

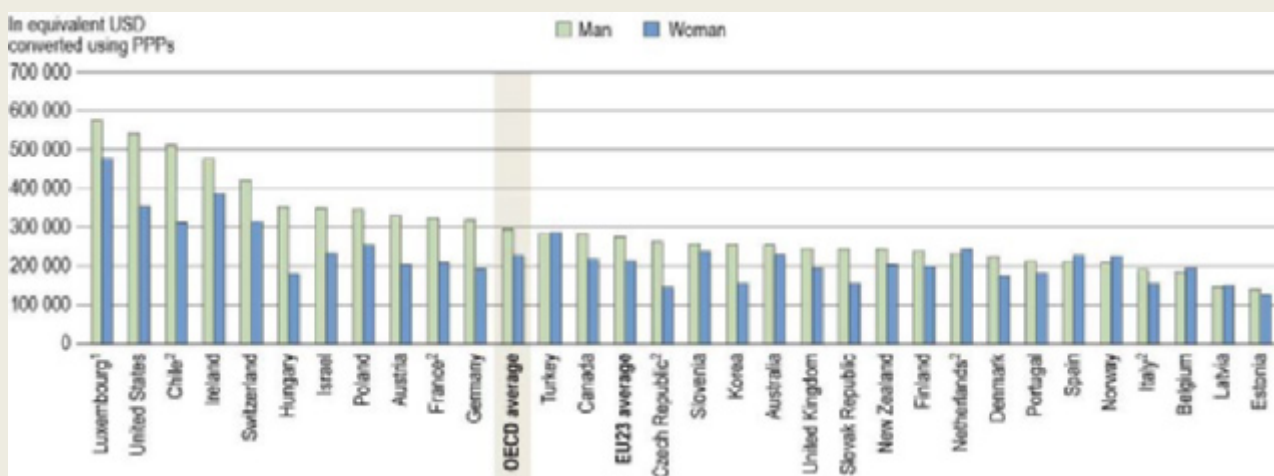
Indicator A5. What are the financial incentives to invest in education?

Highlights

- Adults who complete tertiary education benefit from high returns on investment because they are more likely to be employed and to earn more than adults without tertiary education.
- Not only does education pay off for individuals financially, but the public sector also benefits from having a large proportion of tertiary-educated individuals, for example through greater tax revenues and social contributions.
- Across OECD countries on average, a man invests around USD 45 100 (direct costs plus foregone earnings) to earn a tertiary degree, while a woman invests around USD 34 800. Because men tend to have higher earnings and employment rates, they also have higher total benefits over their career: USD 341 000 for men, compared to USD 262 400 for women.

Figure A5.1. Private net financial returns for a man or a woman attaining tertiary education (2016)

As compared with returns to upper secondary education, in equivalent USD converted using PPPs for GDP; future costs and benefits are discounted at a rate of 2%



1. Results are based on the net earnings of tertiary-educated adults (as compared with the net earnings of adults with upper secondary education).

2. Year of reference differs from 2016. Refer to the source table for details.

Countries are ranked in descending order of private net financial returns for a man.

Source: OECD (2019), Tables A5.1a and A5.1b. See *Source* section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

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Context

Investing time and money in education is an investment in human capital. Better chances of employment (see Indicator A3) and higher earnings (see Indicator A4) are strong incentives for adults to invest in education and postpone employment. Although women currently have higher levels of education than men on average (see

Indicator A1), men reap more benefits from their investment, as they have better employment and earning outcomes from education, on average.

Countries benefit from more highly educated individuals through higher revenues from taxes and social contributions paid once individuals enter the labour market. As both individuals and governments benefit from higher levels of educational attainment, it is important to consider the financial returns to education alongside other indicators, such as access to and completion of higher education (see Indicator B5).

Other factors not reflected in this indicator also affect the returns to education. The financial returns may be affected by the field of study and by the country-specific economic, labour-market and institutional context, as well as by social and cultural factors. Furthermore, returns to education are not limited to financial returns, but also include other economic outcomes, such as increased productivity, and social outcomes, such as greater participation in cultural or sport activities (see Indicator A6).

Other findings

- In most OECD countries, the main cost of tertiary education is not direct payments, such as tuition fees and living expenses, but the earnings individuals forego while they are in education. This is true even when taking students' earnings into account.
- The private benefits from investing in education depend on countries' tax and social contributions systems. For instance, in Chile, Estonia and Korea, income taxes and social contributions amount to less than one-quarter of the gross earnings benefits for a man attaining tertiary education, while in Belgium and the Netherlands they add up to more than half of the gross earnings benefits.
- For nearly all countries with available data, the private and public net financial returns from obtaining a bachelor's, master's or doctoral degree are greater than the returns from obtaining a short-cycle tertiary degree.

Note

This indicator provides information on the incentives to invest in further education by considering its costs and benefits, including net financial returns and internal rates of return. It examines the choice between pursuing higher levels of education and entering the labour market, focusing on two scenarios: 1) investing in tertiary education versus entering the labour market with an upper secondary qualification; and 2) investing in upper secondary education versus entering the labour market without an upper secondary qualification (available on line).

It considers two types of investors: 1) the individuals (referred to here as "private") who choose to pursue higher levels of education and the additional net earnings and costs they can expect; and 2) the government (referred to here as "public") that decides to invest in education and the additional revenue it would receive (e.g. as tax revenues) and the costs involved.

This indicator estimates the financial returns on investment in education only up to a theoretical retirement age of 64 and, therefore, does not take pensions into account. The direct costs of education presented in this indicator do not take into account student loans.

Please note that due to continuous improvements to this indicator's methodology, the values presented in this edition of *Education at a Glance* are not comparable with those in previous editions.

Analysis

Financial incentives for individuals to invest in tertiary education

On average across OECD countries, investing in education pays off in the long run for both men and women. The gains associated with a higher level of education that individuals can expect to receive over their career exceed the costs they bear during their studies. This is true for tertiary education, and it also holds for upper secondary education (Figure A5.1, Tables A5.1a and b, and Tables A5.4a and b, available on line).

Across OECD countries, the average private financial return from tertiary education for a man is USD 295 900. Although young women tend to be more likely to complete higher education than young men (see Indicator A1), they tend to receive lower relative net financial returns on investing in tertiary education than men. For a woman, on average, the net financial return from tertiary education is USD 227 600, representing about three-quarters of the return for a man (Figure A5.1).

The private financial returns from tertiary education are higher for men than for women in most OECD countries with available data. The only countries where women have higher private financial returns than men are Belgium, Latvia, the Netherlands, Norway, Spain and Turkey (Tables A5.1a and b). Women in these countries still faced lower earnings and employment rates than men in 2016 (Education at a Glance Database), but they gain more from attaining a tertiary degree, compared to only upper secondary education, than men do. This means that, in these countries, the gap between earnings and employment by level of educational attainment is larger for women than for men.

The generally lower returns for women can be attributed to a variety of factors, such as women's lower earnings, lower employment rates, a greater share of part-time work on average and differences in choices of field of study between men and women. The availability of affordable, high-quality early childhood education and care can also influence women's employment outcomes.

Another way to analyse returns to education is through the internal rate of return, which is the real interest rate that would equalise the costs and benefits, leading an investment to break even. It can be interpreted as the interest rate on the investment made on a higher level of education that an individual can expect to receive every year during a working-age life. On average across OECD countries, the internal rate of return to tertiary education is 17% for men and 21% for women. The higher internal rate of return for women reflects the fact that their initial investment to attain the higher level of education (in terms of foregone earnings) is lower (Tables A5.1a and b).

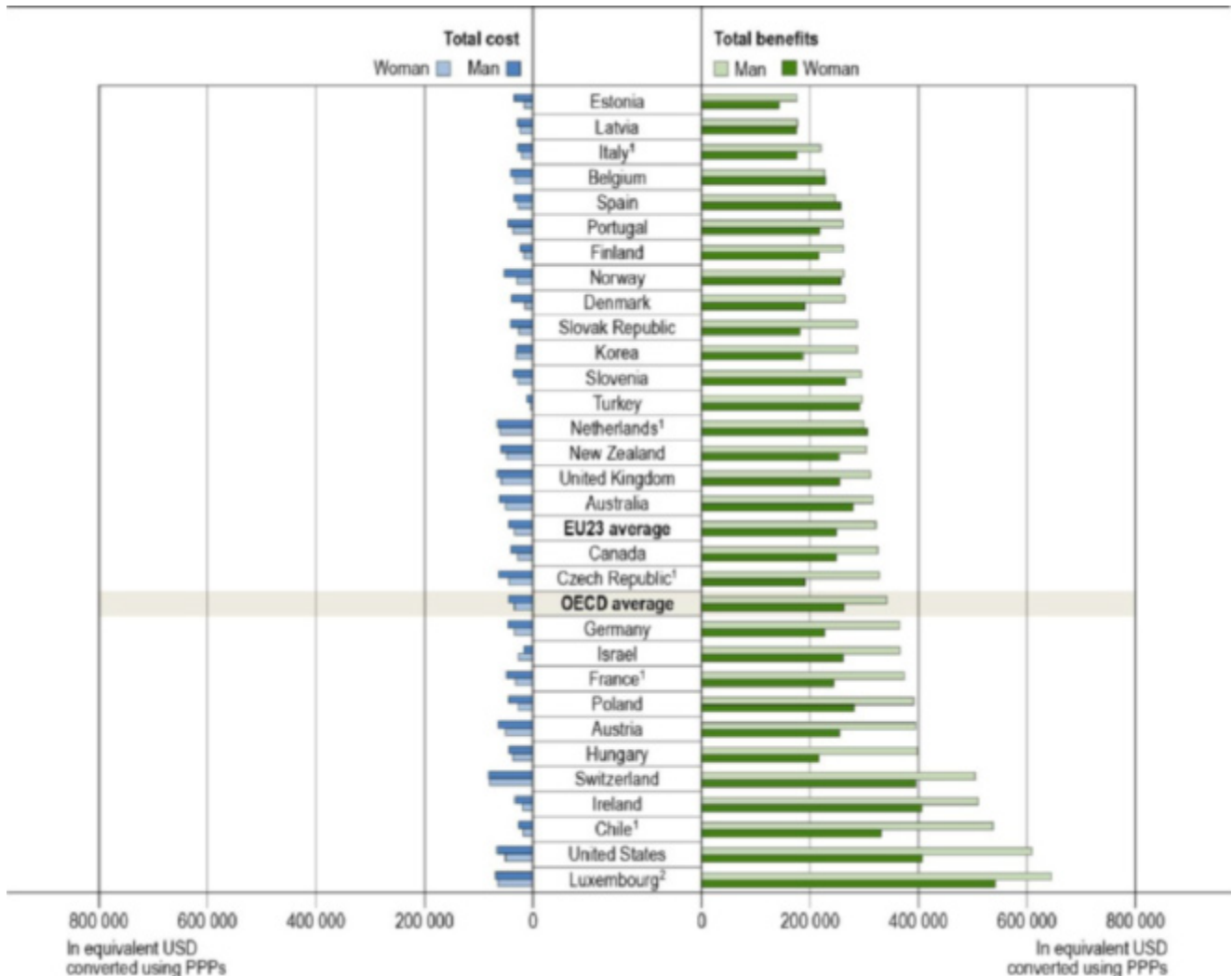
The costs and benefits of tertiary education for individuals

Private net financial returns are the difference between the costs and benefits associated with attaining an additional level of education. In this analysis, the costs include direct costs of attaining education and foregone earnings, while the benefits correspond to earnings from employment. To show the impact of the tax system on total benefits, the income tax effect and social contributions effect are also analysed (see *Definitions* section).

Total private costs (composed of direct costs and foregone earnings) generally rise with the level of education. On average across OECD countries, the total direct cost for a man or a woman of attaining tertiary education is about USD 8 400. However, in most countries, the main costs are foregone earnings, i.e. the earnings individuals could expect to receive if they decided not to pursue further education. These vary substantially across countries, depending on the length of education, earnings levels and the difference in earnings across levels of educational attainment. The current model also takes into account the fact that, in many countries, it is common for students to work while studying, thus reducing their foregone earnings and the total cost of education. Indicator A6 in *Education at a Glance 2017* (OECD, 2017^[1]) shows the prevalence of student employment and the level of student earnings across OECD and partner countries.

Figure A5.2. Private costs and benefits of education for a man or a woman attaining tertiary education (2016)

As compared with returns to upper secondary education, in equivalent USD converted using PPPs for GDP; future costs and benefits are discounted at a rate of 2%



1. Year of reference differs from 2016. Refer to the source table for details.
 2. Results are based on the net earnings of tertiary-educated adults (as compared with the net earnings of adults with upper secondary education). Countries are ranked in ascending order of total private benefits for a man.
Source: OECD (2019), Tables A5.1a and A5.1b. See Source section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

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Men’s foregone earnings while attaining tertiary education range from less than USD 10 000 in Israel and Turkey to nearly USD 70 000 in Switzerland. When direct costs and foregone earnings are combined, Turkey has the lowest total cost and Switzerland the highest of all OECD countries with available data. Men or women attaining tertiary education in Switzerland can expect their total costs to be more than seven times higher than those in Turkey (Tables A5.1a and b).

Figure A5.2 shows that the earning advantages of higher education bring considerable benefits for individuals, but how men and women benefit can depend on country-specific labour-market outcomes. On average, the total

benefit for a tertiary-educated man is USD 341 000, while the total benefit for a tertiary-educated woman is USD 262 400. This means that, over a career of 40 years, a tertiary-educated man will gain about USD 2 000 more per year in total benefits (compared to a man with only upper secondary education) than a tertiary-educated woman. This is mainly due to gender gaps in earnings (see Indicator A4), but is also related to higher inactivity and unemployment rates for women (see Indicator A3) (Tables A5.1a and b).

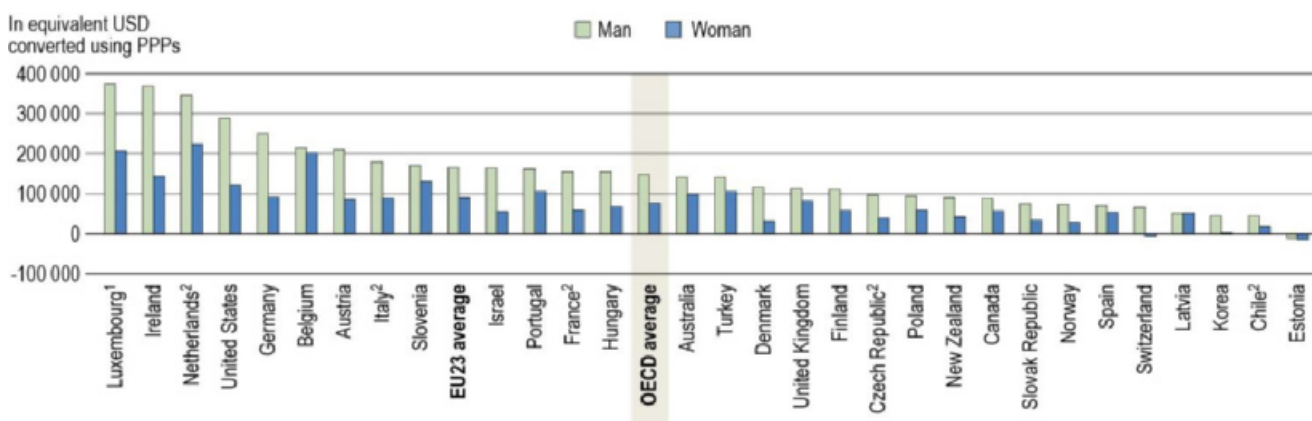
While further education yields higher earnings over the course of an individual's career, private benefits from investing in education also depend on countries' tax and social contributions systems (Brys and Torres, 2013^[2]). For instance, in Chile, Estonia and Korea, income taxes and social contributions amount to less than one-quarter of the gross earnings benefits for a man attaining tertiary education, while in Belgium and the Netherlands they add up to more than half of the gross earnings benefits. As women tend to have lower earnings, they often fall into lower income tax brackets. For example, in Ireland and Israel, the income tax and social contributions relative to gross earnings for a tertiary-educated woman are about 10 percentage points lower than for a tertiary-educated man (Tables A5.1a and b). Taxes and social contributions also relate to pensions and retirement programmes, which are not considered in this indicator.

Financial incentives for governments to invest in tertiary education

Governments are major investors in education (see Indicator C3). From a budgetary point of view, it is important to analyse whether these investments will be recovered, particularly in an era of substantial fiscal constraints. Since higher levels of educational attainment tend to translate into higher earnings (see Indicator A4), investment in education generates higher public returns, because tertiary-educated adults pay higher income taxes and social contributions. On average across OECD countries, the public net financial returns for each individual completing tertiary education are about USD 148 200 for a man and USD 77 300 for a woman (Figure A5.3).

Figure A5.3. Public net financial returns for a man or a woman attaining tertiary education (2016)

As compared with returns to upper secondary education, in equivalent USD converted using PPPs for GDP; future costs and benefits are discounted at a rate of 2%



1. Results are based on the net earnings of tertiary-educated adults (as compared with the net earnings of adults with upper secondary education).

2. Year of reference differs from 2016. Refer to the source table for details.

Countries are ranked in descending order of total public returns for a man.

Source: OECD (2019). Tables A5.2a and A5.2b. See Source section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

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The net financial returns on investment for governments are generally closely related to private returns. Countries where individuals benefit the most from pursuing tertiary education are also those where governments gain the

largest returns (Figure A5.1 and Figure A5.3). This is the case in Ireland, Luxembourg and the United States, countries with very large net financial private and public returns.

However, different tax systems can considerably affect whether public returns will follow private returns. Chile, for example, has one of the highest private returns for a man attaining tertiary education, but the second-lowest public returns because it collects a smaller share of individuals' additional earnings in the form of taxes and social contributions (Tables A5.1a and A5.2a).

The costs and benefits of tertiary education for governments

Public net financial returns are based on the difference between the costs and the benefits associated with an individual attaining an additional level of education. In this analysis, the costs include direct public costs for supporting education and foregone taxes on earnings, while the benefits are calculated using income tax and social contributions.

For governments, direct costs (including student grants) represent the largest share of total public costs for tertiary education, even though student loans are not taken into account in this indicator. This is particularly true in countries such as Denmark, Finland and Norway, where students pay low or no tuition fees and have access to generous public subsidies for higher education (see Indicator C5). The countries with high direct costs are also the countries with the largest total public costs, reaching over USD 100 000 for men in Denmark, Luxembourg, Norway and Switzerland. In contrast, Chile has the lowest total public cost (around USD 10 000 for men and women) of all OECD countries. On average across OECD countries, the total public cost for an individual to attain tertiary education is USD 58 100 for a man and USD 54 100 for a woman (Tables A5.2a and b).

Governments offset the costs of direct investment and foregone tax revenue associated with education by receiving additional tax revenue and social contributions from higher-paid workers, who often have higher educational attainment. On average, these total public benefits are USD 206 300 for a man with tertiary education and USD 131 400 for a woman (Tables A5.2a and b).

Total public benefits differ between men and women, mainly due to differences in labour-market outcomes. This suggests that governments have a role to play in easing the integration and participation of women in the labour market. On average, the total public benefits of education for a man attaining tertiary education are about 57% larger than the total public benefits for a tertiary-educated woman. Across OECD countries, Ireland, Luxembourg and the Netherlands have the largest total public benefits of tertiary education for a man (above USD 400 000) and Belgium, Luxembourg and the Netherlands have the largest benefit for a woman (above USD 250 000) (Tables A5.2a and b).

The internal rate of return to governments is higher for a man attaining tertiary education (9%) than for a woman (7%). This difference by gender is due to the fact that the public costs (i.e. public investment) are very similar for men and women while the public benefits for a man are greater than the public benefits for a woman (Tables A5.2a and b, and Tables A5.5a and b, available on line).

On average, the total public benefits (USD 206 300) for a tertiary-educated man can be broken down into income tax effects (USD 148 100) and social contribution effects (USD 58 200). For a tertiary-educated woman, the total public benefits (USD 131 400) can be broken down into USD 87 300 in income tax effects and USD 44 100 in social contribution effects (Tables A5.2a and b).

Private and public costs and benefits by level of tertiary education

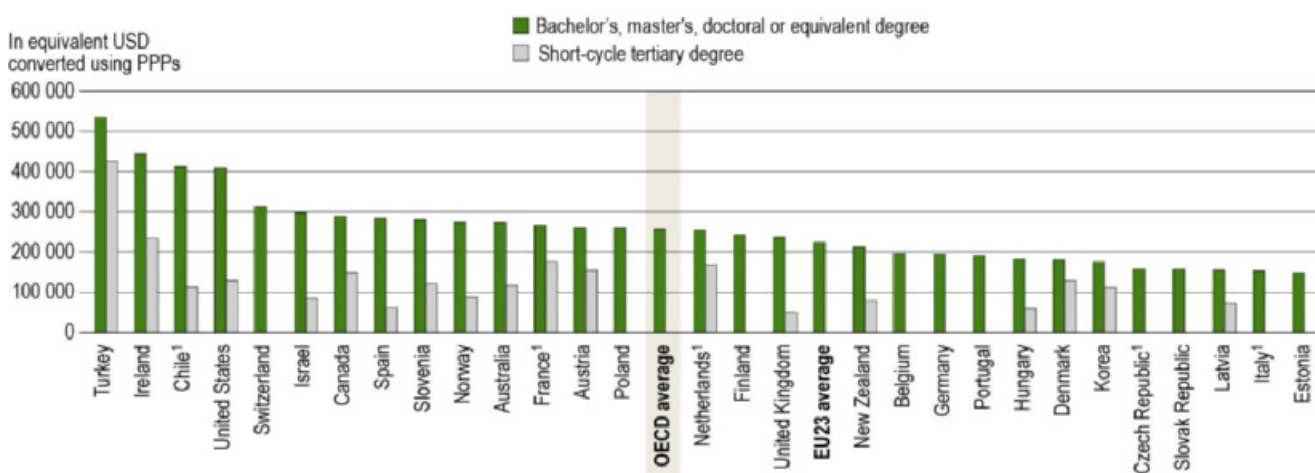
The returns for tertiary education can be broken down by level into short-cycle tertiary (ISCED 5), and bachelor's, master's and doctoral or equivalent level (ISCED 6 to 8). The composition of the population with qualifications at each tertiary level differs between countries (see Indicator A1), and the mix of qualifications can have a significant effect on the financial returns to education for tertiary education overall (Figure A5.4).

For nearly all countries with available data, the private and public net financial returns from obtaining a bachelor's, master's, doctoral or equivalent degree are greater than from obtaining a short-cycle tertiary degree. Although the total costs of a bachelor's, master's, doctoral or equivalent degree tend to be higher than those of a short-cycle tertiary degree, the total benefits accrued during individuals' working lives compensate for the higher initial costs (Tables A5.3a and b).

Turkey is the only country where both the private and public returns to a short-cycle tertiary degree are higher than for a bachelor's, master's and doctoral degree for a man. Turkey is also the OECD country with the highest share of first-time entrants to tertiary education in short-cycle tertiary programmes (48%) (see Indicator B4). The public returns for a woman attaining short-cycle tertiary education are higher than for a bachelor's, master's and doctoral degree in Denmark and Korea.

Figure A5.4. Private financial returns for a woman attaining a short-cycle tertiary degree or a bachelor's, master's and doctoral or equivalent degree (2016)

As compared with returns to upper secondary education, in equivalent USD converted using PPPs for GDP; future costs and benefits are discounted at a rate of 2%



Note: Short-cycle tertiary degree corresponds to ISCED level 5 and bachelor's, master's, doctoral or equivalent degree corresponds to ISCED levels 6, 7 and 8.

1. Year of reference differs from 2016. Refer to the source table for details.

Countries are ranked in descending order of total private returns for a woman with a bachelor's, master's, doctoral or equivalent degree.

Source: OECD (2019). Table A5.3b. See *Source* section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

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Box A5.1. The effect of the discount rate on the net financial returns to education

The calculation of the financial returns, or the net present value (NPV), of education corresponds to a cost-benefit analysis that converts future expected flows into a present value by using a discount rate. The discount rate takes into account the fact that money tomorrow is worth less than money today, and must therefore be "discounted" at a specific rate to find its current worth. The choice of the discount rate is challenging, and it will make a considerable difference when analysing the returns to long-term investments, as is the case with investment in education.

The results presented in the tables and figures of this indicator are calculated using a discount rate of 2%, based on the average real interest on government bonds across OECD countries. However, it can be argued

that education is not a risk-free investment, and that the discount rate should therefore be higher. The OECD countries that perform similar cost-benefit analysis use higher discount rates than 2%, but the rate used varies across countries (OECD, 2018^[3]).

Table A5.a. Net financial returns for a man attaining tertiary education, by discount rate (2016)

As compared with a man attaining upper secondary education, in equivalent USD converted using PPPs for GDP

	Discount rate		
	2.00%	3.75%	8.00%
Australia	254 300	152 300	41 300
Austria	330 600	179 900	30 500
Belgium	185 200	105 200	21 100
Canada	283 900	178 300	61 500
Chile ¹	511 300	330 900	133 000
Czech Republic ^{1,2}	263 500	155 100	36 400
Denmark	224 900	132 800	34 400
Estonia	140 600	85 500	23 900
Finland	238 000	149 600	53 200
France ¹	323 800	191 400	53 800
Germany	319 100	196 500	64 000
Hungary ²	353 300	229 500	87 500
Ireland	476 400	310 600	127 400
Israel	350 200	238 400	106 900
Italy ¹	190 800	99 800	12 900
Korea	256 000	163 600	62 100
Latvia	147 500	94 400	32 500
Luxembourg ^{2,3}	575 700	350 800	113 500
Netherlands ^{2,4}	233 200	136 600	31 600
New Zealand	243 800	147 200	41 900
Norway	210 100	111 800	12 300
Poland ²	345 800	218 700	76 500
Portugal ²	214 000	116 400	19 400
Slovak Republic ²	244 100	147 300	41 000
Slovenia ²	258 100	152 500	42 800
Spain	212 200	126 000	35 600
Switzerland	422 600	253 400	71 400
Turkey ²	284 600	187 900	78 600
United Kingdom	245 100	147 900	40 800
United States	542 600	346 300	128 200
OECD average	295 900	177 600	55 600
EU23 average	276 100	164 000	48 100

Note: Values are based on the difference between men who attained a tertiary education compared with those who have attained an upper secondary education. Values have been rounded to the nearest hundred.

1. Year of reference 2015.

2. The probability of students having earnings refers to the employment rate from the LSO TRANS questionnaire instead of the share of earners from the LSO Earnings questionnaire.

3. Results are based on the net earnings of tertiary-educated adults (as compared with the net earnings of adults with upper secondary education).

4. Year of reference 2014.

Source: OECD (2019). See *Source* section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

Please refer to the *Reader's Guide* for information concerning symbols for missing data and abbreviations.

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In order to assess the size of the impact of the discount rate it is helpful to perform a sensitivity analysis. Table A5.a shows how the private financial returns for a man attaining tertiary education changes when three different discount rates are used. Changing from a discount rate of 2% to a rate of 3.75% reduces the NPV by over 30% in all countries with available data. If a discount rate of 8% is used, the NPV falls by at least 70% in all countries. These comparisons highlight the sensitivity of the NPV results to changes in the discount rate.

Definitions

Adults refer to 15-64 year-olds.

Direct costs are the direct expenditure on education per student during the time spent in school. Direct cost of education does not include student loans.

- **Private direct costs** are the total expenditure by households on education. They include net payments to educational institutions as well as payments for educational goods and services outside of educational institutions (school supplies, tutoring, etc.).
- **Public direct costs** are the spending by government on a student's education. They include direct public expenditure on educational institutions, government scholarships and other grants to students and households, and transfers and payments to other private entities for educational purposes. They do not include student loans.

Foregone earnings are the net earnings an individual not in education (a non-student) can expect, minus the net earnings an individual can expect to receive while studying.

Foregone taxes are the additional tax revenues the government would have received if the individual had chosen to enter the labour force as a non-student instead of pursuing further studies.

Gross earnings benefits are the discounted sum of earnings premiums over the course of a working-age life associated with a higher level of education.

The **income tax effect** is the discounted sum of additional levels of income tax paid by the private individual or earned by the government over the course of a working-age life associated with a higher level of education.

The **internal rate of return** is the (hypothetical) real interest rate equalising the costs and benefits related to the educational investment. It can be interpreted as the interest rate an individual can expect to receive every year during a working-age life on the investment made on a higher level of education.

Levels of education: See the *Reader's Guide* at the beginning of this publication for a presentation of all ISCED 2011 levels.

Net financial returns are the net present value of the financial investment in education, the difference between the discounted financial benefits and the discounted financial cost of education, representing the additional value that education produces over and above the 2% real interest that is charged on these cash flows.

Methodology

This indicator estimates the financial returns on investment in education from the age of 15 to a theoretical retirement age of 64. Returns to education are studied from the perspective of financial investment.

Two periods are considered (Diagram 1):

1. time spent in education during which the private individual and the government pay the cost of education

- time spent after leaving formal education (or "not studying") during which the individual and the government receive the added payments associated with further education.

In calculating the returns to education, the approach taken here is the net present value of the investment. To allow direct comparisons of costs and benefits, the NPV expresses present value for cash transfers happening at different times. In this framework, costs and benefits during a working-age life are transferred back to the start of the investment. This is done by discounting all cash flows back to the beginning of the investment with a fixed interest rate (discount rate).

Diagram 1. Financial returns on investment in education over a lifetime for a representative individual



To set a value for the discount rate, long-term government bonds have been used as a benchmark. The choice of discount rate is challenging, as it should reflect not only the overall time horizon of the investment, but also the cost of borrowing or the perceived risk of the investment (Box A5.1). To allow for comparability and to facilitate the interpretation of results, the same discount rate (2%) is applied across all OECD countries. All values presented in the tables in this indicator are in NPV equivalent USD using purchasing power parities (PPPs).

Change in methodology between Education at a Glance 2019 and Education at a Glance 2018

The current model focuses on earnings from employment. The unemployment benefits and social transfers, reported in the 2018 edition, are not included in the 2019 edition. Compared to previous editions, the main changes have been the use of the employment rate (instead of a ratio based on the active population) as the probability for an individual to receive earnings and the introduction of actual students' earnings in the calculation of foregone earnings. Please see the *OECD Handbook for Internationally Comparative Education Statistics 2018* (OECD, 2018^[4]) for more information and Annex 3 for country-specific notes (<https://doi.org/10.1787/f8d7880d-en>).

Source

The source for the direct costs of education is the UOE data collection on finance (year of reference 2016 unless otherwise specified in the tables).

The data on gross earnings are based on the OECD Network on Labour Market and Social Outcomes earnings data collection, which compiles data from national Labour Force Surveys, EU Statistics on Incomes and Living Conditions, Structure of Earnings Surveys, and other national registers and surveys. Earnings are age-, gender- and attainment-level specific. For the calculation of this indicator, data on earnings have been pooled from three different years (2014-16).

Income tax data are computed using the OECD Taxing Wages model, which determines the level of taxes based on a given level of income. This model computes the level of the tax wedge on income for several household composition scenarios. For this indicator, a single worker with no children is used. For country-specific details on income tax in this model, see *Taxing Wages 2018* (OECD, 2018^[5]).

Employee social contributions are computed using the OECD Taxing Wages model's scenario of a single worker aged 40 with no children. For country-specific details on employee social contributions in this model, see *Taxing Wages 2018* (OECD, 2018^[5]).

Note regarding data from Israel

The statistical data for Israel are supplied by and are under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

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Indicator A5 Tables

Table A5.1a	Private costs and benefits for a man attaining tertiary education (2016)
Table A5.1b	Private costs and benefits for a woman attaining tertiary education (2016)
Table A5.2a	Public costs and benefits for a man attaining tertiary education (2016)
Table A5.2b	Public costs and benefits for a woman attaining tertiary education (2016)
Table A5.3a	Private/public costs and benefits for a man attaining tertiary education, by level of tertiary education (2016)
Table A5.3b	Private/public costs and benefits for a woman attaining tertiary education, by level of tertiary education (2016)

WEB Table A5.4a Private costs and benefits for a man attaining upper secondary education (2016)

WEB Table A5.4b Private costs and benefits for a woman attaining upper secondary education (2016)

WEB Table A5.5a Public costs and benefits for a man attaining upper secondary education (2016)

WEB Table A5.5b Public costs and benefits for a woman attaining upper secondary education (2016)

Cut-off date for the data: 19 July 2019. Any updates on data can be found on line at <http://dx.doi.org/10.1787/eag-data-en>. More breakdowns can also be found at <http://stats.oecd.org/>, Education at a Glance Database.

StatLink: <https://doi.org/10.1787/888933980868>

Table A5.1a. Private costs and benefits for a man attaining tertiary education (2016)

As compared with a man attaining upper secondary education, in equivalent USD converted using PPPs for GDP; future costs and benefits are discounted at a rate of 2%

OECD Countries	Direct costs (1)	Foregone earnings (2)	Total costs (3) = (1) + (2)	Earnings benefits decomposition (taking into account the employment effect)			Total benefits (7) = (4) + (5) + (6)	Net financial returns (8) = (7) + (3)	Internal rate of return (9)
				Gross earnings benefits (4)	Income tax effect (5)	Social contribution effect (6)			
Australia	- 23 900	- 38 200	- 62 100	490 000	- 173 600	0	316 400	254 300	13%
Austria	0	- 64 300	- 64 300	695 800	- 197 100	- 103 800	394 900	330 600	10%
Belgium	- 1 600	- 39 800	- 41 400	499 800	- 197 300	- 75 900	226 600	185 200	11%
Canada	- 13 800	- 27 200	- 41 000	464 000	- 122 400	- 16 700	324 900	283 900	17%
Chile ¹	- 10 500	- 15 800	- 26 300	592 400	- 13 300	- 41 500	537 600	511 300	31%
Colombia	m	m	m	m	m	m	m	m	m
Czech Republic ^{1,2}	- 4 200	- 59 600	- 63 800	472 400	- 93 100	- 52 000	327 300	263 500	12%
Denmark	0	- 39 100	- 39 100	485 500	- 221 500	0	264 000	224 900	13%
Estonia	0	- 34 500	- 34 500	220 500	- 41 900	- 3 500	175 100	140 600	13%
Finland	0	- 23 200	- 23 200	457 100	- 155 300	- 40 600	261 200	238 000	20%
France ¹	- 4 700	- 44 500	- 49 200	592 800	- 140 000	- 79 800	373 000	323 800	14%
Germany	- 3 900	- 42 400	- 46 300	705 600	- 214 100	- 126 100	365 400	319 100	16%
Greece	m	m	m	m	m	m	m	m	m
Hungary ²	- 12 100	- 32 900	- 45 000	599 000	- 89 900	- 110 800	398 300	353 300	20%
Iceland	m	m	m	m	m	m	m	m	m
Ireland	- 2 000	- 31 300	- 33 300	920 400	- 373 900	- 36 800	509 700	476 400	32%
Israel	- 8 400	- 7 400	- 15 800	553 900	- 126 000	- 61 900	366 000	350 200	40%
Italy ¹	- 3 900	- 24 700	- 28 600	436 700	- 175 000	- 42 300	219 400	190 800	10%
Japan	m	m	m	m	m	m	m	m	m
Korea	- 7 300	- 23 700	- 31 000	354 600	- 37 800	- 29 800	287 000	256 000	22%
Latvia	- 9 600	- 19 800	- 29 400	256 300	- 52 500	- 26 900	176 900	147 500	16%
Lithuania	m	m	m	m	m	m	m	m	m
Luxembourg ^{2,3}	- 2 600	- 66 400	- 69 000	1 201 900	- 402 700	- 154 500	644 700	575 700	17%
Mexico	m	m	m	m	m	m	m	m	m
Netherlands ^{2,4}	- 5 200	- 60 800	- 66 000	721 800	- 289 500	- 133 100	299 200	233 200	11%
New Zealand	- 18 500	- 40 700	- 59 200	431 400	- 128 400	0	303 000	243 800	13%
Norway	0	- 52 400	- 52 400	437 800	- 139 400	- 35 900	262 500	210 100	9%
Poland ²	- 2 600	- 42 900	- 45 500	532 100	- 45 900	- 94 900	391 300	345 800	18%
Portugal ²	- 9 700	- 36 900	- 46 600	459 300	- 148 200	- 50 500	260 600	214 000	10%
Slovak Republic ²	- 7 400	- 34 200	- 41 600	405 100	- 65 100	- 54 300	285 700	244 100	13%
Slovenia ²	- 1 100	- 34 800	- 35 900	519 100	- 110 400	- 114 700	294 000	258 100	14%
Spain	- 10 700	- 23 600	- 34 300	353 600	- 84 700	- 22 400	246 500	212 200	14%
Sweden	m	m	m	m	m	m	m	m	m
Switzerland	- 12 800	- 69 200	- 82 000	679 800	- 132 900	- 42 300	504 600	422 600	14%
Turkey ²	- 2 300	- 9 200	- 11 500	467 500	- 101 300	- 70 100	296 100	284 600	36%
United Kingdom	- 36 500	- 29 700	- 66 200	459 000	- 96 100	- 51 600	311 300	245 100	13%
United States	- 36 000	- 30 300	- 66 300	954 800	- 272 900	- 73 000	608 900	542 600	20%
OECD average	- 8 400	- 36 700	- 45 100	547 300	- 148 100	- 58 200	341 000	295 900	17%
EU23 average	- 5 900	- 39 300	- 45 200	549 700	- 159 700	- 68 700	321 300	276 100	15%

Note: Values are based on the difference between men who attained a tertiary education compared with those who have attained an upper secondary education. Values have been rounded up to the nearest hundred. Direct cost to education does not include student loans.

Due to changes in the methodology, values in this edition of *Education at a Glance* cannot be compared to results from previous editions. See *Definitions* and *Methodology* sections for more information.

1. Year of reference 2015.

2. The probability of students having earnings refers to the employment rate from the LSO TRANS questionnaire instead of the share of earners from the LSO Earnings questionnaire.

3. Results are based on the net earnings of tertiary-educated adults (as compared with the net earnings of adults with upper secondary education).

4. Year of reference 2014.

Source: OECD (2019). See *Source* section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

Please refer to the *Reader's Guide* for information concerning symbols for missing data and abbreviations.

StatLink  <https://doi.org/10.1787/888933977087>

Table A5.1b. Private costs and benefits for a woman attaining tertiary education (2016)

As compared with a woman attaining upper secondary education, in equivalent USD converted using PPPs for GDP; future costs and benefits are discounted at a rate of 2%

OECD Countries	Direct costs (1)	Foregone earnings (2)	Total costs (3) = (1) + (2)	Earnings benefits decomposition (taking into account the employment effect)			Total benefits (7) = (4) + (5) + (6)	Net financial returns (8) = (7) + (3)	Internal rate of return (9)
				Gross earnings benefits (4)	Income tax effect (5)	Social contribution effect (6)			
Australia	- 23 900	- 26 100	- 50 000	406 500	- 127 300	0	279 200	229 200	14%
Austria	0	- 50 300	- 50 300	420 900	- 86 900	- 79 900	254 100	203 800	10%
Belgium	- 1 600	- 31 500	- 33 100	485 000	- 152 700	- 103 900	228 400	195 300	18%
Canada	- 13 800	- 15 000	- 28 800	349 300	- 73 200	- 28 100	248 000	219 200	23%
Chile ¹	- 10 500	- 7 400	- 17 900	358 100	- 2 000	- 25 100	331 000	313 100	37%
Colombia	m	m	m	m	m	m	m	m	m
Czech Republic ^{1,2}	- 4 200	- 40 800	- 45 000	270 200	- 50 400	- 29 700	190 100	145 100	10%
Denmark	0	- 14 200	- 14 200	311 600	- 122 000	0	189 600	175 400	26%
Estonia	0	- 16 000	- 16 000	180 700	- 34 900	- 2 900	142 900	126 900	22%
Finland	0	- 16 500	- 16 500	356 400	- 108 000	- 32 300	216 100	199 600	27%
France ¹	- 4 700	- 28 100	- 32 800	362 400	- 67 500	- 51 500	243 400	210 600	19%
Germany	- 3 900	- 30 000	- 33 900	402 500	- 92 800	- 83 200	226 500	192 600	14%
Greece	m	m	m	m	m	m	m	m	m
Hungary ²	- 12 100	- 24 800	- 36 900	325 300	- 48 800	- 60 200	216 300	179 400	14%
Iceland	m	m	m	m	m	m	m	m	m
Ireland	- 2 000	- 16 700	- 18 700	586 200	- 155 900	- 24 900	405 400	386 700	57%
Israel	- 8 400	- 18 500	- 26 900	340 400	- 45 900	- 33 600	260 900	234 000	24%
Italy ¹	- 3 900	- 17 000	- 20 900	300 700	- 97 100	- 28 500	175 100	154 200	13%
Japan	m	m	m	m	m	m	m	m	m
Korea	- 7 300	- 24 400	- 31 700	212 900	- 8 200	- 17 900	186 800	155 100	20%
Latvia	- 9 600	- 14 100	- 23 700	251 600	- 50 800	- 26 400	174 400	150 700	19%
Lithuania	m	m	m	m	m	m	m	m	m
Luxembourg ^{2,3}	- 2 600	- 62 100	- 64 700	928 800	- 268 400	- 119 600	540 800	476 100	20%
Mexico	m	m	m	m	m	m	m	m	m
Netherlands ^{2,4}	- 5 200	- 56 300	- 61 500	600 900	- 194 100	- 101 900	304 900	243 400	13%
New Zealand	- 18 500	- 30 100	- 48 600	330 700	- 77 600	0	253 100	204 500	16%
Norway	0	- 30 100	- 30 100	376 300	- 89 400	- 30 900	256 000	225 900	18%
Poland ²	- 2 600	- 24 700	- 27 300	379 700	- 31 000	- 67 700	281 000	253 700	22%
Portugal ²	- 9 700	- 26 900	- 36 600	358 700	- 101 200	- 39 500	218 000	181 400	12%
Slovak Republic ²	- 7 400	- 19 300	- 26 700	253 800	- 38 000	- 34 300	181 500	154 800	13%
Slovenia ²	- 1 100	- 26 800	- 27 900	447 900	- 83 000	- 99 000	265 900	238 000	16%
Spain	- 10 700	- 17 200	- 27 900	346 300	- 68 800	- 21 600	255 900	228 000	18%
Sweden	m	m	m	m	m	m	m	m	m
Switzerland	- 12 800	- 67 600	- 80 400	496 300	- 70 100	- 30 900	395 300	314 900	14%
Turkey ²	- 2 300	- 2 000	- 4 300	425 200	- 70 600	- 63 800	290 800	286 500	62%
United Kingdom	- 36 500	- 22 400	- 58 900	367 500	- 71 100	- 42 300	254 100	195 200	13%
United States	- 36 000	- 15 400	- 51 400	580 800	- 130 200	- 44 400	406 200	354 800	20%
OECD average	- 8 400	- 26 400	- 34 800	393 800	- 87 300	- 44 100	262 400	227 600	21%
EU23 average	- 5 900	- 27 800	- 33 700	396 900	- 96 200	- 52 500	248 200	214 500	19%

Note: Values are based on the difference between women who attained a tertiary education compared with those who have attained an upper secondary education. Values have been rounded up to the nearest hundred. Direct cost to education does not include student loans.

Due to changes in the methodology, values in this edition of *Education at a Glance* cannot be compared to results from previous editions. See *Definitions and Methodology* sections for more information.

1. Year of reference 2015.

2. The probability of students having earnings refers to the employment rate from the LSO TRANS questionnaire instead of the share of earners from the LSO Earnings questionnaire.

3. Results are based on the net earnings of tertiary-educated adults (as compared with the net earnings of adults with upper secondary education).

4. Year of reference 2014.

Source: OECD (2019). See *Source* section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

Please refer to the *Reader's Guide* for information concerning symbols for missing data and abbreviations.

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Table A5.2a. Public costs and benefits for a man attaining tertiary education (2016)

As compared with a man attaining upper secondary education, in equivalent USD converted using PPPs for GDP; future costs and benefits are discounted at a rate of 2%

	Direct costs	Foregone taxes on earnings	Total costs	Earnings benefits decomposition (taking into account the employment effect)		Total benefits	Net financial returns	Internal rate of return
				Income tax effect	Social contribution effect			
				(1)	(2)			
OECD Countries								
Australia	-24 100	-8 200	-32 300	173 600	0	173 600	141 300	12%
Austria	-68 300	-22 400	-90 700	197 100	103 800	300 900	210 200	7%
Belgium	-54 000	-4 200	-58 200	197 300	75 900	273 200	215 000	10%
Canada	-41 500	-9 100	-50 600	122 400	16 700	139 100	88 500	7%
Chile ¹	-8 800	-1 200	-10 000	13 300	41 500	54 800	44 800	12%
Colombia	m	m	m	m	m	m	m	m
Czech Republic ^{1,2}	-30 200	-17 500	-47 700	93 100	52 000	145 100	97 400	8%
Denmark	-81 500	-24 200	-105 700	221 500	0	221 500	115 800	5%
Estonia	-48 900	-7 800	-56 700	41 900	3 500	45 400	-11 300	1%
Finland	-74 600	-10 400	-85 000	155 300	40 600	195 900	110 900	6%
France ¹	-51 800	-12 500	-64 300	140 000	79 800	219 800	155 500	8%
Germany	-71 100	-19 900	-91 000	214 100	126 100	340 200	249 200	9%
Greece	m	m	m	m	m	m	m	m
Hungary ²	-28 600	-16 600	-45 200	89 900	110 800	200 700	155 500	12%
Iceland	m	m	m	m	m	m	m	m
Ireland	-37 000	-4 500	-41 500	373 900	36 800	410 700	369 200	17%
Israel	-23 700	-200	-23 900	126 000	61 900	187 900	164 000	16%
Italy ¹	-34 900	-2 600	-37 500	175 000	42 300	217 300	179 800	9%
Japan	m	m	m	m	m	m	m	m
Korea	-20 100	-2 300	-22 400	37 800	29 800	67 600	45 200	8%
Latvia	-19 800	-7 800	-27 600	52 500	26 900	79 400	51 800	9%
Lithuania	m	m	m	m	m	m	m	m
Luxembourg ^{2,3}	-171 600	-12 300	-183 900	402 700	154 500	557 200	373 300	8%
Mexico	m	m	m	m	m	m	m	m
Netherlands ^{2,4}	-59 100	-16 400	-75 500	289 500	133 100	422 600	347 100	11%
New Zealand	-31 000	-7 200	-38 200	128 400	0	128 400	90 200	9%
Norway	-82 500	-20 000	-102 500	139 400	35 900	175 300	72 800	4%
Poland ²	-31 800	-14 200	-46 000	45 900	94 900	140 800	94 800	8%
Portugal ²	-32 100	-4 600	-36 700	148 200	50 500	198 700	162 000	10%
Slovak Republic ²	-35 700	-8 600	-44 300	65 100	54 300	119 400	75 100	7%
Slovenia ²	-38 300	-17 100	-55 400	110 400	114 700	225 100	169 700	9%
Spain	-35 200	-1 400	-36 600	84 700	22 400	107 100	70 500	7%
Sweden	m	m	m	m	m	m	m	m
Switzerland	-96 500	-13 000	-109 500	132 900	42 300	175 200	65 700	4%
Turkey ²	-28 800	-2 000	-30 800	101 300	70 100	171 400	140 600	12%
United Kingdom	-26 500	-8 300	-34 800	96 100	51 600	147 700	112 900	11%
United States	-47 900	-9 400	-57 300	272 900	73 000	345 900	288 600	14%
OECD average	-47 900	-10 200	-58 100	148 100	58 200	206 300	148 200	9%
EU23 average	-51 600	-11 700	-63 300	159 700	68 700	228 400	165 100	9%

Note: Values are based on the difference between men who attained a tertiary education compared with those who have attained an upper secondary education. Values have been rounded up to the nearest hundred. Direct cost to education does not include student loans. Due to changes in the methodology, values in this edition of *Education at a Glance* cannot be compared to results from previous editions. See *Definitions and Methodology* sections for more information.

1. Year of reference 2015.

2. The probability of students having earnings refers to the employment rate from the LSO TRANS questionnaire instead of the share of earners from the LSO Earnings questionnaire.

3. Results are based on the net earnings of tertiary-educated adults (as compared with the net earnings of adults with upper secondary education).

4. Year of reference 2014.

Source: OECD (2019). See *Source* section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

Please refer to the *Reader's Guide* for information concerning symbols for missing data and abbreviations.

StatLink  <https://doi.org/10.1787/888933977125>

Table A5.2b. Public costs and benefits for a woman attaining tertiary education (2016)

As compared with a woman attaining upper secondary education, in equivalent USD converted using PPPs for GDP; future costs and benefits are discounted at a rate of 2%

	Direct costs	Foregone taxes on earnings	Total costs	Earnings benefits decomposition (taking into account the employment effect)		Total benefits	Net financial returns	Internal rate of return
				Income tax effect	Social contribution effect			
				(1)	(2)			
OECD Countries								
Australia	-24 100	-4 300	-28 400	127 300	0	127 300	98 900	12%
Austria	-68 300	-13 400	-81 700	86 900	79 900	166 800	85 100	5%
Belgium	-54 000	-1 100	-55 100	152 700	103 900	256 600	201 500	12%
Canada	-41 500	-3 200	-44 700	73 200	28 100	101 300	56 600	7%
Chile ¹	-8 800	-600	-9 400	2 000	25 100	27 100	17 700	8%
Colombia	m	m	m	m	m	m	m	m
Czech Republic ^{1,2}	-30 200	-10 500	-40 700	50 400	29 700	80 100	39 400	5%
Denmark	-81 500	-9 000	-90 500	122 000	0	122 000	31 500	3%
Estonia	-48 900	-3 500	-52 400	34 900	2 900	37 800	-14 600	0%
Finland	-74 600	-7 800	-82 400	108 000	32 300	140 300	57 900	5%
France ¹	-51 800	-8 000	-59 800	67 500	51 500	119 000	59 200	6%
Germany	-71 100	-13 200	-84 300	92 800	83 200	176 000	91 700	6%
Greece	m	m	m	m	m	m	m	m
Hungary ²	-28 600	-12 500	-41 100	48 800	60 200	109 000	67 900	7%
Iceland	m	m	m	m	m	m	m	m
Ireland	-37 000	-400	-37 400	155 900	24 900	180 800	143 400	12%
Israel	-23 700	-700	-24 400	45 900	33 600	79 500	55 100	9%
Italy ¹	-34 900	-1 800	-36 700	97 100	28 500	125 600	88 900	7%
Japan	m	m	m	m	m	m	m	m
Korea	-20 100	-2 300	-22 400	8 200	17 900	26 100	3 700	3%
Latvia	-19 800	-5 200	-25 000	50 800	26 400	77 200	52 200	9%
Lithuania	m	m	m	m	m	m	m	m
Luxembourg ^{2,3}	-171 600	-10 500	-182 100	268 400	119 600	388 000	205 900	6%
Mexico	m	m	m	m	m	m	m	m
Netherlands ^{2,4}	-59 100	-13 300	-72 400	194 100	101 900	296 000	223 600	10%
New Zealand	-31 000	-4 700	-35 700	77 600	0	77 600	41 900	6%
Norway	-82 500	-8 600	-91 100	89 400	30 900	120 300	29 200	3%
Poland ²	-31 800	-8 000	-39 800	31 000	67 700	98 700	58 900	7%
Portugal ²	-32 100	-3 300	-35 400	101 200	39 500	140 700	105 300	9%
Slovak Republic ²	-35 700	-2 700	-38 400	38 000	34 300	72 300	33 900	5%
Slovenia ²	-38 300	-12 900	-51 200	83 000	99 000	182 000	130 800	8%
Spain	-35 200	-1 400	-36 600	68 800	21 600	90 400	53 800	6%
Sweden	m	m	m	m	m	m	m	m
Switzerland	-96 500	-11 800	-108 300	70 100	30 900	101 000	-7 300	2%
Turkey ²	-28 800	-300	-29 100	70 600	63 800	134 400	105 300	11%
United Kingdom	-26 500	-5 200	-31 700	71 100	42 300	113 400	81 700	11%
United States	-47 900	-5 000	-52 900	130 200	44 400	174 600	121 700	9%
OECD average	-47 900	-6 200	-54 100	87 300	44 100	131 400	77 300	7%
EU23 average	-51 600	-7 200	-58 800	96 200	52 500	148 700	89 900	7%

Note: Values are based on the difference between women who attained a tertiary education compared with those who have attained an upper secondary education. Values have been rounded up to the nearest hundred. Direct cost to education does not include student loans.

Due to changes in the methodology, values in this edition of *Education at a Glance* cannot be compared to results from previous editions. See *Definitions and Methodology* sections for more information.

1. Year of reference 2015.

2. The probability of students having earnings refers to the employment rate from the LSO TRANS questionnaire instead of the share of earners from the LSO Earnings questionnaire.

3. Results are based on the net earnings of tertiary-educated adults (as compared with the net earnings of adults with upper secondary education).

4. Year of reference 2014.

Source: OECD (2019). See *Source* section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

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StatLink  <https://doi.org/10.1787/888933977144>

Table A5.3a. Private/public costs and benefits for a man attaining tertiary education, by level of tertiary education (2016)

As compared with a man attaining upper secondary education, in equivalent USD converted using PPPs for GDP; future costs and benefits are discounted at a rate of 2%

OECD Countries	Short-cycle tertiary (ISCED 5)						Bachelor's, master's and doctoral or equivalent level (ISCED 6 to 8)					
	Private			Public			Private			Public		
	Total costs	Total benefits	Net financial returns	Total costs	Total benefits	Net financial returns	Total costs	Total benefits	Net financial returns	Total costs	Total benefits	Net financial returns
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	- 22 300	135 400	113 100	- 9 900	60 400	50 500	- 77 300	375 300	298 000	- 42 500	210 600	168 100
Austria	- 54 300	264 200	209 900	- 77 200	204 600	127 400	- 69 400	562 600	493 200	- 97 900	420 200	322 300
Belgium	m	m	m	m	m	m	- 41 900	228 500	186 600	- 59 300	275 900	216 600
Canada	- 27 100	193 800	166 700	- 31 500	79 900	48 400	- 46 300	428 400	382 100	- 58 700	191 900	133 200
Chile ¹	- 17 500	189 500	172 000	- 4 500	15 400	10 900	- 44 500	684 600	640 100	- 18 800	73 300	54 500
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Czech Republic ^{1,2}	m	m	m	m	m	m	- 63 600	340 400	276 800	- 47 500	151 000	103 500
Denmark	- 18 000	128 700	110 700	- 48 600	86 700	38 100	- 41 600	295 400	253 800	- 112 400	258 100	145 700
Estonia	a	a	a	a	a	a	- 34 500	200 600	166 100	- 56 700	52 000	- 4 700
Finland	a	a	a	a	a	a	- 23 200	298 900	275 700	- 85 000	228 200	143 200
France ¹	- 24 200	208 100	183 900	- 32 700	102 700	70 000	- 56 000	489 600	433 600	- 72 500	302 700	230 200
Germany	m	m	m	m	m	m	- 46 500	392 800	346 300	- 91 400	362 700	271 300
Greece	a	a	a	a	a	a	m	m	m	m	m	m
Hungary ²	- 30 100	163 600	133 500	- 20 900	82 400	61 500	- 45 500	404 600	359 100	- 46 400	203 900	157 500
Iceland	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	- 20 800	223 600	202 800	- 25 800	154 600	128 800	- 36 600	597 500	560 900	- 45 500	498 800	453 300
Israel	- 4 200	147 600	143 400	- 6 700	41 800	35 100	- 21 900	465 900	444 000	- 32 900	264 400	231 500
Italy ¹	m	m	m	m	m	m	- 28 600	219 500	190 900	- 37 600	217 300	179 700
Japan	m	m	m	m	m	m	m	m	m	m	m	m
Korea	- 18 700	191 300	172 600	- 8 400	37 100	28 700	- 34 800	309 800	275 000	- 27 700	76 000	48 300
Latvia	- 21 000	95 500	74 500	- 21 700	41 700	20 000	- 32 100	185 100	153 000	- 29 500	82 900	53 400
Lithuania	a	a	a	a	a	a	m	m	m	m	m	m
Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m
Mexico	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands ^{1,3}	- 31 800	200 000	168 200	- 29 600	215 600	186 000	- 66 400	309 800	243 400	- 75 900	444 000	368 100
New Zealand	- 39 500	161 300	121 800	- 18 100	57 000	38 900	- 64 900	325 500	260 600	- 44 600	140 200	95 600
Norway	- 29 400	107 000	77 600	- 43 000	80 300	37 300	- 53 400	351 500	298 100	- 105 100	230 200	125 100
Poland ²	m	m	m	m	m	m	- 45 500	405 700	360 200	- 46 000	145 900	99 900
Portugal ²	m	m	m	m	m	m	- 46 600	273 500	226 900	- 36 900	210 300	173 400
Slovak Republic ²	m	m	m	m	m	m	- 42 400	289 700	247 300	- 45 200	121 000	75 800
Slovenia ²	- 21 500	167 600	146 100	- 14 900	117 500	102 600	- 38 200	341 800	303 600	- 63 800	270 500	206 700
Spain	- 13 900	128 100	114 200	- 17 400	46 500	29 100	- 41 200	286 400	245 200	- 42 400	131 400	89 000
Sweden	m	m	m	m	m	m	m	m	m	m	m	m
Switzerland	m	m	m	m	m	m	- 83 100	504 100	421 000	- 111 000	175 100	64 100
Turkey ²	- 6 500	505 100	498 600	- 17 300	301 300	284 000	- 13 700	468 000	454 300	- 36 600	280 600	244 000
United Kingdom	- 53 500	143 600	90 100	- 17 400	66 100	48 700	- 68 200	359 100	290 900	- 36 400	176 400	140 000
United States	- 37 400	151 700	114 300	- 32 300	70 300	38 000	- 83 000	732 800	649 800	- 71 800	426 800	355 000
OECD average	m	m	m	m	m	m	- 48 000	383 700	335 700	- 57 900	228 400	170 500
EU23 average	m	m	m	m	m	m	- 45 700	341 100	295 400	- 59 400	239 600	180 200

Note: Values are based on the difference between men who attained a tertiary education compared with those who have attained an upper secondary education. Values have been rounded up to the nearest hundred. Direct cost to education does not include student loans.

Due to changes in the methodology, values in this edition of *Education at a Glance* cannot be compared to results from previous editions. See *Definitions* and *Methodology* sections for more information.

1. Year of reference 2015.

2. The probability of students having earnings refers to the employment rate from the LSO TRANS questionnaire instead of the share of earners from the LSO Earnings questionnaire.

3. Year of reference 2014.

Source: OECD (2019). See *Source* section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

Please refer to the *Reader's Guide* for information concerning symbols for missing data and abbreviations.

StatLink  <https://doi.org/10.1787/888933977163>

Table A5.3b. Private/public costs and benefits for a woman attaining tertiary education, by level of tertiary education (2016)

As compared with a woman attaining upper secondary education, in equivalent USD converted using PPPs for GDP; future costs and benefits are discounted at a rate of 2%

	Short-cycle tertiary (ISCED 5)						Bachelor's, master's and doctoral or equivalent level (ISCED 6 to 8)					
	Private			Public			Private			Public		
	Total costs	Total benefits	Net financial returns	Total costs	Total benefits	Net financial returns	Total costs	Total benefits	Net financial returns	Total costs	Total benefits	Net financial returns
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD Countries												
Australia	- 16 700	134 600	117 900	- 8 000	52 200	44 200	- 63 800	337 500	273 700	- 38 100	155 800	117 700
Austria	- 42 600	197 500	154 900	- 69 600	116 300	46 700	- 54 400	315 000	260 600	- 88 200	220 300	132 100
Belgium	m	m	m	m	m	m	- 33 500	229 900	196 400	- 56 300	257 400	201 100
Canada	- 19 000	168 500	149 500	- 27 600	57 000	29 400	- 32 500	321 100	288 600	- 52 100	138 200	86 100
Chile ¹	- 11 100	124 000	112 900	- 4 000	9 300	5 300	- 31 000	444 000	413 000	- 17 800	39 700	21 900
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Czech Republic ^{1,2}	m	m	m	m	m	m	- 44 900	203 100	158 200	- 40 500	85 900	45 400
Denmark	- 6 500	135 900	129 400	- 41 700	83 000	41 300	- 15 100	195 500	180 400	- 96 300	126 500	30 200
Estonia	a	a	a	a	a	a	- 16 000	164 600	148 600	- 52 400	43 400	- 9 000
Finland	a	a	a	a	a	a	- 16 500	259 600	243 100	- 82 400	175 800	93 400
France ¹	- 15 300	191 100	175 800	- 30 300	89 400	59 100	- 37 800	305 000	267 200	- 67 600	154 100	86 500
Germany	m	m	m	m	m	m	- 34 200	229 700	195 500	- 84 600	179 000	94 400
Greece	a	a	a	a	a	a	m	m	m	m	m	m
Hungary ²	- 24 700	84 300	59 600	- 18 200	42 500	24 300	- 37 300	220 100	182 800	- 42 200	110 800	68 600
Iceland	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	- 11 700	246 600	234 900	- 23 300	75 200	51 900	- 20 600	464 500	443 900	- 41 100	229 400	188 300
Israel	- 9 400	93 900	84 500	- 6 900	12 900	6 000	- 34 700	332 800	298 100	- 33 400	110 900	77 500
Italy ¹	m	m	m	m	m	m	- 20 900	175 200	154 300	- 36 800	125 700	88 900
Japan	m	m	m	m	m	m	m	m	m	m	m	m
Korea	- 19 100	131 100	112 000	- 8 400	14 800	6 400	- 35 500	210 700	175 200	- 27 700	32 800	5 100
Latvia	- 17 300	90 400	73 100	- 20 000	38 100	18 100	- 25 800	181 100	155 300	- 26 700	80 400	53 700
Lithuania	a	a	a	a	a	a	m	m	m	m	m	m
Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m
Mexico	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands ^{1,2}	- 29 500	197 200	167 700	- 28 000	126 400	98 400	- 61 900	316 800	254 900	- 72 800	317 700	244 900
New Zealand	- 32 300	111 300	79 000	- 16 400	26 900	10 500	- 53 300	267 100	213 800	- 41 900	83 800	41 900
Norway	- 17 500	105 500	88 000	- 36 900	52 400	15 500	- 30 600	304 900	274 300	- 93 500	142 500	49 000
Poland ²	m	m	m	m	m	m	- 27 300	287 600	260 300	- 39 800	101 100	61 300
Portugal ²	m	m	m	m	m	m	- 36 600	227 800	191 200	- 35 600	148 700	113 100
Slovak Republic ²	m	m	m	m	m	m	- 27 300	185 100	157 800	- 39 300	73 800	34 500
Slovenia ²	- 16 800	139 800	123 000	- 12 500	87 000	74 500	- 29 700	310 600	280 900	- 59 300	218 300	159 000
Spain	- 10 600	72 900	62 300	- 17 400	15 200	- 2 200	- 33 900	318 300	284 400	- 42 400	120 500	78 100
Sweden	m	m	m	m	m	m	m	m	m	m	m	m
Switzerland	m	m	m	m	m	m	- 81 500	394 800	313 300	- 109 700	100 900	- 8 800
Turkey ²	- 2 400	427 900	425 500	- 16 400	231 900	215 500	- 5 200	540 800	535 600	- 34 600	286 000	251 400
United Kingdom	- 48 500	99 800	51 300	- 15 200	48 200	33 000	- 60 800	297 900	237 100	- 33 300	132 900	99 600
United States	- 29 000	159 400	130 400	- 29 800	55 900	26 100	- 64 400	474 200	409 800	- 66 300	215 300	149 000
OECD average	m	m	m	m	m	m	- 36 800	293 600	256 800	- 53 500	145 100	91 600
EU23 average	m	m	m	m	m	m	- 33 400	257 200	223 800	- 54 600	152 700	98 100

Note: Values are based on the difference between women who attained a tertiary education compared with those who have attained an upper secondary education. Values have been rounded up to the nearest hundred. Direct cost to education does not include student loans.

Due to changes in the methodology, values in this edition of *Education at a Glance* cannot be compared to results from previous editions. See *Definitions* and *Methodology* sections for more information.

1. Year of reference 2015.

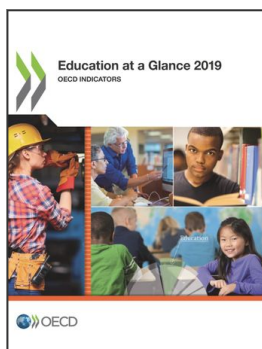
2. The probability of students having earnings refers to the employment rate from the LSO TRANS questionnaire instead of the share of earners from the LSO Earnings questionnaire.

3. Year of reference 2014.

Source: OECD (2019). See *Source* section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

Please refer to the *Reader's Guide* for information concerning symbols for missing data and abbreviations.

StatLink  <https://doi.org/10.1787/888933977182>



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