

Education at a Glance 2011

OECD Indicators

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COUNTRY NOTE – UNITED STATES

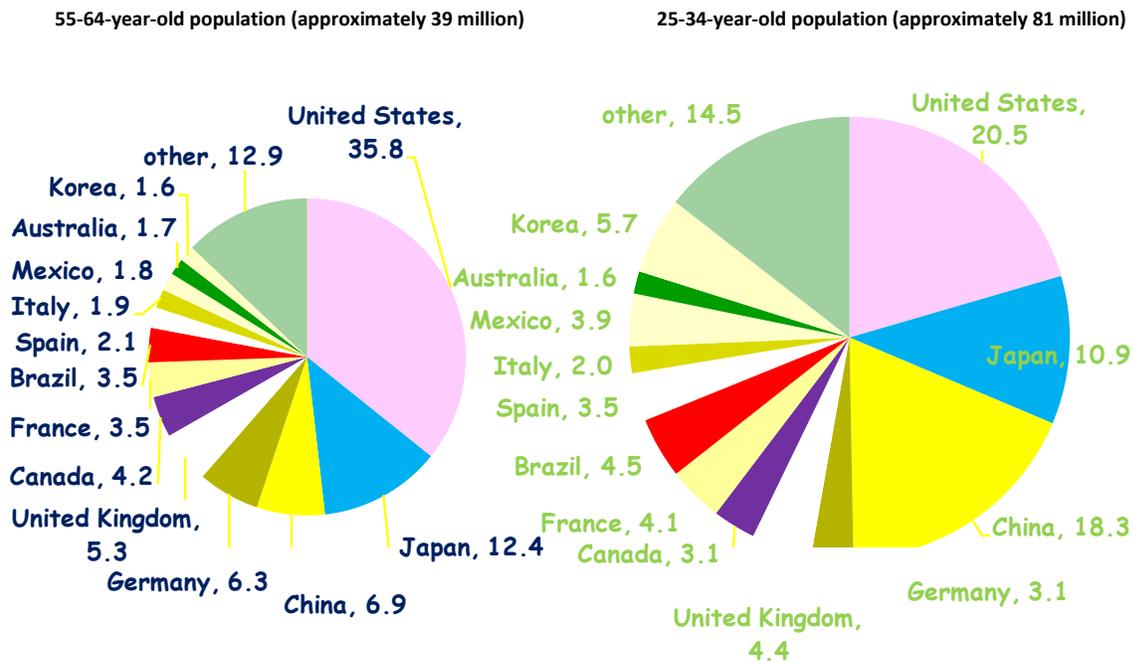
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Among the G20 countries, every fourth adult with a tertiary degree is in the U.S....

The U.S. holds close to 26% of the total pool of 255 million tertiary-educated individuals among OECD and G20 countries with comparable data; China and Japan come in second and third with a 12% and 11.5% share, respectively. However, because of the rapid expansion of tertiary education both in the industrialized world and in emerging economies, the U.S. is fast losing its advantage (Table A1.3a).

Chart 1. Countries' share of the population with tertiary attainment, percentage (2009)



...but while it was every third person in the older generation, it is only every fifth in the younger generation, because the global talent pool is changing rapidly.

The global share of the U.S. population with a tertiary degree has slipped by over 15 percentage points from 35.8% among 55-64 year-olds to 20.5% among the 25-34 year-olds who have just entered the labor market. Other countries with a significant decline in market share include Canada and Japan, with a decrease of 1 percentage point or more, and Germany, with over a 3 percentage-point decline. On the other hand, China's share of this global talent pool has expanded from 7% among the older age group to 18% among those who have just entered the labor market – just 2 percentage points below that of the U.S. Korea has seen an increase of more than 4 percentage points.

In relative terms, too, many countries have now caught up to the U.S.

Overall, the U.S. still has one of most highly educated labor forces in the OECD area. With 41% of the adult population having attained a tertiary degree, the U.S. ranks among the top five countries on this measure, and has over 10 percentage points more of its labor force with this level of education than the OECD average (30%). But much of this advantage stems from a high educational level among older age groups. The U.S. is the only country where attainment levels among those just entering the labor market (25-34 year-olds) do not exceed those about to leave the labor market (55-64 year-olds). This is why international comparisons look so different among younger age groups. Among 25-34 year-olds, the U.S. ranks 15th among 34 OECD countries in tertiary attainment (Table A1.3a).

The rate of graduation from tertiary education increased in the U.S. from 42% in 2000 to 49% in 2009. But here too the pace of the expansion has been more rapid in many other countries. On average across OECD countries, graduation rates have increased from 37% to 47%. Graduation rates from tertiary-type A (longer, theory-based) programs and advanced research programs in the U.S. also stand at the OECD average of 38% (Table A3.2).

The global increase in highly educated workers has not led to a decline in their pay, as has happened for poorly educated workers.

Tertiary education brings substantial economic benefits to individuals. On average across OECD countries, a person with a tertiary education can expect to earn over 50% more than a person with an upper secondary education. This premium is 79% in the U.S., among the highest in the OECD area (ranked 6 of 34 countries with available data) and provides a solid incentive for completing higher levels of education.

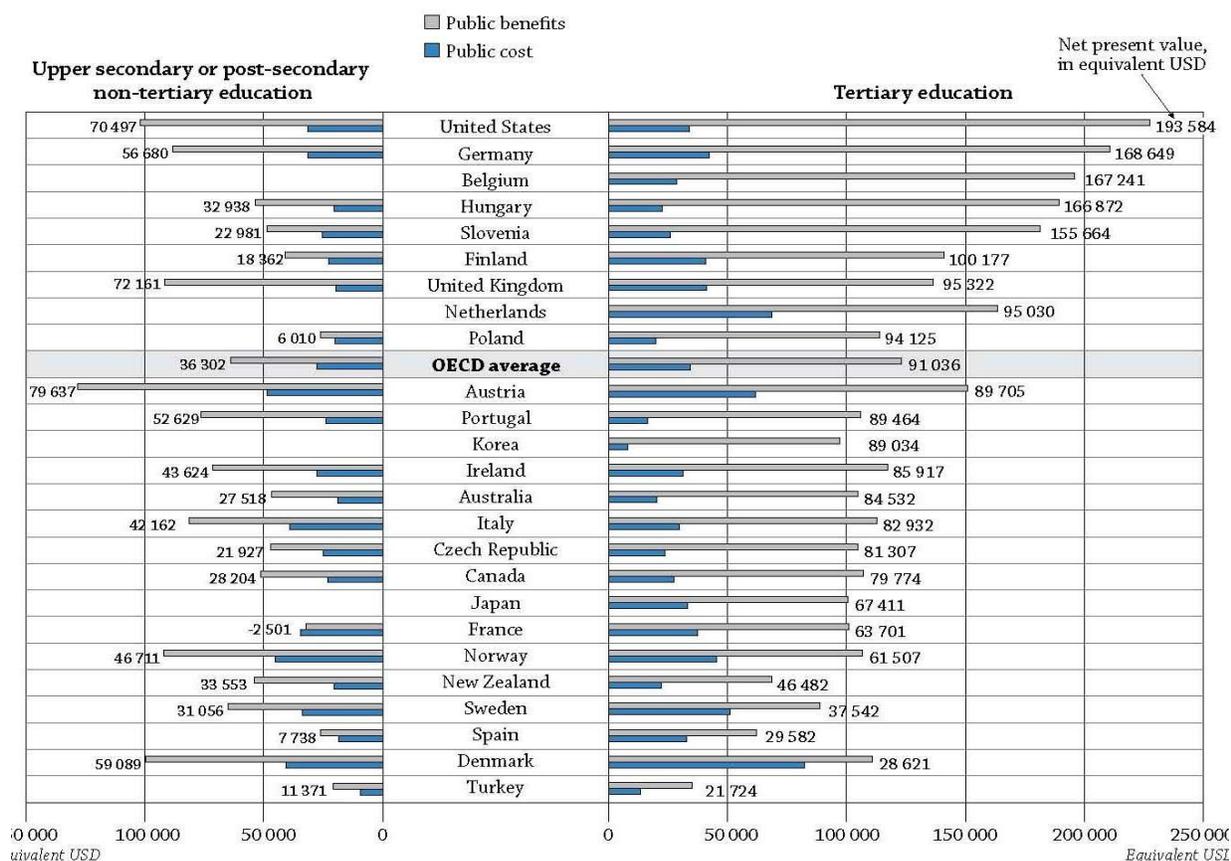
On the other hand, the penalty for not completing high school is particularly severe in the U.S.: someone who has not completed an upper secondary education can only expect to receive 64% of a high school graduate's earnings (77% on average across OECD countries). Education thus determines access to well-paid jobs more than in other OECD countries.

As in most other countries, the earnings premium for those with higher education has kept increasing in the U.S. over the past decade, suggesting that the demand for tertiary-educated workers has outstripped supply. In the U.S. the earnings premium has increased from 66% in 1999 to 79% in 2009, and the pace of the increase appears to be have intensified by the current economic crisis (Table A8.2a).

Graduates generate more public revenue in the U.S. than in any other OECD country.

The additional taxes and social contributions paid by tertiary graduates during their working life make investment in this level of education very profitable from the public perspective. The net gain over the working life of a tertiary-educated man in the U.S. is above USD 190,000 – the highest in the OECD area and well above the OECD average of USD 91,000. Among tertiary-educated women in the U.S., the net gain is close to USD 90,000, also well above the OECD average of USD 55,000 (Chart A9.5).

Chart A9.5. Public cost and benefits for a man obtaining upper secondary or post-secondary non-tertiary education and tertiary education (2007 or latest available year)



Notes: Korea is not included in the chart because of data-quality issues at that level. Japan is not included because the data at lower and upper secondary level of education are not broken down. The Netherlands are not included in the table because upper secondary education is compulsory. 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 at tertiary level of education.

Source: OECD, Tables A9.2 and A9.4. See Annex 3 for notes (www.oecd.org/edu/eag2011).

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These high returns to taxpayers are largely seen in income taxes paid by tertiary graduates, who have a particularly large earnings premium in the U.S. In addition, the public share of the direct costs for higher education is among the lowest in the OECD area. Further expanding higher education to meet labor-market demands thus makes good economic sense from a public perspective (Table A9.4).

Education also has a major impact on employment in the U.S.

Education is generally good insurance against unemployment and for staying employed in difficult economic times, and this has been particularly true in the U.S. Since the start of the recession in 2007, employment rates among those who have not completed high school have dropped by almost 6

percentage points, and stand at 52.5%. In comparison, employment rates among those with tertiary education have decreased by only 2.5 percentage points, and the overall employment rate is still above 80% (80.8%), over 28 percentage points higher than for those without a high school degree (Table A7.3a).

Unemployment rates for those without a high school education have shot up to 15.8% in 2009, more than 4 percentage points above the OECD average. Some 9.8% of those who have completed high school are unemployed (3 percentage points above OECD average), while unemployment rates have stayed below 5% (4.9%) for college graduates, just half a percentage point above the OECD average (A7.4a).

The proportion of individuals employed in full-time jobs tells a similar story: only 58% of those employed without an upper secondary education are in full time-jobs (the OECD average is 66%); 69% of those employed with an upper secondary education are in full-time employment (the OECD average is 72%); and 76% of those employed with a higher education are in full-time jobs (the OECD average is 75%) (Table A7.5).

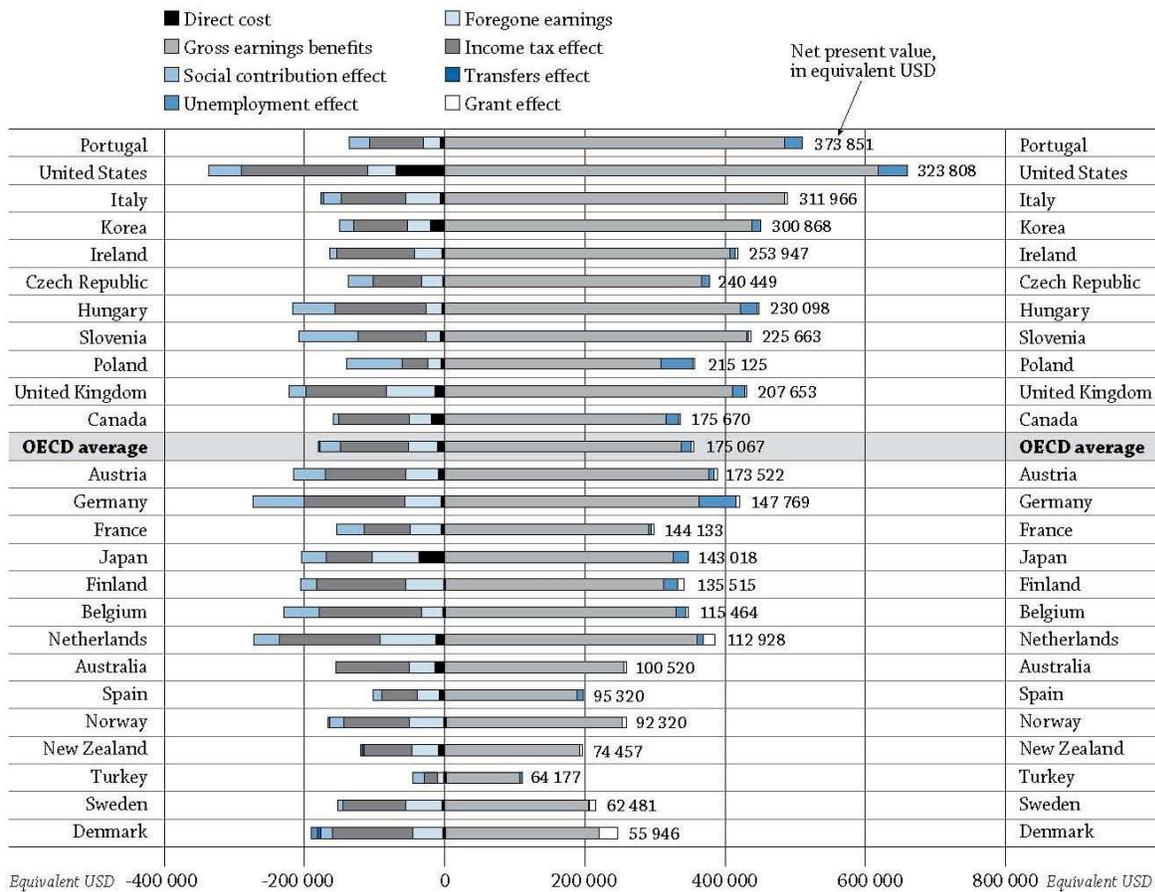
As a result, the job market in the U.S. is particularly difficult for those without a college degree. Higher-educated individuals have fared substantially better in this recession and face a job market that is no worse, on average, than in other OECD countries.

The incentives for individuals to invest in education remain strong in the U.S...

The large earnings premium and better labor-market prospects for higher-educated workers in the U.S. translate into substantial economic gains over the working life. A tertiary-educated man can expect to receive, in present value (3% discount rate), more than USD 600,000 in additional earnings over someone with an upper secondary education – the highest gross earnings amount in any OECD country and almost twice as much as the OECD average of USD 338,000.

After taking into account investment costs, additional income taxes and social contributions paid, and better employment prospects, a man with a tertiary education will still have a net gain, over his working life, of over USD 320,000 and a woman tertiary graduate can expect to have a net gain of close to USD 160,000, both well above the OECD average of USD 175,000 for men and USD 110,000 for women (Chart A9.3).

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.

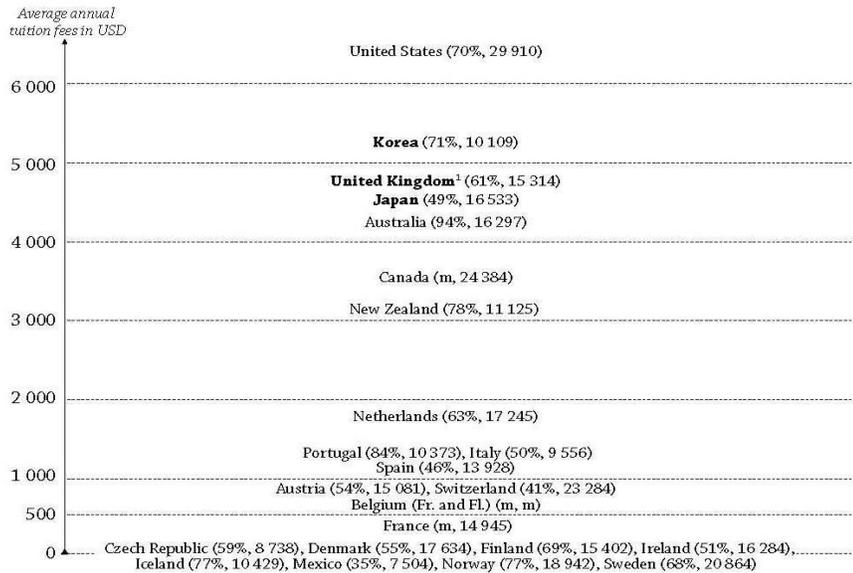
Source: OECD, Table A9.3. See Annex 3 for notes (www.oecd.org/edu/eag2011).

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...but the financial burden to acquire a college degree is heavy...

Higher education is costly, and direct costs in the U.S., such as tuition fees, are by far the highest in the OECD area. On average, a graduate can expect to spend USD 70,000 in direct costs (the OECD average is USD 11,000) and lose an additional USD 39,000 in earnings foregone while in studies. The U.S. and Japan are the only countries where the total investment costs exceed USD 100,000. On average across OECD countries, an individual can expect to invest USD 50 000 to acquire a tertiary qualification, when direct and indirect costs are taken into account (Table A9.3). Chart B5.2 shows the annual costs for student going to higher education in public institutions across OECD countries.

Chart B5.2. Average annual tuition fees charged by tertiary-type A public institutions for full-time national students, in USD converted using PPPs (academic year 2008-09)



Note: This chart does not take into account grants, subsidies or loans that partially or fully offset the student's tuition fees.

1. Public institutions do not exist at this level of education and almost all students are enrolled in government-dependent private institutions.

Source: OECD. Tables B1.1a, B5.1 and Indicator C2. See Annex 3 for notes (www.oecd.org/edu/eag2011).

Please refer to the Reader's Guide for information concerning the symbols replacing the missing data.

StatLink <http://dx.doi.org/10.1787/888932461218>

How to read this chart

This chart shows the annual tuition fees charged in equivalent USD converted using PPPs. Countries in bold indicate that tuition fees refer to public institutions but more than two-thirds of students are enrolled in private institutions. The net entry rate and expenditure per student (in USD) in tertiary-type A programmes (2008) are added next to country names.

While the public side can expect to receive these average returns, outcomes for educated workers can vary greatly, and thus investing in higher education carries substantial financial risk for the individual. The risk of a poor earnings outcome for a highly educated worker is relatively high in the U.S., where 13% of those with a higher education earn half or below half of the median salary. Only Austria, Canada and Germany have larger proportions of higher-educated workers in this low-income group (Chart A8.4).

...and financial support for students is thus more important in the U.S. than elsewhere.

Because of the large investment and uncertainty in outcomes, the decision to continue education at the tertiary level is a more difficult one to take in the U.S., particularly for young individuals from less-affluent backgrounds. To alleviate the financial burden, most countries provide loans and grants to students. Income-contingent loans and loans with low interest rates are important, as they bring more people into higher education, reduce risk, and provide access to education while still maintaining students' stake in their own investment and keeping direct costs for education under control.

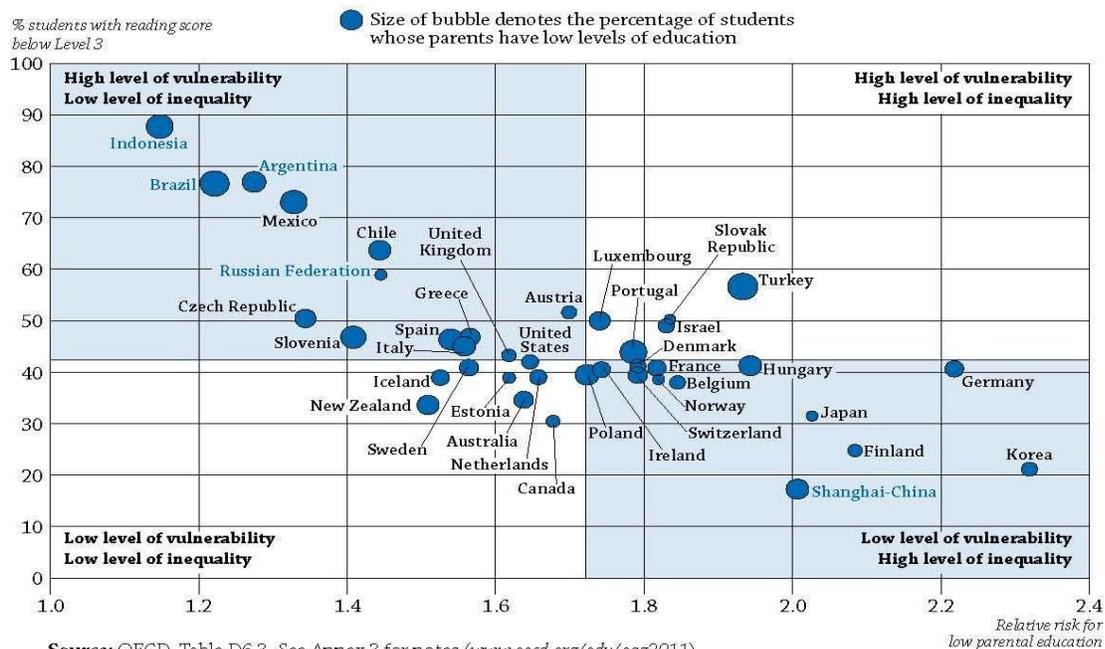
Despite the high private costs for education, public subsidies for financial aid to students in the U.S. are similar to that of other OECD countries. In the U.S., 20.3% of public expenditure is channelled to

financial aid, compared with the OECD average of 19.4% (Table B5.1). Some 15.5% of these subsidies are geared towards scholarships and grants (the OECD average is 11.4%), and only 4.8% of public expenditure is directed towards student loans (the OECD average is 8.9%).

The U.S. also faces significant challenges in the supply of future students...

With 42% of 15-year-old students scoring below proficiency Level 3 in reading (PISA 2009), it will become increasingly difficult to supply institutions of higher education with students who are able to follow and complete their studies. For most students, performing below proficiency Level 3 on the PISA reading scale means that they lack the skills necessary for secondary-level studies (Chart D6.1).

Chart D6.1. Relationship between student vulnerability and inequality associated with parental education (PISA 2009)



Source: OECD. Table D6.3. See Annex 3 for notes (www.oecd.org/edu/eag2011).
 StatLink <http://dx.doi.org/10.1787/888932462149>

How to read this chart

This chart shows the relationship between a measure of vulnerability – 15-year-old students with reading scores below Level 3 – and an indicator of inequality – the relative risk associated with parents with low levels of education. The size of the dot for each country is proportional to the percentage of students in the country whose parents have low levels of education. A country can have a low level of inequality but not necessarily a low level of vulnerability. Chile is a good example, as the relative risk associated with parents with low levels of education is relatively small (1.4), yet Chile has a relatively high percentage of students who perform poorly in reading (64%). In New Zealand, the relative risk associated with parents who have low levels of education is also small (1.5), as in Chile, but the prevalence of 15-year-olds with poor reading performance is markedly lower (34%). Also, a country may show a relatively high level of inequality, but the difference in outcomes applies to a smaller proportion of the population. Finland and Japan are good examples, as fewer than 5% of the students in these countries have parents with low levels of education.

Although many countries face a similar problem (on average across OECD countries, 42.8% of students perform below Level 3 in reading), a number of countries do substantially better in providing baseline education to all students. Fewer than a quarter of the students in Finland (24.8%) and Korea (21.2%) perform below this level, and in Shanghai-China, only 17.3% of the students fail to reach this proficiency level in reading (Table D6.3).

...as well as attracting the best students to the education profession.

Teachers in the U.S. earn substantially less than their peers with similar educational backgrounds. Salary scales are typically also less steep than in other countries. (Table D3.1). A high school teacher in the U.S. with 15 years of experience can expect to receive only 65% of the earnings of a tertiary-educated individual working in another profession, a proportion substantially below that observed in other OECD countries (85%). The relatively low wages for teachers in primary, secondary, and upper secondary education compared with the earnings of people with similar educational backgrounds in other occupations suggests that salaries alone may not attract the most talented students to the education profession in the U.S. (Table D3.2).

Making the right decisions on education is of crucial importance as higher education provides the competitive edge for the U.S...

Given their overall high cost structure, OECD countries typically face stronger competition in the lower skills segments, where products and services are easier to imitate and where production can be shifted to low-cost countries. Their pricing power is still in the high-end skills market, even if labor costs are higher. This is evident from other labor market-based indicators in *Education at a Glance*, which suggests that those with a higher education face better job prospects and increasing premiums on their educational investments. This is particularly true in the U.S.¹

Employers in the U.S. pay among the highest annual labor costs for employing a tertiary-educated individual. These costs are higher than the OECD average by USD 25,000. Only in Austria, Ireland, Italy, Luxembourg, the Netherlands and Norway do employers pay more for hiring someone with a tertiary degree.

The U.S. also has among the highest labor-cost (productivity) differentials between educational levels in the OECD area. Labor costs for higher-educated workers are USD 25,000 higher than the OECD average. Employers pay USD 7,000 more for those with an upper secondary education, but USD 2,000 less than the OECD average for those who have not completed high school (chart A10.2).

While labor costs for higher-educated workers are high in the U.S., employer contributions, income taxes and social contributions need to be paid and net income is lower. An experienced (45-54 year-old) tertiary-educated individual can expect to keep 55% of the labor costs as net income (the same as the OECD average); whereas someone of that age who has not attained an upper secondary education keeps 64% (around the OECD average of 62%). In New Zealand, Israel and Korea, higher-educated individuals keep more than 70% of labor costs (Chart A10.1).

¹ Labor costs generally reflect productivity, but they are also a function of supply and demand. One has to recognise that increasing earnings premiums due to a short supply of higher-educated individuals would eventually lead to certain high-skill segments being priced-out of the global market.

...and the high net income still makes the U.S. one of the most attractive destinations for higher-educated individuals.

Attracting higher-educated individuals from other countries is a cost-effective way of supplying the labor market with talent. High earnings, average tax rates and relatively inexpensive labor (costs) in lower skills segments make the U.S. an attractive place to live for someone with a higher education. The net purchasing power (income) for those with a higher education in the U.S. is the highest among OECD countries, with the exception of Luxembourg. A higher-educated individual has a net spending power of USD 52,000 per year in comparison with USD 32,000 on average in OECD countries. Someone with an upper secondary education, working full time, has a net income of USD 33,000 (the OECD average is USD 23,000), and a full-time worker who has not attained an upper secondary education can expect a net income of USD 23,000 (the OECD average is USD 19,000). The highest net earnings among those with low levels of education are found in Australia, Ireland, Luxembourg, the Netherlands and Norway, where an individual who has not attained an upper secondary education can expect to earn (PPP) USD 25 000 per year (Chart A10.5).

The U.S., together with other English-speaking countries, typically attracts more highly educated immigrants and/or provides the right incentives for foreign-born people to achieve higher educational attainment within the country. Between 30% and 40% of the foreign-born population in Australia, New Zealand and the United Kingdom have a tertiary education. In the U.S., 35% of the immigrant population has a tertiary degree, while in Canada and Ireland, more than 45% of the immigrant population does (Table A10.6). Considering the high level of spending power (net income) for those with higher education, the U.S. could potentially do better in attracting more highly skilled immigrants (Chart A10.6).

Although the pay is better, employees receive less job-related training.

Labor-force skills are acquired both during and beyond initial education; providing access to education and training throughout the working life is becoming increasingly important for maintaining a competitive edge and keeping people employed. A substantial portion of the adult population is educated and trained each year. Close to 50% of the adult population in the U.S. receives some education and training during a year, which is well above the OECD average of 40% and more than in Canada, Denmark and Germany (Table C5.3a).

But fewer adults participate in job-related training (non-formal education) than in other OECD countries, and only 9% of those who have not attained an upper secondary education receive this type of training. The expected number of hours of job-related training over the working life is below the OECD average across all education levels; and those without an upper secondary education can expect to receive only a third as many hours of job-related training as individuals with a similar level of education receive in other OECD countries (Table C5.1b.).