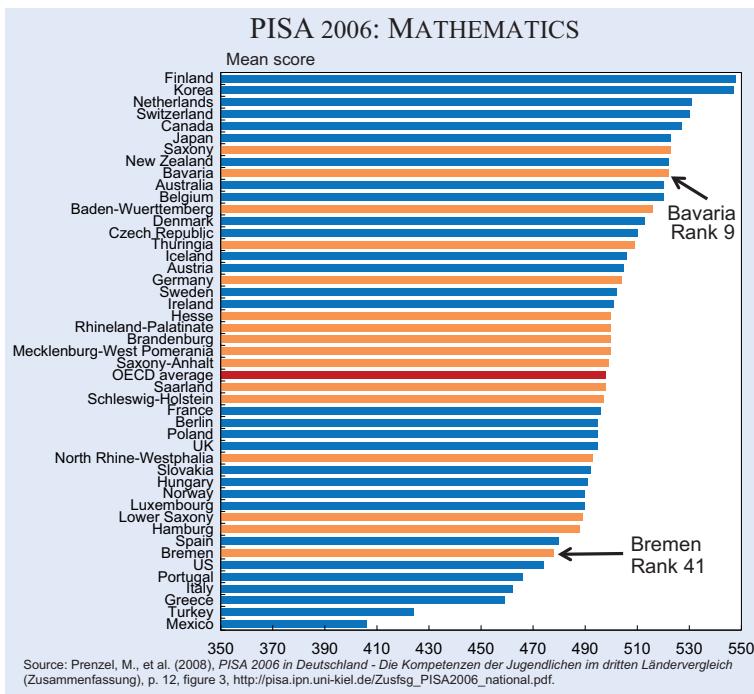
Figure 1



Educate earlier

Education should begin earlier rather than later. Some years ago James J. Heckman gave a presentation here in Munich on this topic in which he convincingly argued that the rate of return on human capital investment in early childhood is much greater than that made at a later point in time. This applies particularly to disadvantaged children. Figure 3 shows a stylised curve illustrating that investment in the first three years of a child's life generates a huge rate of return. If, on the other hand,

Figure 2



investment is made later on in a child's life cycle, huge efforts and resources are required to achieve similar results. Let us consider language learning as a classic example of this phenomenon. If pupils begin to learn languages too late in life, they will always keep their accent, but with an early start the accent is easily overcome.

For children from a well-to-do background the picture is different as far as return on investment is concerned. The rate of return is not that high because these children already benefit from parental invest-

ment, so the marginal productivity of investing in their education with public money is obviously smaller. However, the results show that for children from affluent backgrounds, the productivity of educational investment is higher at the secondary level.

This figure is particularly important in view of the fact that Germany has many immigrants. One third of the babies born in Germany and one third of primary school pupils have a parent or parents who have migrated to Germany. In the big cities this figure rises to over 50 percent (Berlin and Frankfurt) and over 70 percent (Cologne). Immigrant children are naturally disadvantaged in the German education system since they began life learning another language. A particular effort therefore needs to be made to invest very early in their lives, because if it is done too late, full integration will never be achieved.

Inequality: redressing the balance

Inequality in society is an ongoing problem that can be compensated for by transfers between the well-to-do and the needy, but this can be achieved even more effectively via the education system. So the question is: does the education system achieve this goal? Figure 4 demonstrates the difference in test scores between the upper and the lower quartiles in the mathematics scores of the PISA test and the OECD average. I would like to highlight the performance of three countries: Austria, Germany and Belgium. These countries exhibit the largest inequality in the test scores of all OECD countries. Finland, by contrast, has very little inequality. This may be the reason why it has the highest ranking in the PISA test. Finland seems to be able to help all chil-

Figure 3

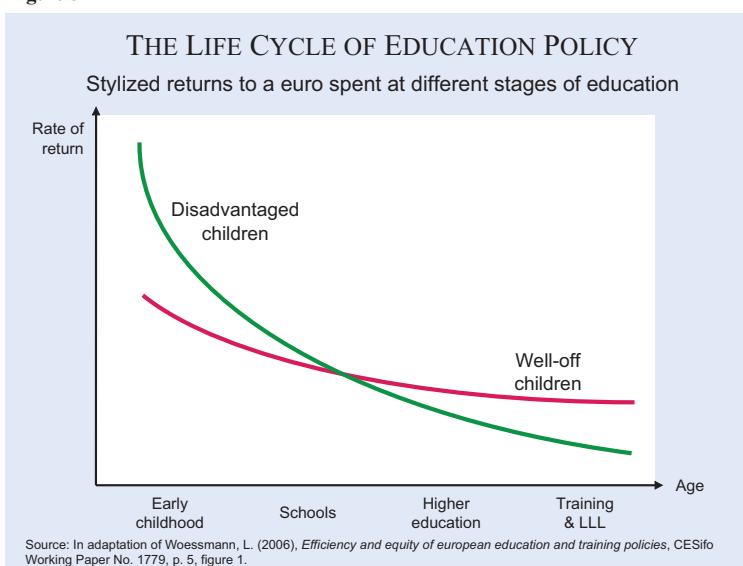
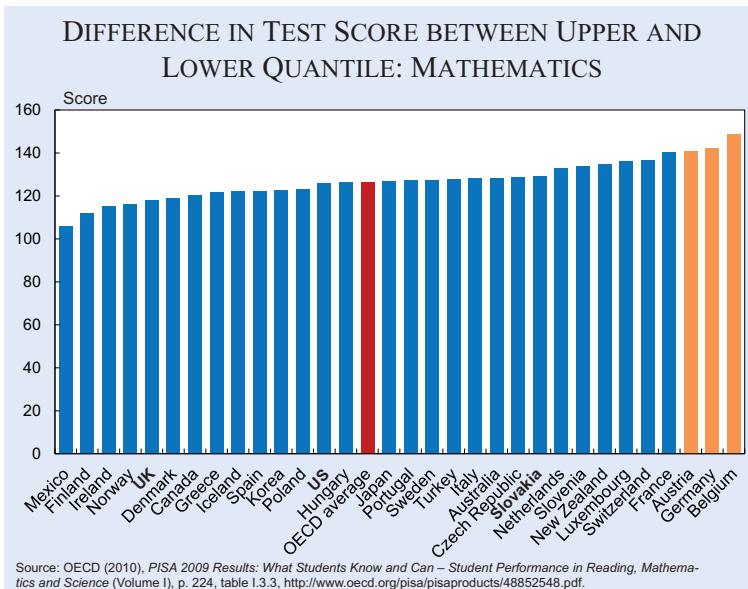


Figure 4

dren attain their personal efficiency frontier and teach them as much as possible. Education systems that foster inequality are a serious problem for society because considerable redistribution activities are required later on, as is the case for countries like Germany and Belgium.

What are the causes of this inequality? One hypothesis is early separation. The education systems in Germany and Austria separate children at the age of ten, which basically informs their entire career. Decisions at this stage depend very heavily on their parents, which can create serious problems. In Belgium this separation takes place at the age of 12, but in Finland it takes place much later. Finland's school system was modelled on that of Germany until the mid-1970s when it switched to its present system with later tracking. Other changes were also made and the results have been outstanding.

The problems with inequality that are experienced by some school systems can be demonstrated by comparing the rankings for two tests: the PIRLS tests for elementary school children and the PISA tests. Figure 5 suggests how successful countries are in translating initial

inequality early on into equality later on or vice versa. The ideal school system reduces inequality over time by educating children. Unfortunately, Germany actually creates inequality in terms of PISA test scores, making it nearly the worst in this respect, followed only by Greece and the Czech Republic. On a more positive note, there are countries that succeed in reducing the initial inequality found in elementary schools later on in their school career. The champion here is Turkey, with a school system that reduces previously existing inequality more than any other OECD country. Additional good examples of countries with equalizing school systems are New Zealand and Canada.

Investment in education

Like most good things in life, education costs money. How does education expenditure compare from country to country? To determine this, an index is needed that takes into account the different income levels in general and the number of pupils. Thus the expense per student is divided by GDP per capita to obtain a relative measure of human capital investments per child relative to some common indicator

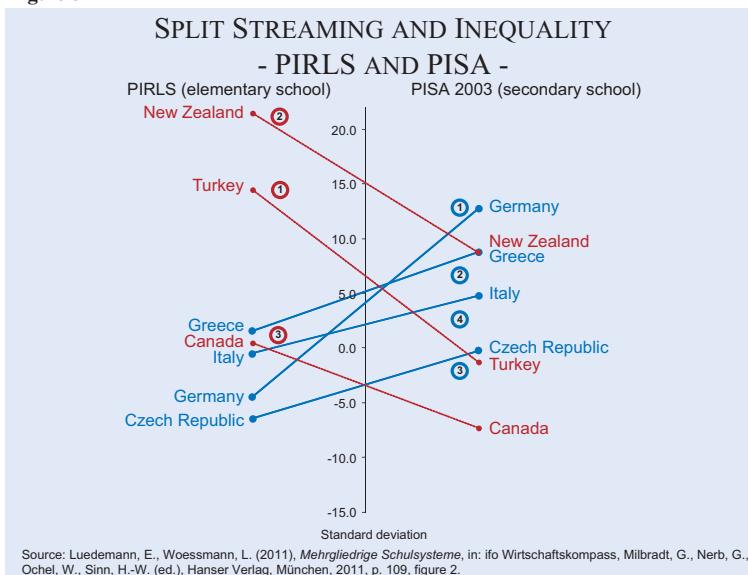
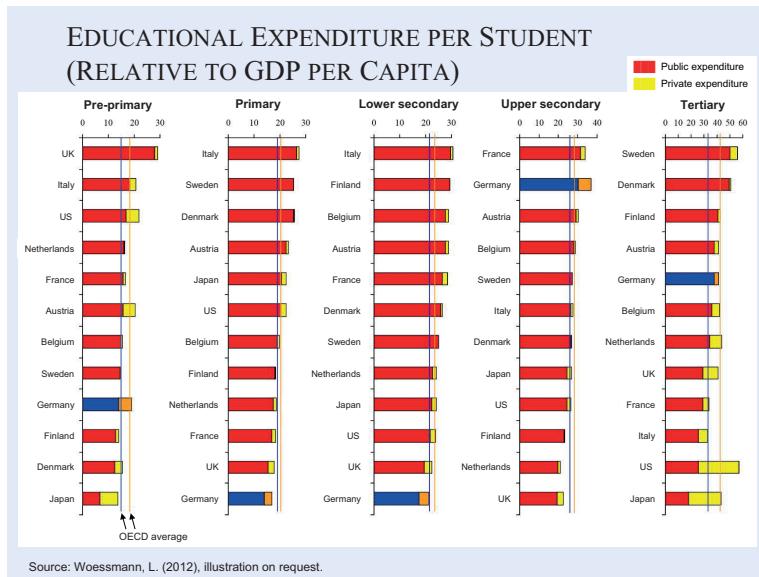
Figure 5

Figure 6



of the average income level of a society (see Figure 6). Let me focus on Germany, which is located at the bottom of this international ranking. No country spends less money relative to its wealth per child on education than Germany. Finland, on the other hand, spends much more money and obviously obtains results.

Interestingly, Germany spends much more than other countries on upper secondary education and ranks second highest. This is primarily due to the German vocational education system, the dual education system, in which Germany has invested heavily. I think vocational training is a key issue and should not be neglected in discussions about education. Unfortunately, the OECD, which has written a great deal on education, tends to overlook vocational education. The OECD repeatedly argues, for example, that Germany needs more widespread university education, draws international comparisons showing that Germany has fewer young people at universities than other countries and urges it to address this situation.

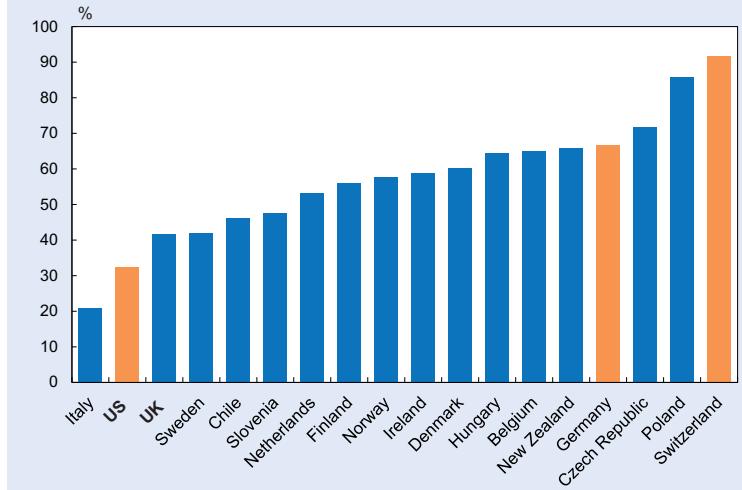
In my opinion, these recommendations are absurd and do not pay tribute to Germany's special approach of having a dual education system. Personally, I

think that the main reason for Germany's strong economic performance in terms of exports and low youth unemployment etc. is its vocational training system. For an economy to function well, it must have the tradesmen and other specialists who can handle the materials (buildings, cars, machines) that surround us, and it cannot afford to have its young people drift away from an ordered existence. Figure 7 illustrates the percentage of people in secondary and tertiary education that complete vocational education. Switzerland outperforms both the United States and Germany in this respect, and, as a result, the quality of its workforce is outstanding.

Some conclusions

The German Council of Economic of Advisers has drawn up a list of ten recommendations to improve education in Germany. One of the key recommendations concerns childcare for children under 3 years of age: in view of the high rate of return on early investments (see the Heckman results) there should be an obligatory preschool year. All-day schools should also be introduced to give disadvantaged children from immigrant backgrounds, for

Figure 7
PERCENTAGE OF SECONDARY AND TERTIARY EDUCATION
COMPLETING VOCATIONAL EDUCATION



example, a better chance of being integrated. In the Council's opinion tracking at the age of ten is too early and should take place at a later stage. I fully share this view. The Council also supports public/private competition and recommends that private schools receive subsidies, be publicly monitored and have common test scores. Research by Ludger Woessmann, which undoubtedly influenced the Council's recommendations, suggests that such competition generates the best academic results. Finally, in a complex society that is changing quickly the Council highlights the need for more lifelong learning and on-the-job training.