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COUNTRY NOTE – GERMANY

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Germany's contribution to the global talent pool has been shrinking rapidly.

In the older age group now leaving the labour force, Germany provides 6.3% of the talent pool of highly educated individuals in the industrialised world. In the younger age group, of those now entering the labour force (25-34 year-olds), Germany provides just 3.1%, or around half of that proportion, of highly skilled workers. This is not just because emerging economies like China have a rapidly rising impact on the global talent pool; it is also because growth in the number of highly educated individuals has been exceptionally slow in Germany. Among 55-64 year-olds, 2.46 million individuals in Germany have attained a tertiary qualification while among 25-34 year-olds the number is, at 2.48 million, only marginally higher. Meanwhile, the number of tertiary-educated individuals more than doubled from 39.16 to 81.21 million among the 36 countries with available data, and many OECD countries saw even faster growth rates. Naturally, not all 25-34 year-olds will have completed their tertiary studies; but comparisons of older cohorts suggest significantly smaller increases than on average across OECD countries (Chart A1.4 and Table A1.3a).

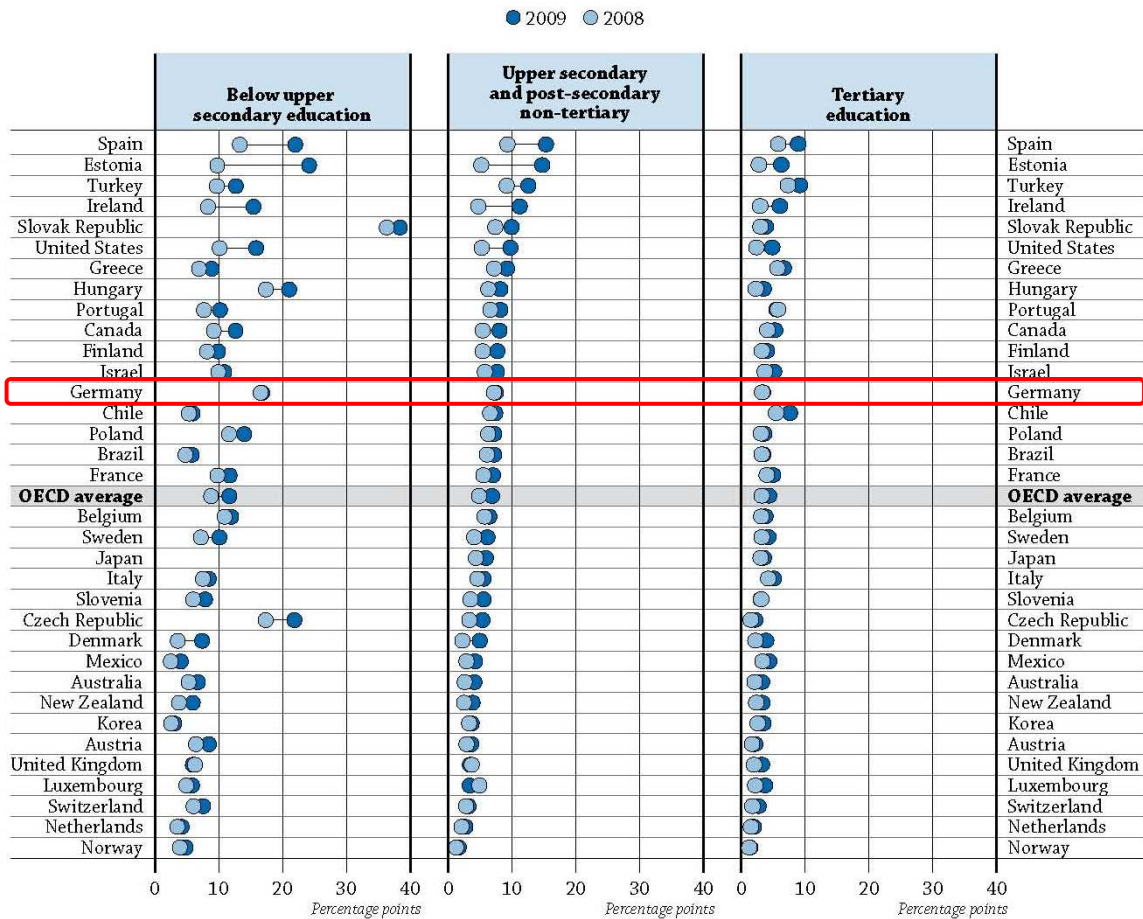
The sluggish growth in the supply of individuals with either academic or vocational tertiary qualifications explains, in part, why the labour-market rewards for workers with those qualifications have risen so rapidly in Germany. Never before have the life-chances of highly-educated workers in Germany been better than in the past years, while the prospects of those without baseline qualifications have deteriorated. It is also noteworthy that the rapid rise in the size of the global talent pool of highly educated individuals has not led to a decline in their pay, as has happened for workers without baseline qualifications.

Over recent years, the supply of tertiary-educated workers in Germany has begun to accelerate, but growth in demand still appears to be outpacing supply.

Even at a time of economic crisis, the employment rate among tertiary graduates in Germany continued to rise...

The employment rate among tertiary graduates in Germany increased by 0.6 percentage point from 2008 to 2009, during the height of the global economic crisis. Germany and Australia were the only OECD countries with rising demand for highly-qualified labour during that difficult period. Germany was also more successful than other countries in containing rises in unemployment: there was only a 0.1 percentage-point increase in the unemployment rate among those with a tertiary education, compared to the OECD average increase of 1.1 percentage points (Chart A7.2 below and Tables A7.3a and A7.4a).

Chart A7.2. Change in unemployment rates, by level of education (2008-09)



Countries are ranked in descending order of the employment rate in 2009 for individuals with upper secondary and post-secondary non-tertiary education.
Source: OECD, Table A7.4a. See Annex 3 for notes (www.oecd.org/edu/eag2011).
StatLink <http://dx.doi.org/10.1787/888932460439>

Secondary and tertiary graduates in Germany enjoy higher employment rates than their counterparts did in 1997.

Some 86% of tertiary graduates are employed in Germany, four percentage points more than in 1997 (Germany ranks 10th among OECD countries in this respect). The unemployment rate among tertiary graduates in Germany is also one of the lowest among OECD countries and, at 3.4%, some 2.3 percentage points lower than in 1997.

Similarly, 76% of upper secondary graduates were employed in 2009 compared to 68% in 1997. The unemployment rate among adults with this level of education fell by 2.6 percentage points during the period to 7.5% (Tables A7.3a and A7.4a).

Although tertiary graduates in Germany earn more...

While an ISCED 4 (largely vocational programmes) graduate in Germany earns 9% more than someone with either an upper secondary or a post-secondary degree, graduates of university-level programmes earn 68% more than those with an upper secondary or a post-secondary degree (Table A8.1).

...and the penalties for those without baseline qualifications are severe...

Trend data on relative earnings of 25-64 year-olds with a tertiary education in Germany suggest that the supply of tertiary graduates is not catching up with increases in demand for highly educated workers. Between 1999 and 2009 the earnings premium for a man with a tertiary degree over a man with an upper secondary qualification increased by 16 percentage points (Table A8.2b). As a result, German employers are paying a higher earnings premium for tertiary-educated workers. For women, the effect has been even more pronounced: here the earnings advantage increased by 31 percentage points over the same period (Table A8.2c).

At the other end of the spectrum, only 55% of those without an upper secondary education are employed. While unemployment rates among this small group remained stable, they are at a high 16.7% (Tables A7.3a and A7.4a). Individuals without an upper secondary qualification also earn 13% less than a worker with an upper secondary education (Table A8.2a).

Educational disparities in the adult population are mirrored in today's learning outcomes at school. Some 41% of 15-year-old students in Germany scored below PISA reading proficiency Level 3 in 2009. Although this is only slightly below the OECD average of 43%, the risk of not reaching Level 3 was more than twice as high in Germany for students from socio-economically disadvantaged backgrounds – more pronounced than across OECD countries. Germany also shows one of the highest relative risks of potentially vulnerable 15-year-olds whose parents have low levels of education (Table D6.3). At the same time, recent improvements in PISA scores suggest that the gap has been larger in the past.

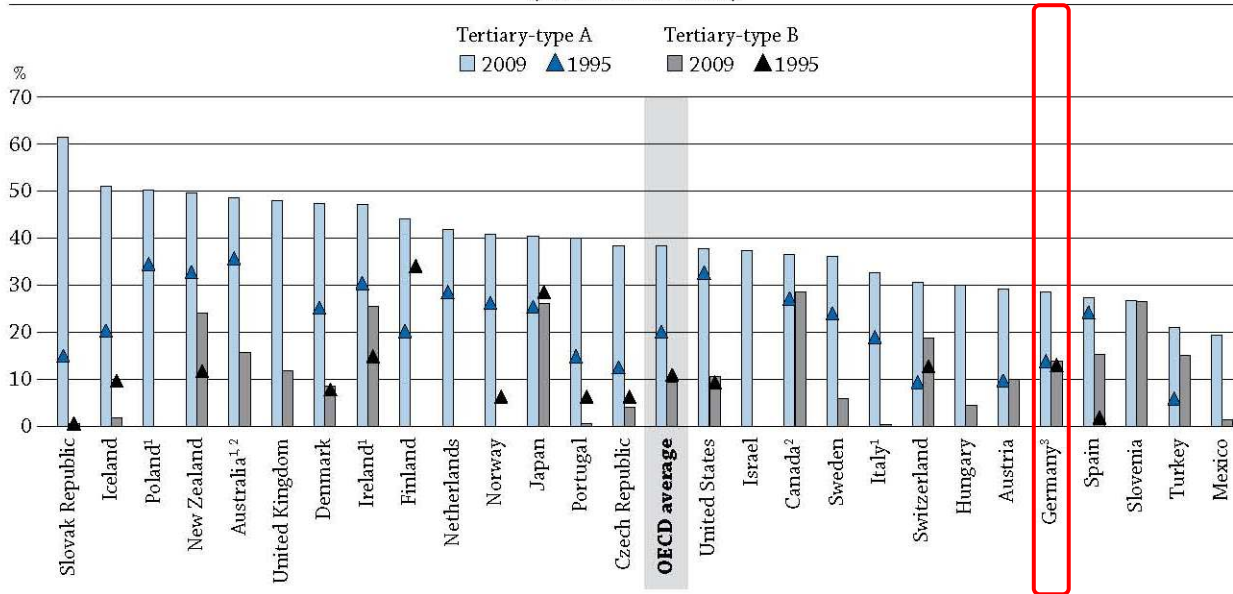
...the university-level graduation rate is below the OECD average...

Germany ranks 23 of 27 OECD countries in its proportion of university graduates (29%) and is well below the OECD average of 39%. However, as in other countries, university graduation rates in Germany have doubled since 1995 (Chart A3.2 below, Tables A3.1 and A3.2).

...except for advanced research degrees and job-related education.

Germany ranks fifth among OECD countries in graduation rates from advanced research programmes (2.5%) (Table A3.3). Germany also ranks fifth in adult participation in job-related non-formal education, after Sweden, Norway, Finland and Switzerland (Table C5.1a). With an average of over half a working year, Germany invests very significantly in continuing education and training.

Chart A3.2. First-time graduation rates for tertiary-type A and B programmes (1995 and 2009)



1. Year of reference 2000 instead of 1995.

2. Year of reference 2008 instead of 2009.

3. Break in the series between 2008 and 2009 due to a partial reallocation of vocational programmes into ISCED 2 and ISCED 5B.

Countries are ranked in descending order of first-time graduation rates for tertiary-type A education in 2009.

Source: OECD. Table A3.2. See Annex 3 for notes (www.oecd.org/edu/eag2011).

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Germany performs around average in providing young people with baseline qualifications.

Germany's graduation rate at the upper secondary level, which comprises the Abitur as well as qualifications of dual-system apprenticeship programmes, is, at 84%, around the OECD average (Table A2.1).

Germany is making good use of foreign students.

Germany charges some of the lowest tuition fees for tertiary education among OECD countries. In addition, it charges the same tuition fees for international and domestic students (Box C3.3). This may be one of the reasons why Germany, which receives 7% of all international students, remains the fourth most popular destination for foreign students after the US (18%), the UK (9.9%) and Australia (7%), even if its market share of foreign students has been declining (Table C3.6, available online).

It is noteworthy that, in 2009, over 25% of foreign students in Germany converted their status from student to employed worker and decided to remain in the country. This is the sixth largest rate among countries with available data (Chart C3.5) and signals that foreign graduates from outside Europe are making a significant contribution to the German economy.

Employers pay a higher price for qualified labour...

German employers pay more for their workers than employers in other OECD countries, and these labour costs increase substantially as workers' education level increases. Labour costs for a 25-64 year-old worker without an upper secondary diploma amount to USD 51 000; for a worker with an upper

secondary degree, they average USD 58 000; and for a worker with a tertiary degree, they average USD 87 000. German employers need to pay approximately USD 20 000 more per year than the OECD average to hire a tertiary graduate (Table A10.1). The data also show that qualification outweighs experience (Tables A10.2 and A10.4).

...but take-home pay is lower because of higher social contributions and taxes.

Although German employers pay comparatively higher labour costs, individuals take home less pay, largely because of higher social contributions and taxes. A 45-54 year-old tertiary-educated worker in Germany receives only 47% of his or her labour cost as net income (USD 45 000), whereas a worker with an upper secondary qualification receives 51% (USD 30 000) and a worker with qualification below upper secondary education receives 52% (USD 28 000) (Table A10.4).

Individual returns on education are low...

After direct and indirect costs are taken into account, the earnings and employment benefits that accrue over the working life of a German man with a tertiary education amount to a net present value of USD 148 000, below the OECD average of USD 175 000. This is mainly due to higher foregone earnings, and higher income tax and social contributions than on average across OECD countries. On the other hand, direct costs for a tertiary education in Germany are just around half the OECD average (Chart A9.3 below and Table A9.3). However, the returns on tertiary education remain well beyond those of upper secondary programmes and well beyond interest rates at the capital market.

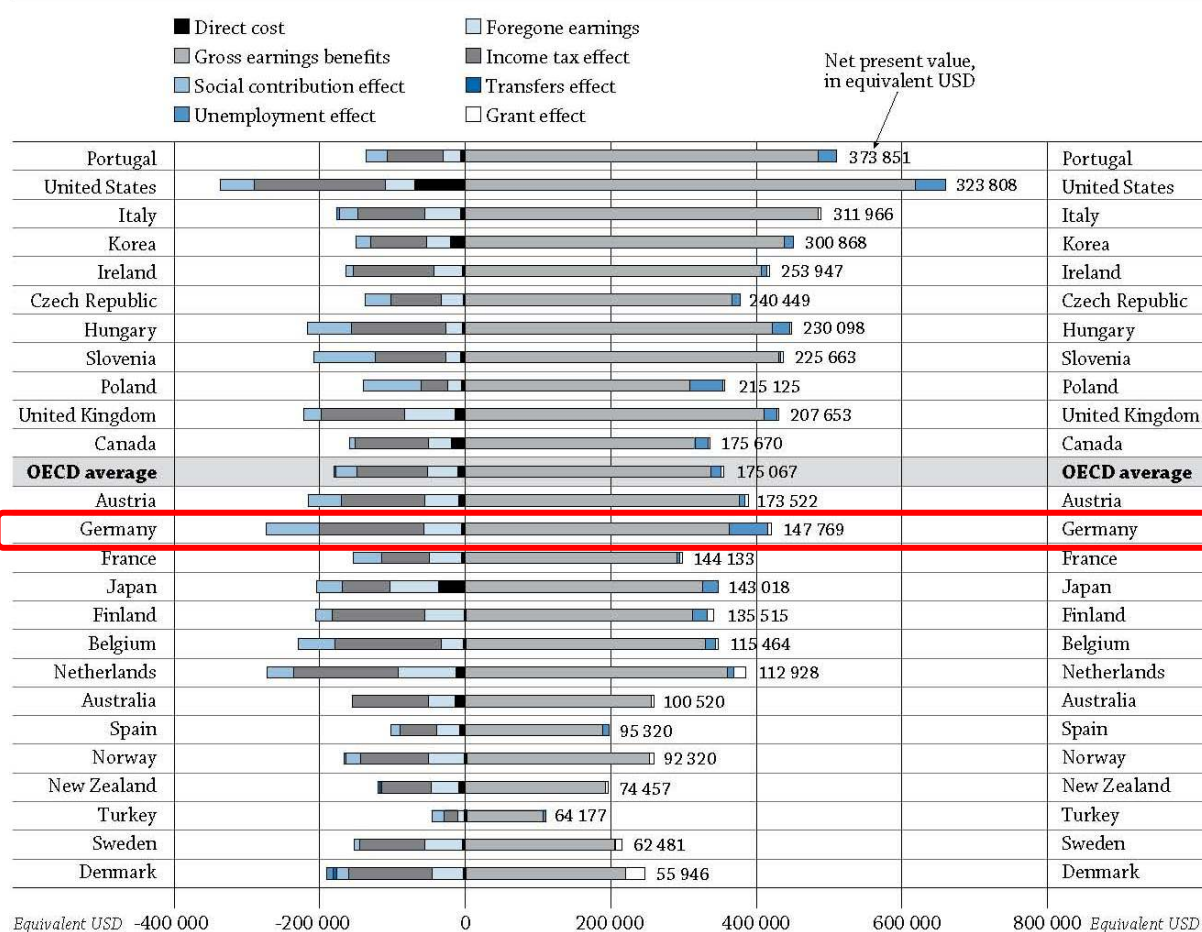
The net present value for a German man with an upper secondary education or a qualification of the dual system of apprenticeship amounts to only around USD 38 000 over his working life; compared to the OECD average of USD 78 000, it is particularly low. This is due to relatively high social contributions (USD 35 000) and transfer effect (USD 20 000). In fact, 67% of the gross earnings benefit to an average German man goes into social contributions and transfers (Table A9.1).

...while the public benefits of education in Germany are second only to those in the United States.

In Germany, the public benefit that tertiary graduates generate through higher income tax and social contributions far outweighs the public costs for tertiary education. As a result, the German taxpayer gains USD 169 000 per man and USD 85 000 per woman with a tertiary qualification over their working lives, the second highest net return for men and the seventh highest net return for women among the 25 OECD countries with available data (Table A9.4).

The public benefits of USD 57 000 per man and USD 66 000 per woman are generated through upper secondary education graduates over their working lives, much higher than the OECD average of USD 36 000 per man and USD 26 000 per woman (Table A9.2).

Chart A9.3. Components of the private net present value for a man obtaining tertiary education, ISCED 5/6 (2007 or latest available year)



Notes: Australia, Belgium and Turkey refer to 2005; Italy, the Netherlands, Poland, Portugal and the United Kingdom refer to 2006. All other countries refer to 2007.

Cashflows are discounted at a 3% interest rate.

Countries are ranked in descending order of the net present value.

Source: OECD, Table A9.3. See Annex 3 for notes (www.oecd.org/edu/eag2011).

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Spending on schools has dropped markedly since 1995...

In 1995, Germany spent 5.1% of its GDP on education; in 2008, it spent only 4.8% – significantly below the OECD average of 5.9%. As a result, Germany now ranks 30th of 36 countries with available data in terms of national income invested in education (Table B2.1).

This drop has mainly occurred in below tertiary-level education, where student numbers have declined. Indeed, annual expenditure per student is particularly low in primary education. Compared to the OECD average of USD 7 200, Germany spends only USD 5 900 (Table B1.1a) per primary student, even though experienced primary teachers in the country earn the third-highest salaries (USD 57 000) among OECD countries (Table D3.1). The result is that Germany has larger classes and fewer teachers per student, and students also have fewer hours of instruction (Table D1.1).

...but spending on tertiary education and vocational programmes remains high.

Annual expenditure per tertiary student is USD 1 700 higher than on average across OECD countries (Table B1.1a). Annual expenditure per German student in a secondary vocational or pre-vocational programme is about USD 5 000 higher than that for a student in a general secondary programme, and about USD 3 000 higher than on average across OECD countries (Table B1.6).