

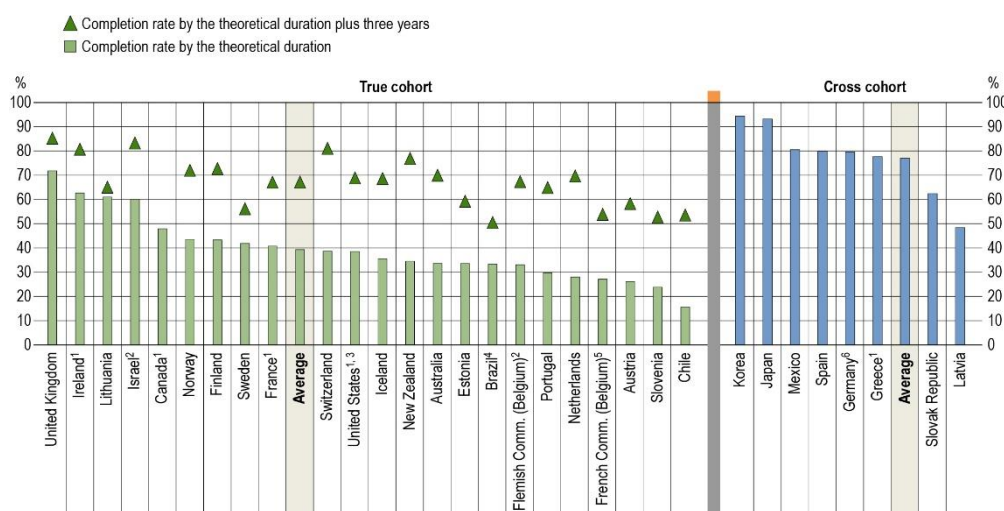
EDUCATION
AT A GLANCE 2019

Education at a Glance: OECD Indicators (OECD, 2019^[1]) is the authoritative source for information on the state of education around the world. It provides data on the structure, finances and performance of education systems in the 36 OECD countries and a number of partner countries.

Brazil

- **About 33% of students who enter a bachelor's programme in Brazil graduate within the programme's theoretical duration**, below the average of 39% for countries with available data. The completion rate after three additional years increases to 50%, still below the average of 67%.
- **Young women in Brazil are 42% more likely to have attained tertiary education than men**, although they are less likely to be employed.
- Although Brazil spends an above-average percentage of its gross domestic product (GDP) on education, **spending per student on primary to upper secondary levels is well below the OECD average**.
- **Enrolment of children under the age of three in early childhood education has increased considerably, from 10% in 2012 to 23% in 2017**, although it remains below the OECD average of 36%.
- **Average teachers' salaries in Brazil are lower than in most OECD countries** in purchasing power parity terms, and at least 13% lower than the average earnings of tertiary-educated workers in the country.

Figure 1. Completion rate of full-time students who entered a bachelor's or equivalent programme (2017)



Note: For countries with true cohort data, the completion includes students who transferred and graduated from another tertiary level.

1. Year of reference differs from 2017. Refer to the source table for details.

2. Completion rate of students who entered a bachelor's programme does not include students who transferred and graduated from short-cycle programmes.

3. The theoretical duration plus 3 years refers to the theoretical duration plus 2 years.

4. Data do not include entrants to 6-year bachelor's programmes, which correspond to about 2% of total entrants at this level.

5. Data refer only to the hautes écoles (HE) and the écoles des arts (ESA), representing about 60% of entrants to bachelor's or equivalent programmes.

6. Data refer to estimated completion rates based on a modelled relationship between future graduates and students still enrolled.

Countries and economies are ranked in descending order of completion rate by theoretical duration (true cohort) or cross cohort.

Source: OECD (2019), Table B5.1. See Source section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

Despite expansion in recent years, Brazil's tertiary education sector faces challenges

- About 18% of adults (25-64 year olds) in Brazil have attained tertiary education. This is similar to the attainment rate in Mexico, but well below other Latin American countries such as Argentina (36%), Chile (25%), Colombia (23%) and Costa Rica (23%). In OECD countries, the average tertiary attainment rate is 39%, over twice that of Brazil. Over the past decade, however, there has been a considerable increase in tertiary attainment among the younger generation (25-34 year-olds), from 11% in 2008 to 21% in 2018.
- Increasing tertiary attainment requires both increased access and high completion rates – both of which are relatively low in Brazil. In 2017, only 15% of 20-29 year-olds were enrolled in tertiary education in Brazil, compared to 22% on average across OECD countries. Moreover, those who enter tertiary education in Brazil are less likely to complete it than in most OECD countries with available data. Only 33% of students who enter a bachelor's programme in Brazil graduate within its theoretical duration (4 or 5 years, depending on the programme), compared to an average of 39% among countries with available data (Figure 1). After three additional years, the completion rate increases to 50%, still below the average of 67%. Of the remaining students who have not graduated within this timeframe, about one-third are still enrolled in tertiary education and two-thirds have left the system without graduating.
- Those who do attain tertiary education in Brazil tend to graduate from a bachelor's programme, and very few pursue a master's or doctoral degree, although bachelor's degrees in Brazil tend to be longer than their equivalents in Europe or North America. Only 0.8% of 25-64 year-olds in Brazil have attained a master's degree, well below all OECD countries and the OECD average of 13%. Only about 0.2% have attained a doctorate, just over one-fifth the OECD average of 1.1%.
- Over three-quarters of bachelor's students in Brazil attend private universities, in stark contrast to most OECD countries, where this is the case for less than one-third of students. It also stands in contrast to all other levels of education in Brazil: over 80% of primary to upper secondary students attend public institutions. Brazilian public universities are free of charge, whereas private universities charge a wide range of tuition fees. The dominance of fee-paying private provision, and the limited number of places in free public institutions, creates a complex environment for policy makers seeking to ensure that access to tertiary education is not hindered by students' socio-economic status.
- Public tertiary institutions tend to have more teaching resources than private ones. In 2017, there were 42 students per teaching staff member in private tertiary institutions – the highest ratio among all OECD and partner countries and over 2.5 times the OECD average of 16. Meanwhile, there were only 11 students per teaching staff in public institutions, one of the lowest ratios across OECD countries and below the OECD average of 15. This difference may be at least partially explained by the fact that public universities in Brazil undertake most of the research in the country, thus requiring more academic staff (Clarivate Analytics, 2018^[21]). Over 80% of master's and doctoral students in the country are enrolled in public institutions, and these programmes naturally have a low ratio of students to teaching staff.
- Public spending in public tertiary institutions increased by 19% between 2010 and 2016. Nevertheless, spending per student in public institutions in Brazil was still below average in 2016, at USD 14 200,¹ compared to the OECD average of USD 16 100. Direct spending on public institutions represented about 1.0% of the country's GDP in 2016, slightly above the OECD average of 0.9%, and 16% higher than in 2010 (Figure 2). When public spending outside education institutions, such as transfers to households, is also included, tertiary education accounts for 1.4% of GDP, again above the OECD average of 1.2%.
- As in most OECD countries, the most common broad field of study at tertiary level in Brazil is business, administration and law, which accounts for 33% of recent graduates. The second most popular is education with 20% of graduates, double the OECD average. The distribution of fields of study changes

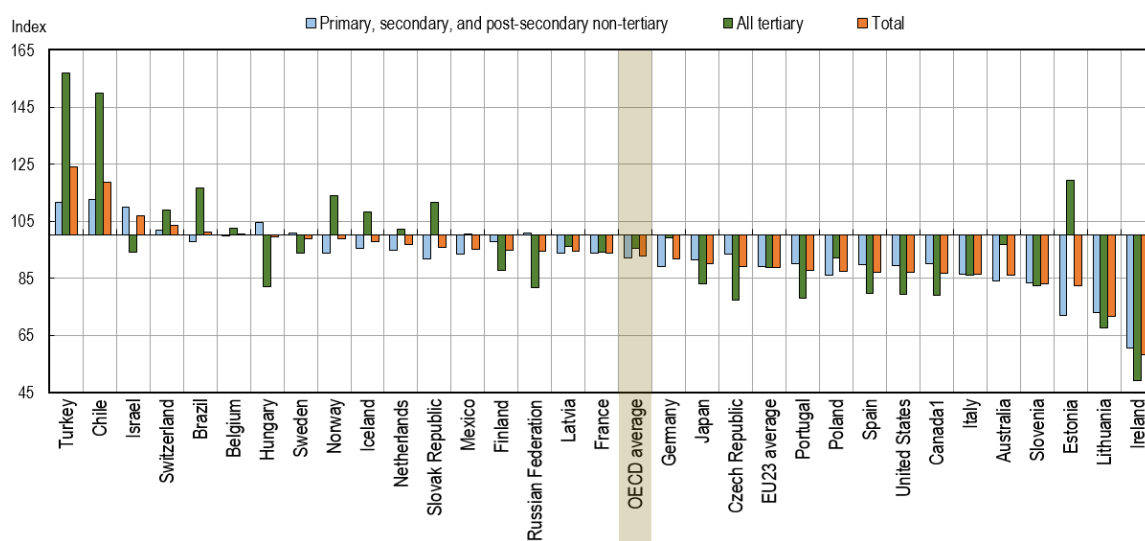
¹ Values reported in equivalent US dollars (USD) have been converted using purchasing power parities (PPPs) for GDP.

considerably at doctoral level where the most popular field is health and welfare, which accounts for 19% of graduates (OECD average: 17%). This is followed by natural sciences, mathematics and statistics (15%); and engineering, manufacturing and construction (14%).

- The Brazilian tertiary education system is one of the least internationalised of all OECD and partner countries. Only 0.2% of tertiary students in Brazil are foreign, compared to the total of 6% mobile or foreign students across OECD countries. Between 2010 and 2017, the share of international or foreign students increased in nearly all OECD countries, but remained stable in Brazil. Moreover, only about 0.6% of Brazilian tertiary students are enrolled abroad, less than half the OECD total of 1.6%.

Figure 2. Index of change in public expenditure on educational institutions as a percentage of GDP (2010 and 2016)

Final source of funds, by level of education, reference year 2010 = 100



1. Primary education includes pre-primary programmes.

Countries are ranked in descending order of the index of change in total expenditure on educational institutions as a percentage of GDP.

Source: OECD/UIS/Eurostat (2019), Table C2.4, available on line. See Source section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

While the gender gap in education increasingly favours women, the situation in the labour market is reversed

- Women in Brazil (25-64 year-olds) are 34% more likely to have a tertiary education than men. This is one of the widest gender gaps in educational attainment across OECD and partner countries, and it is widening among younger generations. While older women (55-64 year-olds) are 16% more likely to have a tertiary education than men in this age group, the share rises to 42% among 25-34 year-olds. Women have even become the majority at doctoral level, where they were under-represented among older generations in Brazil and continue to be under-represented in many OECD countries. In 2017, 54% of the doctoral graduates in Brazil were women, compared to 47% in total across OECD countries.
- A tertiary education is associated with better employment outcomes for both men and women, but in Brazil the advantage is particularly large for women. In 2018, about 82% of tertiary-educated young women (25-34 year-olds) were employed, compared to 63% of those with upper secondary education and only 45% of those without upper secondary education. This employment advantage is above the OECD average, and considerably larger than for their male counterparts. Employment rates among

young men in Brazil range from 89% for those with tertiary education, to 84% for those with upper secondary education and 76% for those without upper secondary education. Although women are less likely to be employed than men at all levels of educational attainment, the gender gap is thus considerably wider among those with lower levels of educational attainment.

- Overall, the gender gaps within tertiary fields of study in Brazil follow similar patterns to most OECD countries: women are significantly over-represented in the fields of education and social sciences, journalism and information while men are over-represented in the fields of information and communication technologies (ICT) and engineering, manufacturing and construction. The most popular broad field of study at tertiary level for both men and women in Brazil is business, administration and law, as is the case on average across OECD countries. The second most popular field, however, varies by gender. In Brazil, 25% of female graduates chose to study education, while 19% of male graduates chose engineering, manufacturing and construction.
- The over-representation of women in the field of education is reflected in the gender imbalance of the teaching profession. As in most OECD and partner countries, women make up the majority of the teaching workforce in Brazil from pre-primary (95% of teachers) to upper secondary education (59% of teachers). However, unlike on average across OECD countries, the gender gap is narrowing among younger teachers in Brazil. While men make up only 8% of primary teachers aged 50 or over, they make up 18% of those under the age of 30. At the tertiary level, women are still under-represented among the teaching staff, although less so than on average across OECD countries. Women make up 46% of professors in Brazil, compared to 44% on average and the gender gap at this level is also narrowing among younger adults in Brazil.

From pre-primary to secondary education, spending per student and teachers' salaries are comparatively low

- In 2016, the Brazilian government spent 4.2% of its GDP on primary, secondary and post-secondary non-tertiary education, above the OECD average of 3.2%. This spending accounted for 10.5% of total government expenditure, again above the OECD average of 7.9%. Public expenditure on these levels of education has remained nearly the same as it was in 2010, while GDP increased by 2% and total government expenditure increased by 5%. As a result, spending as a percentage of GDP and total government expenditure fell by equivalent amounts (2% and 5% respectively).
- Nevertheless, because of the country's relatively low GDP per capita and the below-average share of total government expenditure in relation to GDP, the absolute amount spent per student at these levels is less than half the OECD average. In 2016, the government spent about USD 3 800 per primary student (OECD average: USD 8 600), USD 3 700 per lower secondary student (OECD average: USD 10 200) and USD 4 100 per upper secondary and post-secondary non-tertiary student (OECD average: USD 10 000).
- Teachers' compensation usually accounts for the largest share of expenditure per student, so the relatively low spending per student in Brazil is reflected in low teachers' salaries. Average actual salaries in Brazil range from USD 22 500 for pre-primary teachers to USD 23 900 for upper secondary ones, well below the OECD averages which range from USD 36 200 at pre-primary level to USD 45 800 at upper secondary. Teachers' salaries in Brazil are also lower than for other tertiary-educated workers in the country. Upper secondary teachers, for example, earn 13% less than the average wage of tertiary-educated workers in the country (OECD average: 7% less). Unsurprisingly, higher salaries are rated as a highly important spending priority for nearly 93% of lower secondary teachers in Brazil – the highest share of all countries participating in the OECD Teaching and Learning International Survey (TALIS) and well above the OECD average of 64% (OECD, 2019^[3]).

Participation in vocational education – both at upper secondary and post-secondary levels – is still relatively low

- Provision of upper secondary vocational education in Brazil is limited. In 2017, only about 8% of students graduating from upper secondary education for the first time obtained a vocational qualification. This is the second lowest share across OECD member and partner countries and well below the OECD average of 40%.
- Admission into upper secondary vocational programmes in Brazil is often selective. As a result, upper secondary vocational programmes in Brazil have very different characteristics to those in most OECD countries. First, unlike all OECD countries with available data, disadvantaged students² in Brazil are significantly less likely to enrol in vocational programmes than advantaged ones (OECD, 2016^[4]). Second, Brazil is one of very few countries participating in the Programme for International Student Assessment (PISA) where students enrolled in vocational programmes score significantly higher in science than those from general programmes – in fact, the difference in favour of vocational students is higher in Brazil than in any other PISA-participating country with available data. Third, 57% of upper secondary vocational graduates in Brazil are female, compared to under 50% in most OECD countries (OECD average: 46%).
- Upper secondary vocational programmes also have better student-teacher ratios than general programmes. There are, on average, 26 students per teacher in upper secondary general programmes in Brazil – the highest student-teacher ratio of all OECD member and partner countries and double the OECD average of 13. Meanwhile, there are only 13 students per teacher in vocational upper secondary programmes, below the OECD average of 14. No other OECD member or partner country has such a large difference in teaching resources in favour of vocational programmes.
- The most popular broad fields of study among upper secondary vocational graduates in Brazil are business, administration and law (22%) and engineering, manufacturing and construction (18%). These are also the two most popular fields of study on average across OECD countries, but the distribution of students in Brazil is more evenly spread across fields. A considerable share of students also graduate in the fields of education (16%) and ICT (15%) – both well above the respective OECD averages of 1% and 4%.
- Vocational programmes can also provide a route for adults to gain qualifications or learn new skills and competencies. Brazil offers vocational programmes specifically geared towards adult education at both upper secondary and post-secondary levels. Some 0.5% of the population aged 25 or over are participating in either upper secondary or post-secondary vocational programmes, below the OECD average of 0.8%. In countries with strong vocational provision, such as Australia and Finland, this share reaches 4%. Nevertheless, Brazil has a comparatively large share of the adult population participating in formal education, including those in below upper secondary and tertiary programmes. In total, about 8% of 30-39 year-olds (OECD average: 7%) and 3% of 40-64 year-olds (OECD average: 2%) are enrolled in formal education in Brazil.

Participation in early childhood education has increased considerably

- Research has shown that the development of highly important competencies such as emotional control, social skills, language and numeracy, peak in the first three years of a child's life. In Brazil, enrolment of children under the age of three in early childhood education and care (ECEC) jumped from 10% in 2012 to 23% in 2017, although it remains below the OECD average of 36%. Enrolment among 3-5 year-olds

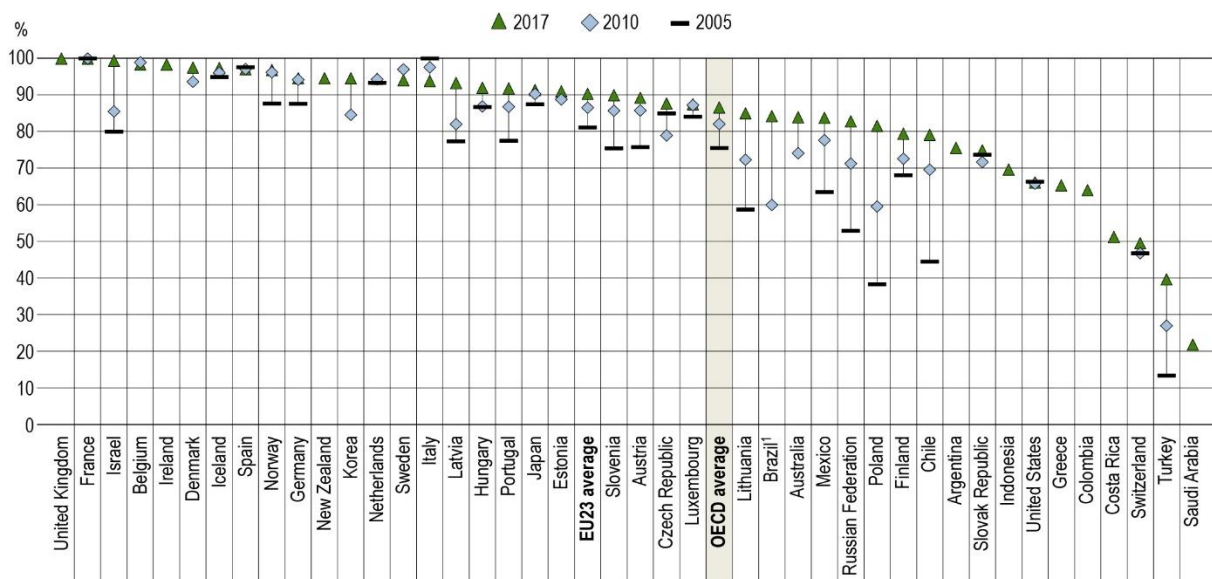
² As defined in PISA, a socio-economically disadvantaged student is a student in the bottom quarter of the distribution of the PISA index of economic, social and cultural status (ESCS) within his or her country/economy.

also increased considerably, from 60% in 2012 to 84% in 2017, close to the OECD average of 87% (Figure 3). Among 5-6 year-olds, enrolment in either ECEC or primary education is largely universal.

- Provision of ECEC is mostly public in Brazil – 72% of enrolled children attend public institutions, compared to 66% on average across OECD countries. These institutions have about 18 children per teacher, compared to 16 children per teacher in private institutions and 14 children per teacher on average across OECD countries.

Figure 3. Change in enrolment rates of children aged 3 to 5 years (2005, 2010 and 2017)

Early childhood education (ISCED 0) and primary education



Note: Countries are ranked in descending order of the enrolment rates of 3-5 year-olds in 2017.

1. Year of reference 2012 instead of 2010

Source: OECD (2019), Table B2.2. See Source section for more information and Annex 3 for notes (<https://doi.org/10.1787/f8d7880d-en>).

- As in most OECD countries, teachers must formally have attained at least a bachelor's degree to teach in early childhood education. However, Brazil also makes extensive use of teachers' aides, who only need an upper secondary qualification. In early childhood development programmes (*creches*), 40% of contact staff are teachers' aides. This brings the child-staff ratio down: while there are 14 children for every teacher, there are only 8 children per contact staff member (teachers and teachers' aides).
- Sustained public financial support is critical for the growth and quality of ECEC programmes. In 2016, the Brazilian government spent about 0.7% of its GDP on early childhood education, in line with the OECD average. However, given the country's lower GDP per capita, spending per child is only USD 3 700, one of the lowest across OECD countries and less than half the OECD average of USD 7 800.

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For more information on Education at a Glance 2019 and to access the full set of Indicators, visit www.oecd.org/education/education-at-a-glance-19991487.htm.

Updated data can be found on line at <http://dx.doi.org/10.1787/eag-data-en> and by following the *StatLinks*  under the tables and charts in the publication.

Explore, compare and visualise more data and analysis using: 

<http://gpseducation.oecd.org/CountryProfile?primaryCountry=BRA&treshold=10&topic=EO>.

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On 25 May 2018, the OECD Council invited Colombia to become a Member. While Colombia is included in the OECD averages reported in this note, at the time of its preparation, Colombia was in the process of completing its domestic procedures for ratification and the deposit of Colombia's instrument of accession to the OECD Convention was pending.

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.

Key Facts for Brazil in Education at a Glance 2019

Source	Main topics in <i>Education at a Glance</i>	Brazil		OECD average	
Tertiary education					
Educational attainment of 25-64 year-olds					
Table A1.1	Short-cycle tertiary	**		7%	
	Bachelor's or equivalent	17%		17%	
	Master's or equivalent	1%		13%	
	Doctoral or equivalent	0%		1%	
Tertiary attainment of 25-34 year-olds, by gender					
Table A1.2		2008	2018	2008	2018
	Men	9%	18%	31%	38%
	Women	13%	25%	40%	51%
	Total	11%	21%	35%	44%
Distribution of first-time tertiary entrants by education level					
Table B4.1	Short-cycle tertiary	**		17%	
	Bachelor's or equivalent	**		76%	
	Master's or equivalent	**		7%	
Share of international or foreign students, by education level¹					
Table B6.1				2017	
	Bachelor's or equivalent	0%		4%	
	Master's or equivalent	1%		13%	
	Doctoral or equivalent	2%		22%	
	All tertiary levels of education	0%		6%	
Employment rate of 25-64 year-olds, by educational attainment					
Table A3.1	Short-cycle tertiary	**		82%	
	Bachelor's or equivalent	82%		84%	
	Master's or equivalent	84%		88%	
	Doctoral or equivalent	91%		92%	
	All tertiary levels of education	83%		85%	
Employment rate of tertiary-educated 25-64 year-olds, by field of study					
Table A3.4				2018	
	Education	**		84%	
	Business and administration and law	**		86%	
	Engineering, manufacturing and construction	**		89%	
	Health and welfare	**		87%	
Relative earnings of full-time full-year 25-64 year-old workers, by educational attainment (upper secondary education = 100)					
Table A4.1				2017	
	Short-cycle tertiary	**		120	
	Bachelor's or equivalent	**		144	
	Master's, doctoral or equivalent	**		191	
	All tertiary levels of education	**		157	
Upper secondary and vocational education and training (VET)					
Upper secondary or post-secondary non-tertiary attainment rate					
Table A1.2	Share of 25-34 year-olds with upper secondary or post-secondary non-tertiary as their highest attainment	46%		41%	
Percentage of first-time upper secondary graduates with a vocational qualification					
Table B3.1	Vocational programmes	8%		40%	
Age at graduation from upper secondary education, by programme orientation					
Figure B3.1				2017	
	General programmes	19		18	
	Vocational programmes	20		21	
Share of women among upper secondary graduates, by programme orientation					
Figure B3.2				2017	
	General programmes	55%		55%	
	Vocational programmes	57%		46%	
Employment, unemployment and inactivity rates of 25-34 year-olds, with upper secondary or post-secondary non-tertiary education					
Table A3.3				2018	
	Employment rate	73%		78%	
	Unemployment rate	13%		7%	
	Inactivity rate	16%		16%	
Total expenditure on upper secondary educational institutions, in USD² per full-time equivalent student, by programme orientation					
Table C1.1				2016	
	General programmes	**		USD 9 397	
	Vocational programmes	**		USD 10 922	
Early childhood education and care (ECEC)					
Enrolment rate of 3-5 year-olds in education					
Table B2.2	ECEC and primary education	84%		87%	
Share of children enrolled in private institutions					
Table B2.3	Pre-primary level (ISCED 02)	23%		34%	
Ratio of children to teaching staff					
Table B2.3	Pre-primary level (ISCED 02)	21		16	
Expenditure on children aged 3-5 enrolled in education					
Table B2.4	Annual expenditure per child, in USD ² per child	**		USD 8 141	

Source	Main topics in <i>Education at a Glance</i>	Brazil		OECD average	
Social outcomes and adult learning					
Participation in formal and/or non-formal education, by educational attainment		2016			
Table A7.1	Below upper secondary	**			n.a.
	Upper secondary or post-secondary non-tertiary	**			n.a.
	Tertiary	**			n.a.
Participation in cultural or sporting activities in the last 12 months, by educational attainment		2015			
Table A6.1	Below upper secondary	**			n.a.
	Upper secondary or post-secondary non-tertiary	**			n.a.
	Tertiary	**			n.a.
Financial resources invested in education					
Total expenditure on educational institutions, by level of education²		2016			
Table C1.1 and C2.1		USD/student	% GDP	USD/student	% GDP
	Primary	**	**	USD 8 470	1.5%
	Lower secondary	**	**	USD 9 884	0.9%
	Upper secondary	**	**	USD 10 368	2%
	Tertiary (including R&D)	**	**	USD 15 556	1.5%
Share of expenditure on educational institutions, by final source of funds		2016			
Table C3.1		Public	Private	Public	Private
	Primary, secondary and post-secondary non-tertiary	**	**	90%	10%
	Tertiary (including R&D)	**	**	66%	32%
Total public expenditure on primary to tertiary education		2016			
Table C4.1	As a percentage of total government expenditure	14%		10.8%	
Teachers, the learning environment and the organisation of schools					
Actual salaries of teachers and school heads in public institutions relative to earnings of full-time, full-year workers with tertiary education		2017			
Table D3.2a		Teachers	School heads	Teachers	School heads
	Pre-primary	0.82	**	0.78	**
	Primary	0.84	**	0.84	1.25
	Lower secondary (general programmes)	0.86	**	0.88	1.34
	Upper secondary (general programmes)	0.87	**	0.93	1.43
Annual statutory salaries of teachers in public institutions, based on most prevalent qualifications, at different points in teachers' careers²		2018			
Table D3.1a		Starting salary	Salary after 15 years of experience	Starting salary	Salary after 15 years of experience
	Pre-primary	USD 14 775	**	USD 31 276	USD 42 078
	Primary	USD 14 775	**	USD 33 058	USD 45 947
	Lower secondary (general programmes)	USD 14 775	**	USD 34 230	USD 47 675
	Upper secondary (general programmes)	USD 14 775	**	USD 35 859	USD 49 804
Organisation of teachers' working time in public institutions over the school year		2018			
Tables D4.1a and D4.1b		Net teaching time	Total statutory working time	Net teaching time	Total statutory working time
	Pre-primary	**	**	1 024 hours	1 613 hours
	Primary	**	**	783 hours	1 612 hours
	Lower secondary (general programmes)	**	**	709 hours	1 634 hours
	Upper secondary (general programmes)	**	**	667 hours	1 629 hours
Percentage of teachers who are 50 years old or over		2017			
Table D5.1	Primary to upper secondary	23%		36%	
Share of female teachers, in public and private institutions		2017			
Table D5.2	Primary	89%		83%	
	Lower secondary	68%		69%	
Total number of compulsory instruction time, by level of education		2019			
Table D1.1	Primary	**		4 568 hours	
	Lower secondary	**		3 022 hours	
	Upper secondary	**		**	
Average class size by level of education		2017			
Table D2.1	Primary	23		21	
	Lower secondary	27		23	

The reference year is the year cited or the latest year for which data are available.

1. For some countries, data on foreign students are provided instead of international students.

2. Values reported in equivalent US dollars (USD) have been converted using purchasing power parities (PPPs) for GDP

** Please refer to the source table for details on these data.

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>.