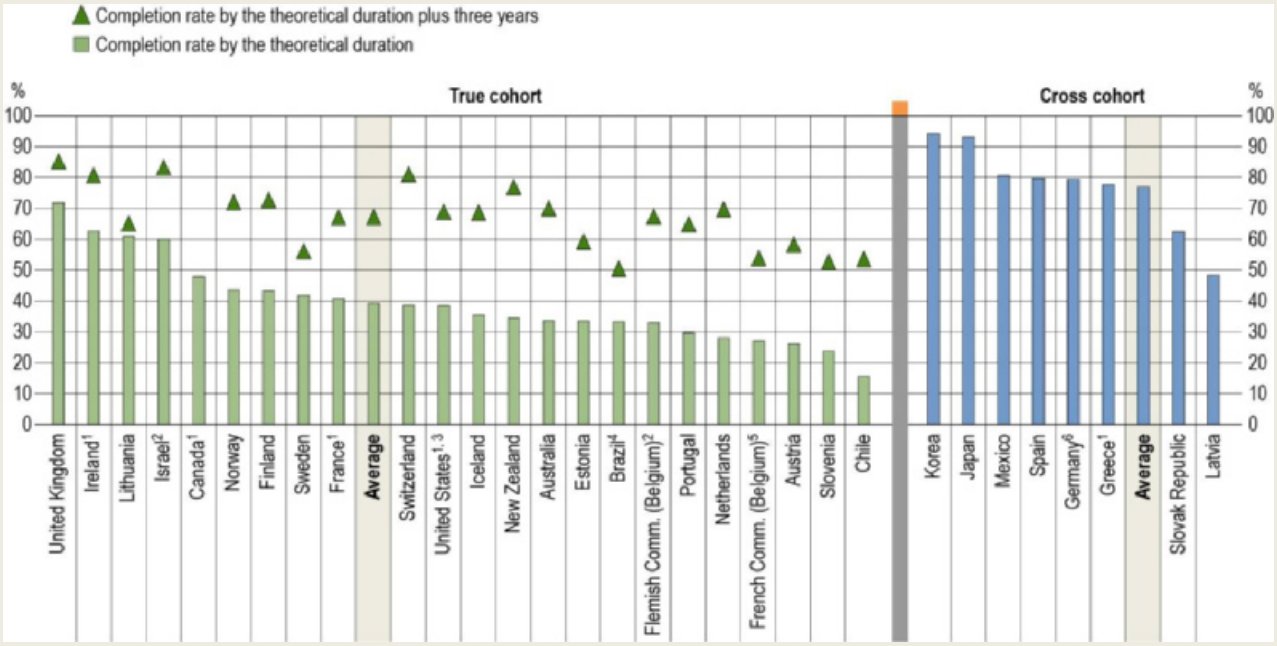
Indicator B5. How many students complete tertiary education?

Highlights

- On average across countries with true cohort data (data on individual students), 39% of full-time students who enter a bachelor's programme graduate within the theoretical duration of the programme. The average completion rate after three additional years increases to 67%.
- The completion rate (within the theoretical duration of the programme plus three years) of students with a general upper secondary degree (70%) is higher than that of students with a vocational upper secondary degree (58%), on average across countries.
- On average, 12% of students who enter a bachelor's programme full time leave the tertiary system before the beginning of their second year of study. This share increases to 20% by the end of the programme's theoretical duration and to 24% three years later.

Figure B5.1. 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 to 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).

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Context

Tertiary completion rates can indicate the efficiency of tertiary education systems, as they show what proportion of the students who enter a tertiary programme ultimately graduate from it. However, low completion rates do not necessarily imply an inadequate tertiary system, as students may leave a programme for a variety of reasons. They may realise that they have chosen a subject or educational programme that is not a good fit for them, or they may find attractive employment opportunities before completing the programme. In some educational systems, it may also be common for students to enrol without intending to graduate from a specific programme, but rather to pursue a few courses as part of lifelong learning or upskilling.

A variety of factors can influence completion rates, including students' prior educational background and social and economic characteristics. This indicator analyses the completion rate of tertiary students by gender and by their upper secondary programme orientation (general or vocational). It also analyses the extent to which students' immigration background and their parents' educational attainment can influence their likelihood of succeeding in tertiary education (Box B5.2).

Completion of a programme may be defined differently across countries. This indicator focuses on full-time students and just two specific timeframes for completion: 1) the share of students who graduate from any tertiary programme within the theoretical duration of the programme they entered; and 2) the share of students who graduate within three years after the end of the theoretical duration. The difference between these two timeframes can shed light on the extent to which students graduate "on time" (within the amount of time expected given the theoretical duration of the programme) or after some delay. This indicator also examines the share of students who transfer between tertiary levels and who leave the education system without graduating.

Other findings

- In all countries with available data, women have higher completion rates than men in bachelor's programmes. The gender gap in completion within the programme's theoretical duration reaches over 27 percentage points in Finland.
- On average across countries and economies with available data, 45% of students who entered a short-cycle tertiary programme graduated from any tertiary programme by the end of the theoretical duration of the programme in which they entered.
- In some countries, students transfer to different tertiary levels during their studies. In France, 13% of students who entered a bachelor's programme had transferred to a short-cycle or a master's long first degree by the beginning of their second year of study.

Note

Completion, graduation and attainment rates are three different measures. Completion rates describe the percentage of students who enter a tertiary programme and who graduate from it a given number of years later. Graduation rates represent the estimated percentage of people from a certain age cohort who are expected to graduate at some point during their lifetime. They measure the number of graduates from a level of education relative to the country's population (Education at a Glance Database). The third indicator, attainment rates, measure the percentage of a population that has reached a certain level of education (see Indicator A1). They represent the relationship between all graduates (of the given year and previous years) and the total population.

This indicator only covers full-time students. On average across OECD countries, about 26% of short-cycle tertiary students and 16% of bachelor's students are enrolled part time. Please see Indicator B1 for more information on the share of part-time students enrolled in each tertiary level of education.

The theoretical duration of tertiary programmes may vary across countries. Therefore, despite having the same reference year for graduates (2017 unless specified otherwise), the year used for entry cohorts will differ depending on the duration of the programmes.

Analysis

Completion rate by level of educational attainment

Completion rates in this indicator are calculated using two different methods, depending on countries' data availability: true cohort and cross cohort. The results from these two methodologies are analysed separately as they are not comparable (see Box B5.1).

True cohort completion

On average across countries and economies that submitted true cohort data, 39% of students who entered a bachelor's programme graduated within the theoretical duration of the programme. This includes all students who graduated from a tertiary programme, even if at a different level. Three years after the end of the theoretical duration, the average completion level increases to 67% (Table B5.1).

There is a wide variation among countries and economies in completion rates within the theoretical duration, ranging from less than 30% in Austria, Chile, the French Community of Belgium, the Netherlands and Slovenia, to 60% or more in Ireland, Israel, Lithuania and the United Kingdom (Figure B5.1). The completion rate after three additional years increases for all countries and economies, but it tends to increase by more where the completion rate by the theoretical duration is lower. As a result, the range of completion rates after three additional years is narrower, ranging from 50% in Brazil to 85% in the United Kingdom. Notably, the completion rate within the three additional years increases by over 40 percentage points in the Netherlands, New Zealand and Switzerland.

A variety of institutional factors and country-specific characteristics can help explain the different levels of "delayed" graduation across countries. For example, in some countries it is common for students to take remedial or prerequisite courses that may not be included in the official curriculum (Scrivener et al., 2018[1]). In some countries, remedial courses are counted as years spent in tertiary education, as is the case in United States. In other countries, such as Norway, students are only considered to have started the level of education after they have completed any remedial courses, thus not affecting the completion rate.

Nevertheless, a large difference in completion rates between the shorter and longer periods is not necessarily a negative outcome. In the Flemish Community of Belgium, for example, higher education programmes are very flexible and are not divided into years of study. Students are required to take a certain number of credits to graduate, but the years of study, even if full time, may not be consecutive. This type of flexible system tends to increase the number of students who do not graduate "on time", but could be beneficial to students in many other ways. In countries that provide relatively broad access to tertiary education, as is the case in the Flemish Community of Belgium, flexibility may be particularly important, giving students more time to meet the standards set by their educational institution.

Only ten countries have data available for short-cycle tertiary programmes and, as with bachelor's programmes, completion rates at this level vary widely. In the United States, only about 9% of students who enter a short-cycle programme full-time graduate from any tertiary programme within two years, the theoretical duration of their programmes. In Austria, nearly 70% of students graduate within this time. Three years after the end of the theoretical duration, the completion rates increase in all countries, but especially so in countries which saw lower rates within the theoretical duration. The completion rate doubles in Chile (from 23% to 46%) and more than triples in the United States (from 9% to 31%).

The completion rate of short-cycle tertiary programmes is higher than that of bachelor's programmes in about half of the countries with available data. The difference between the two levels is highest in Austria, where the completion rate of short-cycle tertiary programmes is 43 percentage points higher than at the bachelor's level (both within their respective theoretical durations). In order to put these differences into context, it is important to examine the share of students enrolled in each tertiary level. Austria, for example, is the only OECD country

where more first-time entrants to tertiary education enrol in short-cycle programmes than in bachelor's programmes (see Indicator B4).

Only seven countries have data available for master's long first degrees and, in every country, the completion rate of these programmes is higher than that of bachelor's programmes. Completion by the theoretical duration of programmes varies from 32% in Chile to 53% in Norway and Switzerland. Completion within the theoretical duration plus three years increases considerably in all countries, and ranges from 65% in Austria and Slovenia to 89% in Norway.

In recent years, many countries have implemented a variety of policies aimed at increasing tertiary completion rates. A common approach is to make the financing of institutions conditional to some extent on student completion rate. This is the case in Austria, Brazil, Estonia, Finland and Israel. In other countries, completion rates are taken into account in the financing provided directly to students. In Chile, the government only provides tuition-free education for the theoretical duration of the programme. In Norway, student loans can be partly converted into scholarships if students advance without delays. In some countries, such as Brazil, specific financing is provided to institutions in order to help ensure that students from disadvantaged backgrounds complete the degree without excessive delays. Other policies focus on helping students make better study choices and ensuring that teachers have the necessary tools to help students succeed.

Cross cohort completion

Cross cohort completion rates take into account all graduates in a given academic year, regardless of the time it took them to complete the programme. As a result, cross cohort completion rates tend to be considerably higher than true cohort completion rates (see Box B5.1 for more information on the comparison between two methodologies).

On average across the seven countries that submitted cross cohort data, 77% of students who enter a bachelor's programme complete it. This rate ranges from 48% in Latvia to over 90% in Japan and Korea. At short-cycle tertiary level, completion rates range from 55% in the Slovak Republic to 89% in Japan. The difference in completion rates between bachelor's and short-cycle programmes varies across countries. In Mexico, completion at short-cycle tertiary level is over 20 percentage points lower than at bachelor's level. The opposite is true in Latvia, where the completion rate of short-cycle tertiary programmes is 13 percentage points higher than that of bachelor's programmes.

Box B5.1. Difference between true cohort and cross cohort completion rates

This indicator presents completion rates calculated using two different methods: true cohort and cross cohort. The true cohort method follows an entry cohort through a specific timeframe which in the case of this survey corresponds to the theoretical duration of the programme and an additional three years. This method is the preferred methodology for analysing completion rates, but only countries with longitudinal surveys or registers are able to provide such information. Panel data can be available in the form of an individual student registry (a system including unique personal identification numbers for students) or a cohort of students used for conducting a longitudinal survey. Using the true cohort method, the completion rate corresponds to the share of students from a specific cohort who graduate within each timeframe.

The cross cohort method is used to calculate completion rates in countries where true cohort data are not available. This method only requires the number of new entrants to a given ISCED level and the number of graduates from the level N years later, where N corresponds to the theoretical duration of the programme. Under the assumption of constant student flows (constant increases or decreases in the number of students entering a given education level over these years), cross cohort completion rates are closer to true cohort

completion rates over longer timeframes. This is because cross cohort completion rates take into account all graduates in a given academic year, regardless of the time it took them to graduate.

Any comparison between the two methodologies should be avoided. Table B5.a exemplifies the difference in completion rate results between the two methodologies in a few countries that provided both true cohort and cross cohort data. As expected, the cross cohort completion is considerably higher than the true cohort completion, even when taking into account rates three years after the end of the theoretical duration.

Table B5.a. Difference in the completion rate of students who entered a bachelor's or equivalent programme when calculated using the true cohort and cross cohort methodologies (2017)

	True cohort		
	By the theoretical duration	By the theoretical duration plus 3 years	Cross-cohort (using the theoretical duration)
Flemish Comm. (Belgium)	33	67	82
French Comm. (Belgium)[1]	27	54	64
Finland	43	73	93
Israel	60	83	92

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

Completion rate by gender

In every country with available data (both true cohort and cross cohort), women have higher completion rates than men in bachelor's programmes (Table B5.1). On average across countries and economies with true cohort data, 44% of female entrants and 33% of male entrants to bachelor's programmes graduate within the theoretical duration. The average gap remains similar when taking three additional years into account: the completion rate among women increases to 72% and among men to 61%.

Some countries have a narrower gender gap than others. The difference in bachelor's programme completion rates between women and men within the theoretical duration is below 7 percentage points in Switzerland and the United Kingdom and 27 percentage points in Finland. In most countries, the gender gap does not change considerably three years after the end of the theoretical programme duration. Only in Finland does the gap change by more than 10 percentage points, with the gender gap narrowing to 16 percentage points.

Completion rate by upper secondary programme orientation

Another factor that may influence students' tertiary completion rate is their upper secondary programme orientation. On average across countries and economies with available data, 38% of bachelor's students with a general upper secondary qualification graduate within the theoretical duration of the programme in which they entered. The same is true for 35% of bachelor's students with a vocational upper secondary degree. This 3 percentage-point gap increases to 12 percentage points within the three years following the end of the theoretical duration of programmes.

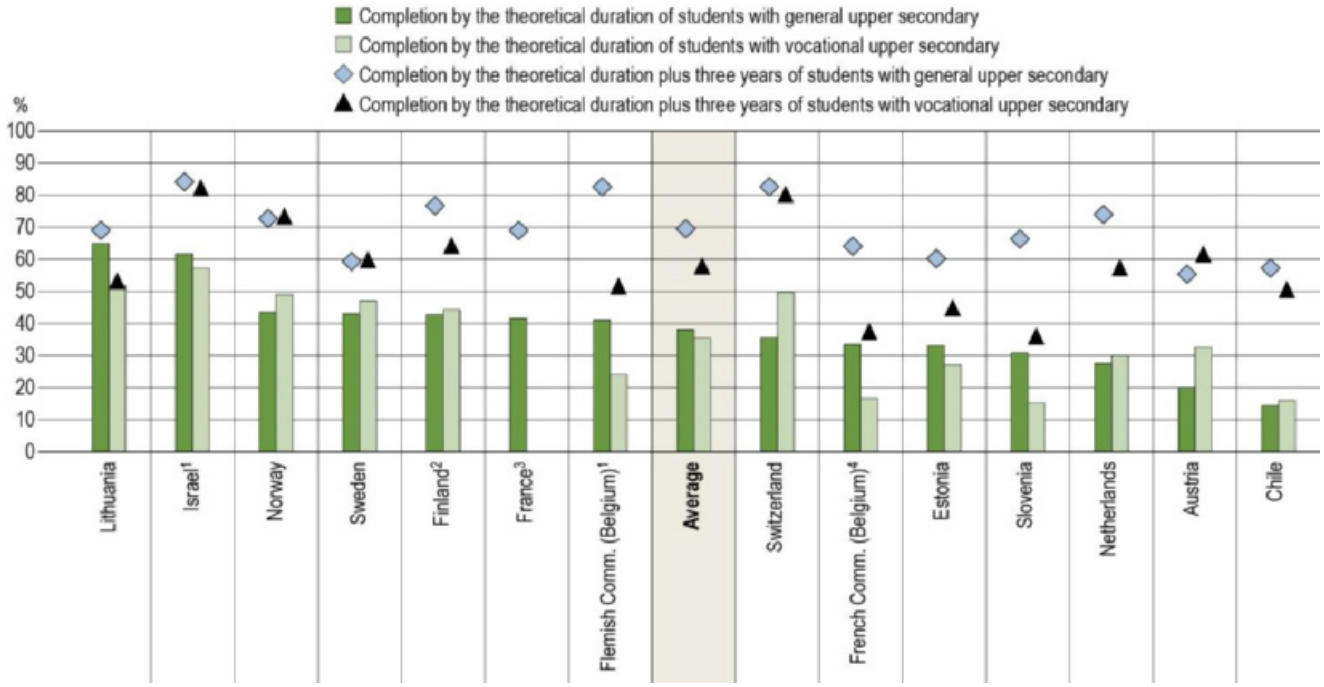
The pattern of completion rates within the theoretical duration varies widely across countries: students from general programmes have a higher completion rate than students from vocational programme in exactly half of the countries with available data. However, the pattern becomes clearer when looking at completion rates after three additional years. Within this longer timeframe, the completion rate of students with general upper secondary

qualifications is either higher or very similar to students with vocational qualifications in nearly all countries. In fact, only in one country – Austria – are bachelor's students from vocational upper secondary programmes more likely to graduate than their peers who attended general programmes (Figure B5.2).

To understand the context behind these results, it is important to assess the representativeness of these students among entrants to bachelor's programmes (Table B5.2). For example, in Lithuania, 53% of students from vocational upper secondary programmes graduate within the theoretical duration of the programme in which they entered. However, these students represent less than 1% of entrants into bachelor's programmes. In nearly all countries with available data, the share of bachelor's entrants with a general upper secondary degree is higher than the share of entrants with a vocational upper secondary degree. On average across countries and economics with available data, students from vocational programmes make up 28% of entrants. The share ranges from less than 15% in Estonia, Lithuania and Norway to 51% in Austria – the only country where they make up the majority of entrants.

Figure B5.2. Completion rate of full-time students who entered a bachelor's or equivalent programme, by students' upper secondary programme orientation (2017)

True cohort only



1. Completion rate of students who entered a bachelor's programme does not include students who transferred to and graduated from short-cycle programmes.
2. If the student has completed both upper secondary general and vocational education or if the data on previous education is missing, the student is reported under upper secondary vocational.
3. Year of reference differs from 2017. Refer to the source table for details. Data on students from vocational upper secondary programmes have been withdrawn due to small sample size.
4. 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
Countries and economies are ranked in descending order of completion rate by the theoretical duration of students with general upper secondary education.
Source: OECD (2019), Table B5.2. See *Source* section for more information and Annex 3 for notes (https://doi.org/10.1787/f8d7880d-en).

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It is important to note that in many countries, such as Belgium and Estonia, some upper secondary vocational programmes do not grant access to bachelor's programmes. Depending on the share of students enrolled in these programmes, this may help explain the lower share of bachelor's entrants with vocational degrees.

Relative to bachelor's level, students from vocational programmes make up a considerably larger share of entrants to short-cycle tertiary programmes, but a considerably lower share of entrants to master's long first degree programmes in the few countries with data available at these levels (Table B5.2, Panels B and C). In Chile and Norway, students from vocational programmes who enter short-cycle programmes have a higher completion rate than those from general programmes. Indeed, in some countries it is common for short-cycle tertiary programmes to be specifically geared towards students from an upper secondary vocational track.

Pathways through tertiary education

In addition to students' completion rates, it is important to examine their different paths once they enter tertiary education. This helps understand the flexibility and effectiveness of education systems. It can also shed light on the other portion of students – those who have not graduated. Are they still in education? Have they transferred to a different tertiary level? Or have they left the system without graduating?

Where are students after their first year of study?

Examining students' status right after their first year of study can be very relevant to understanding what happens during their first contact with tertiary education. This could reflect, among other things, the effectiveness of student orientation or preparedness for tertiary education. On average across countries and economies with available data some 12% of students who entered a bachelor's programme were no longer enrolled in any tertiary programme by their second year of study, more than 2% had transferred to another tertiary level and 85% were still enrolled in the same or another bachelor's programme (Table B5.3).

In some countries, students enter one tertiary level but transfer and graduate instead from a different level. In fact, a large portion of the transfers between tertiary levels actually takes place very soon after students have entered a programme. In France, 11% of students who entered a bachelor's programme had transferred to a short-cycle programme by the beginning of their second year of study. The same is true for over 3% of students in Chile and Slovenia (Table B5.3).

The share of students who are no longer enrolled after their first year of studies ranges from 6% in the United Sates to at least 20% in Slovenia and the French Community of Belgium. High levels after just one year could be particularly concerning given that the share of students who leave the system without graduating tends to increase considerably with time. Indeed, by three years after the end of theoretical duration the share has nearly doubled – and even tripled in some cases – in most countries and economies with available data (Figure B5 3).

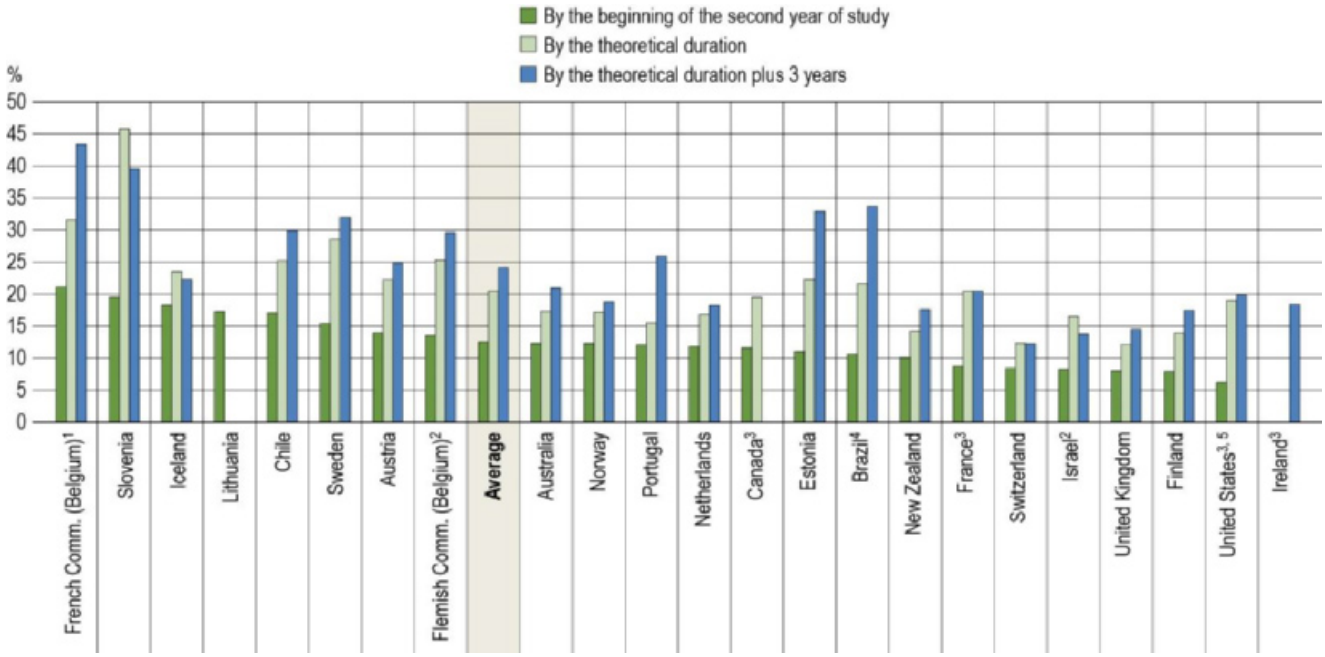
Where are students by the end of their programmes' theoretical duration? And three years later?

The two timeframes this indicator uses to measure students' status are: 1) by the end the theoretical duration of the programme in which they entered; and 2) by three years after the end of the theoretical duration of the programme.

On average across countries and economies with available data, 39% of students who entered a bachelor's programme graduated from that or another bachelor's programme by the end of the theoretical duration. About 1% had transferred and graduated instead from a short-cycle tertiary programme, 41% were still in tertiary education (even if at a different level) and 20% no longer enrolled in any tertiary programme. The picture evolves quite considerably within the three years after the end of the theoretical duration of the programme, as many of those who were still in education either graduate or leave the system. At this point, on average, 64% of students have graduated from a bachelor's programme, 2% have graduated from a short-cycle tertiary programme and 1% from a master's long first degree programme. Some 9% are still in education and 24% are no longer enrolled (Figure B5.4).

Figure B5.3. Share of full-time bachelor's students who are no longer enrolled in tertiary education (and have not graduated) at various timeframes after entry (2017)

True cohort only



Note: The share of students "not graduated and not enrolled in tertiary education" may include students who left the country before graduation.
1. 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.
2. Includes students who transferred to short-cycle tertiary programmes.
3. Year of reference differs from 2017. Refer to the source table for details.
4. Data do not include entrants to 6-year bachelor's programmes, which correspond to about 2% of total entrants at this level.
5. The theoretical duration plus 3 years refers to the theoretical duration plus 2 years.
Countries and economies are ranked in descending order of share of students not enrolled by the beginning of the second year of study.
Source: OECD (2019), Table B5.3. See *Source* section for more information and Annex 3 for notes (https://doi.org/10.1787/f8d7880d-en).

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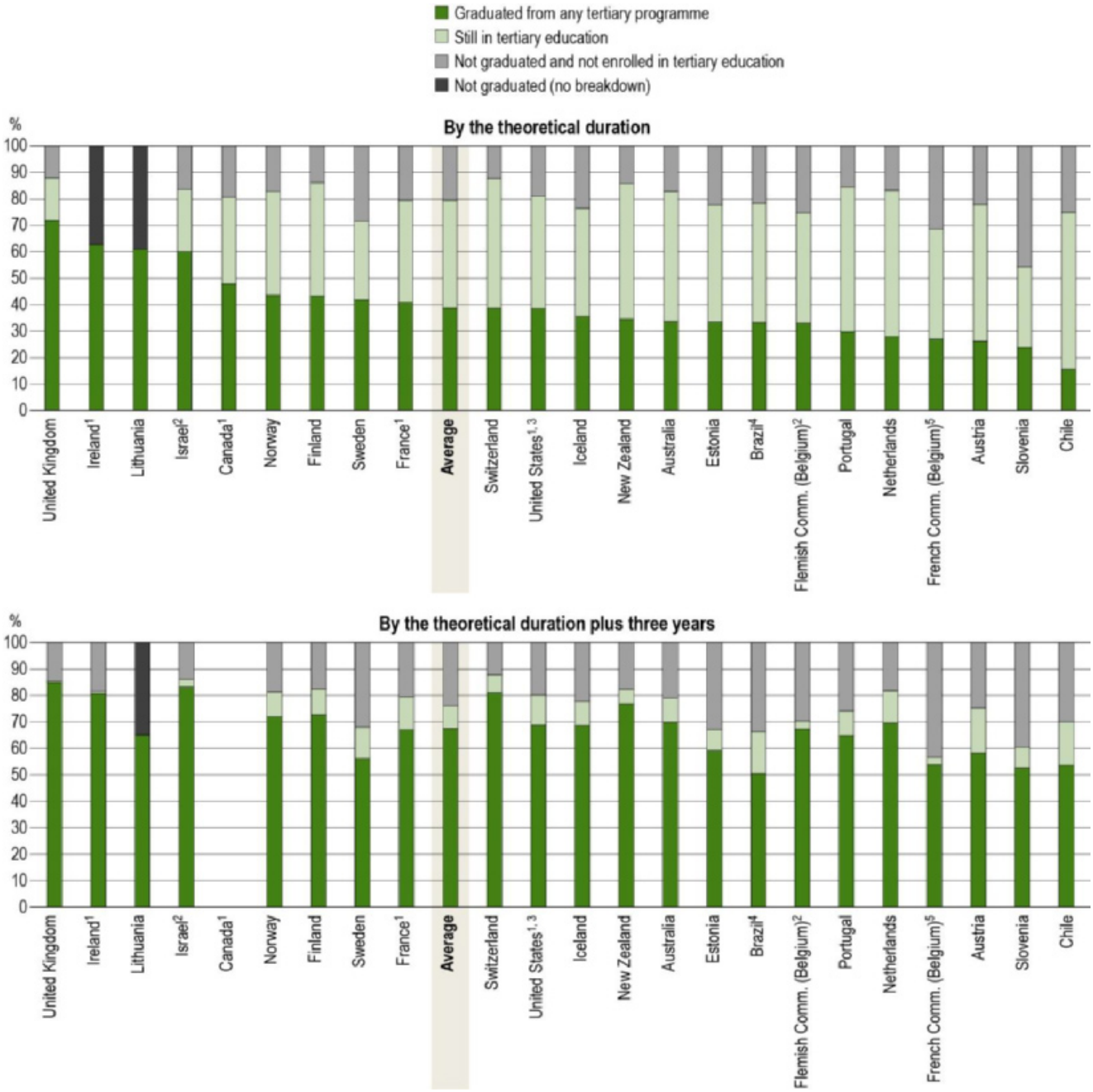
A high transfer rate between tertiary levels can help explain some delays in students' graduations. Delays are expected to occur if there are difficulties in transferring credits, or if students transfer to a programme with a longer theoretical duration (students' status is always measured within the timeframe of their original programme's theoretical duration). Transfer rates among students who enter a bachelor's programme are highest in France, where about 8% graduate from a short-cycle tertiary programme, and in Slovenia, where about 2% graduate from a short-cycle tertiary programme and 6% graduate from a master's long first degree programme (all within the theoretical duration of the original programmes plus three years).

The overall evolution in the status of students between the end of the theoretical duration of programmes and three years later differs across countries. Whereas completion increases by over 40 percentage points in the Netherlands, New Zealand and Switzerland, the increase is only 4 percentage points in Lithuania. There are also important differences in what happens to students who are still in education by the end of the theoretical duration of the programme. In some countries, like Israel and Slovenia, over 90% of these students will graduate within the following three years. In other countries and economies, like the French Community of Belgium, Brazil and Estonia, at least 20% of the students still in education by the end of the theoretical duration leave the system without graduating over the following three years.

Figure B5.4. Status of full-time bachelor's students by the theoretical duration and by the theoretical duration plus three years (2017)

True cohort only



Note: The share of students "not graduated and not enrolled in tertiary education" may include students who left the country before graduation.
1. Year of reference differs from 2017. Refer to the source table for details.
2. Share of students who graduated does not include students who transferred to 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.
Countries and economies are ranked in descending order of the share of students who graduated by the theoretical duration
Source: OECD (2019), Table B5.3. See *Source* section for more information and Annex 3 for notes (https://doi.org/10.1787/f8d7880d-en).

StatLink https://doi.org/10.1787/888933978341

Delayed completion, or even non-completion, can be costly to both governments and individuals. The cost of tertiary education is high, and students and governments may not reap the full benefits until the degree is completed. Data show that individuals with a tertiary qualification tend to have higher earnings and higher employment rates, which in turn translate into higher taxes and higher social contributions for the government (see Indicator A5). Nevertheless, delaying graduation or dropping out are not necessarily symptoms of student or institutional failure. In some countries, the labour market recognises the partial completion of tertiary degrees, either formally or informally, which may encourage students to work part time (and potentially delay graduation) or to drop out and join the labour market full time. In Sweden, for example, the strong labour market demand in some fields such as engineering leads many students to start working before attaining their degree.

Box B5.2. Completion rate by parents' educational attainment and by students' immigration background

Studies have shown that coming from a disadvantaged socio-economic background has a strong impact on tertiary completion (Vossensteyn et al., 2015[2]; Thomas and Quinn, 2006[3]). Even among highly qualified students, those from disadvantaged backgrounds tend to be more at risk of dropping out because of financial constraints, family problems or peer pressure (Quinn, 2013[4]). This box examines the extent to which completion rates differ for individuals from potentially disadvantaged backgrounds, identified through two proxy measures: parents' highest level of educational attainment and immigrant background.

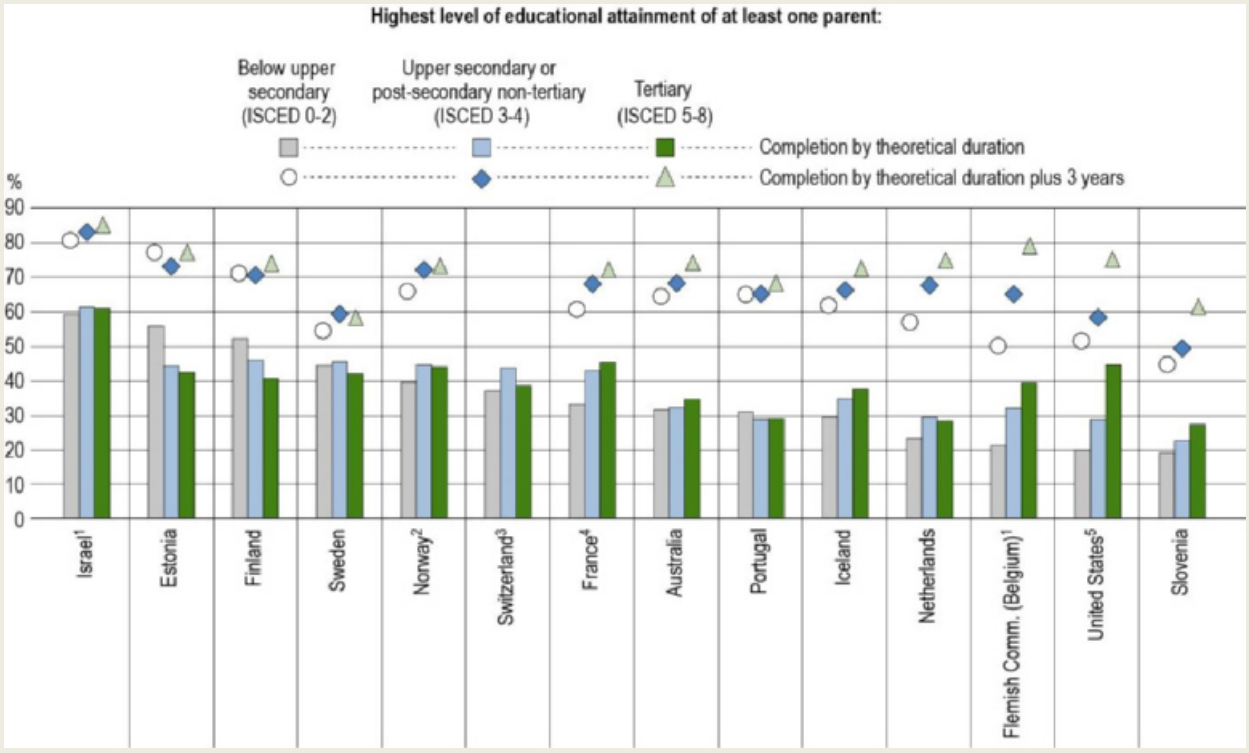
Completion by parents' educational attainment

Parental education is linked to income and wealth, and evidence shows that it is highly correlated with a variety of educational outcomes, such as attainment levels (see Indicator A1), choice of programme orientation (see Indicator B3) and skills acquisition (OECD, 2013[5]). Figure B5.a shows the completion rate of students who entered a bachelor's programme full time disaggregated by the highest level of educational attainment of at least one parent. There is no clear pattern across countries between parental education and completion within the theoretical duration. However, in nearly every country with available data, the completion rate within the theoretical duration plus three years is highest for students with at least one tertiary-educated parent and lowest for students whose parents did not complete upper secondary education.

The gap between students is considerably wider in some countries than in others. The difference in completion within the theoretical duration plus three years between a student with a tertiary-educated parent and one whose parents did not complete upper secondary ranges from less than 5 percentage points in Estonia, Finland, Portugal and Sweden to over 20 percentage points in the Flemish Community of Belgium and the United States (Figure B5.a). In order to address some of the equity issues at this level of education, the Flemish government has recently set a target to have at least 60% of upper secondary graduates whose mother's' educational attainment is below tertiary participate in a tertiary programme by 2020 (Cabinet of Prime Minister of the Flemish Government and Flemish Minister for Economy, Foreign Policy, Agriculture and Rural Policy, 2009[6]).

The gap in completion rates between these students indicates that entrants from disadvantaged backgrounds may face particular challenges in completing tertiary education. However, this measure alone is not enough to assess the equitability of education systems. At least two other factors must be taken into account: 1) the share of students from each group in the entry cohort; and 2) the representativeness of the entry cohort in the population as a whole. Table B5.b (available on line) shows the distribution of entrants to bachelor's programmes by parents' education attainment. In Estonia, for example, students whose parents did not complete upper secondary education are more likely to graduate within the theoretical duration than their peers, but they only represent 2% of bachelor's entrants. In Portugal, they represent 44% of entrants.

Figure B5.a. Completion rate of full-time students who entered bachelor's or equivalent level, by parents' educational attainment (2017)



1. Completion rate of students who entered a bachelor's programme does not include students who transferred to and graduated from short-cycle programmes.
2. Upper secondary and post-secondary non-tertiary attainment includes short-cycle tertiary; and tertiary attainment includes only bachelors, master's and doctoral or equivalent levels.
3. Year of reference 2018.
4. Year of reference for entrance cohort is 2008. Graduation years vary depending on the theoretical duration of programmes.
5. Year of reference for entrance cohort is 2003. Graduation years vary depending on the theoretical duration of programmes. The theoretical duration plus 3 years for bachelor's or equivalent programmes refers to the theoretical duration plus 2 years.

Countries and economies are ranked in descending order of completion rate by the theoretical duration for students whose parents have not attained upper secondary education.

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

StatLink https://doi.org/10.1787/888933978360

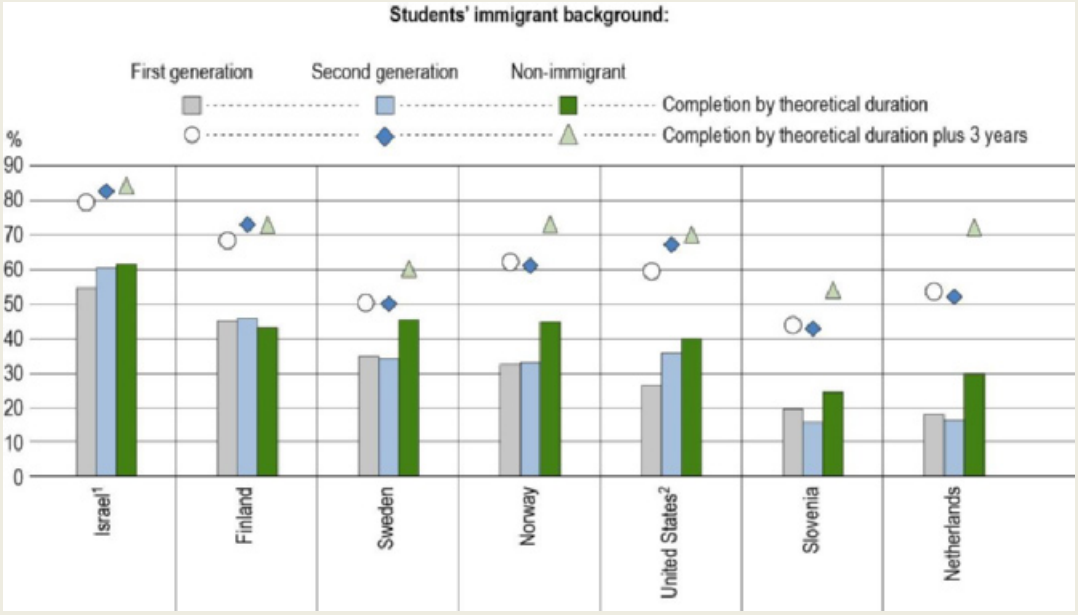
It is also important to assess the representativeness of the entry cohort in the population. A system is not equitable if most of a country's youth do not have tertiary-educated parents, but they make up only a minority of the entrants to bachelor's programmes. Please see Indicator B7 in (OECD, 2018[7]) for further information on the representativeness of potentially disadvantaged groups among tertiary students.

Finally, it must be noted that students from disadvantaged backgrounds may be more likely to enrol part time in some countries, which is not captured by this indicator.

Completion by students' immigration background

Immigrant background, although not always indicative of a disadvantage, is also correlated with lower student performance (OECD, 2018[7]). Students with an immigrant background must often overcome adversities associated with displacement, socio-economic disadvantage and language barriers.

Figure B5.b. Completion rate of full-time students who entered bachelor's or equivalent level, by students' immigration background (2017)



1. Completion rate of students who entered a bachelor's programme does not include students who transferred to and graduated from short-cycle programmes.
2. Year of reference for entrance cohort is 2003. Graduation years vary depending on the theoretical duration of programmes. The theoretical duration plus 3 years for bachelor's or equivalent programmes refers to the theoretical duration plus 2 years
Countries are ranked in descending order of completion rate by the theoretical duration for first-generation immigrant students
Source: OECD (2019). See *Source* section for more information and Annex 3 for notes (https://doi.org/10.1787/f8d7880d-en).

StatLink https://doi.org/10.1787/888933978379

Figure B5.b shows the completion rate of students who entered a bachelor's programme full time disaggregated by their immigration status. In nearly every country with available data, non-immigrant students (i.e. students who were born in the country and who have at least one parent also born in the country) have a higher completion rate than students with an immigration background, both within the theoretical duration and three years later. The difference between first- and second-generation immigrants varies across countries, but the difference between them tends to be smaller (in absolute terms) than the difference between non-immigrants and either first- or second-generation immigrants.

As with parental education, it is important to take into account the share of each group in the entry cohort (Table B5.c, available on line) and in the population (OECD, 2018[7]). Finland, for example, is the only country where the completion rate of non-immigrant students is below that of both first- and second-generation immigrants. However, Finland is also the country with the lowest share of students with an immigration background among entrants to bachelor's programmes: 4% are first-generation immigrants and 0.1% are second-generation immigrants. Students with an immigration background make up a considerably higher share of bachelor's entrants in other countries such as Israel (25%) and Sweden (18%).

Box B5.3. Using student surveys to measure quality in higher education

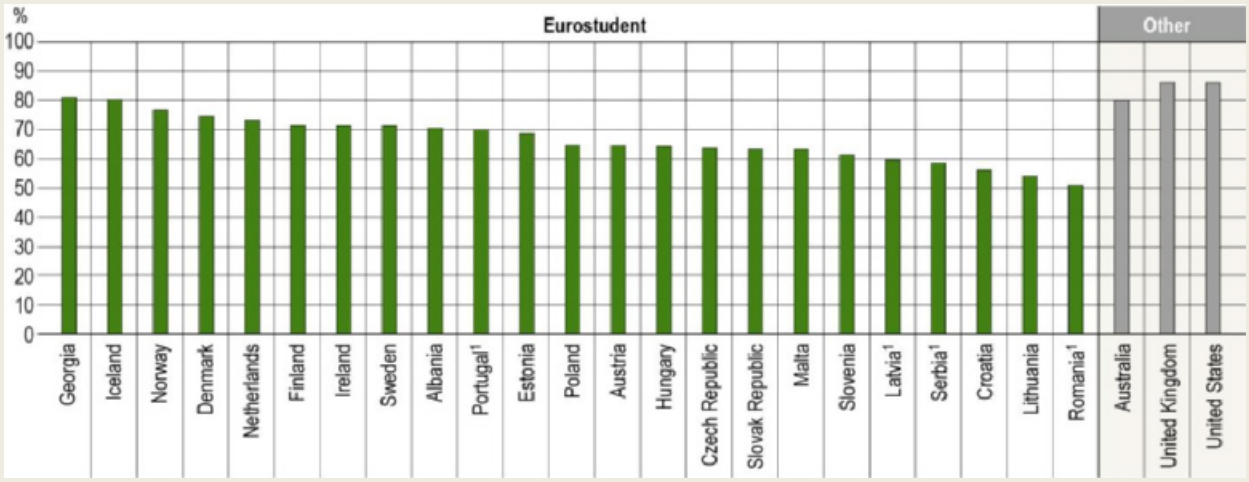
This box shows how surveys of student experiences can inform policies for quality improvements in post-secondary education and provide international comparisons of higher education outcomes.

Measurement of the quality of higher education teaching and learning, either at the institutional or national/systemic level, suffers from a lack of appropriate data. Direct measurement of student learning outcomes is expensive and time consuming, and difficult to scale up to the national level.

An alternative approach to measuring teaching quality are surveys of students or graduates. These surveys measure aspects of the student experience with the education they have received and provide valuable information on a wide range of contextual and personal factors that impact learning. Examples of student surveys include the National Survey of Student Engagement (NSSE) in the United States and Canada, the National Student Survey (NSS) in the United Kingdom, the Student Experience Survey (SES) in Australia, and the Eurostudent survey, conducted by 25 to 30 participating European countries.

Focusing on the quality of student experiences can assist institutions in raising retention rates, by identifying factors such as teaching practices, support services and academic resources which encourage engagement and success for each student. Areas of relative weakness can be isolated at institutional or discipline levels, or conversely, models of best practice can be identified. The student experience can also be improved through policy responses to specific survey items, such as those dealing with retention. For example, the Australian SES asks respondents whether they have considered leaving their studies in the past year, and if so why.

Figure B5.c. Overall assessment of study programme (% positive rating), all students (2016)



1. Year of reference 2017.
Source: National Survey of Student Engagement (NSSE) for the United States, the Student Experience Survey (SES) for Australia, the National Student Survey (NSS) for the United Kingdom and the Eurostudent survey for the other European countries.

Another potential use for student survey data is for international comparisons of higher education systems. Figure B5.c shows an example of international comparisons using publicly available survey data from Eurostudent participant nations, Australia, the United States and the United Kingdom.

Student surveys have limitations as measures of teaching quality and learning outcomes. They do not provide a direct, objective measure of learning outcomes, but instead aggregate individual students' subjective assessments of learning outcomes, or of proxies or factors believed to be important for achieving learning

outcomes. As such, student survey results need to be analysed in the context of the educational and demographic characteristics of the students themselves.

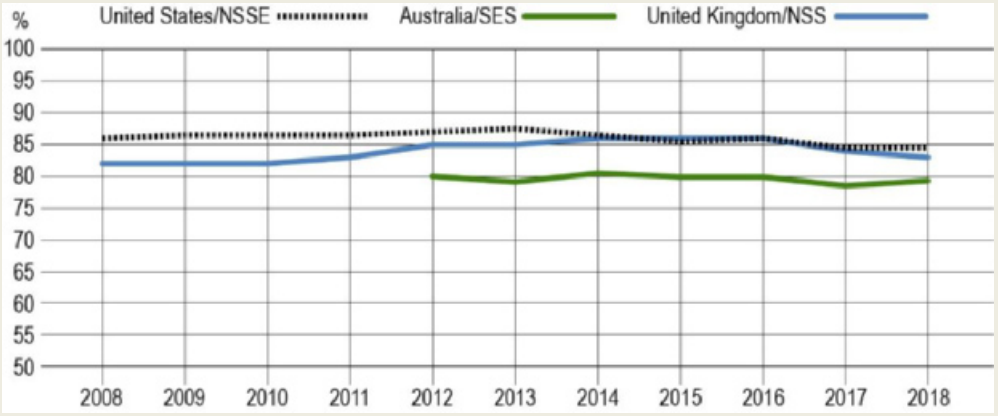
Absolute levels of performance recorded in surveys are of less importance than relationships between population sub-groups (for instance institutions or student demographics) and changes in performance over time. Such analyses are supported by the scalability and repeatability of survey instruments.

Results from student surveys should not be interpreted simplistically. Although measuring similar concepts, it is important to acknowledge that differences in survey methodologies and the precise wording of survey items can have a substantial impact on results. For example, Figure B5.c is based on a Eurostudent survey item asking whether students would recommend their study programme to others, whereas survey items for Australia, the United Kingdom and the United States relate to overall student experience/satisfaction. In addition, survey results can be affected by differences in the demographic makeup of the student cohorts, or differences in national cultures and expectations of education.

Given these limitations, changing relationships between national system measures over time are likely to be more meaningful than absolute scores at any one point in time. An example of a time series comparison is presented in Figure B5.d.

Further work in developing comparable items and in understanding cultural differences in responding to survey items would assist in interpreting these results and serve to increase the value of international comparisons.

Figure B5.d. Student/graduate overall rating of study experience (% rating positively), selected countries, 2008 to 2018



Source: National Survey of Student Engagement (NSSE) for the United States, the National Student Survey (NSS) for the United Kingdom, the Student Experience Survey (SES) for Australia.

Definitions

The **true cohort** method requires following an entry cohort through a specific time frame, which in the case of this survey corresponds to the theoretical duration of the programme and the theoretical duration plus three years. Only countries with longitudinal surveys or student registers are able to provide such information.

The **cross cohort** method only requires the number of new entrants to a given ISCED level and the number of graduates N years later, where N corresponds to the theoretical duration of the programme.

Full-time students in this indicator refer to students who entered the given tertiary programme with full-time status. They may have switched status during their studies.

The **theoretical duration** of programmes is the regulatory or common-practice time it takes a full-time student to complete a level of education.

Immigration status:

- **First-generation immigrants** refer to those born outside the country and whose parents were also both born in another country. This excludes international students.
- **Second-generation immigrants** refer to those born in the country but whose parents were both born in another country.
- **Non-immigrants** refer to those with at least one parent born in the country.

Parents' educational attainment:

- **Below upper secondary** means that both parents have attained ISCED 2011 levels 0, 1 or 2 and includes recognised qualifications from ISCED 2011 level 3 programmes (see *Reader's Guide*), which are not considered as sufficient for ISCED 2011 level 3 completion, and do not provide direct access to post-secondary non-tertiary education or tertiary education.
- **Upper secondary or post-secondary non-tertiary** means that at least one parent has attained ISCED 2011 levels 3 and 4.
- **Tertiary** means that at least one parent has attained ISCED 2011 levels 5, 6, 7 or 8.

Methodology

For countries that submitted data using the true cohort method, it is possible to calculate two different completion rates (described below) which are computed for two different timeframes (theoretical duration N and three years later, N+3):

- completion rate of students who graduate at the same ISCED level which they entered: number of graduates in a given calendar year and ISCED level divided by the number of entrants to that same ISCED level N/N+3 calendar years before
- completion rate of students who graduate at any tertiary ISCED level: the sum of graduates from all tertiary ISCED levels in a given calendar year who entered a given ISCED level N/N+3 calendar years before.

Countries that submitted true cohort data either used first-time entrants to tertiary education (which considers only students who entered tertiary education for the first time) or new entrants to the tertiary level (which considers all first-time entrants to each tertiary level, regardless of whether they have pursued a different tertiary level before). Please see Annex 3 for the list of countries using each methodology (https://doi.org/10.1787/f8d7880d-en).

For cross cohort data, only one completion rate is calculated: the number of graduates in a given calendar year and ISCED level divided by the number of entrants to that same ISCED level N calendar years before.

If countries offer programmes of different theoretical durations within the same ISCED level, the completion rate of each programme is weighted by the number of new entrants to each programme.

Please see the *OECD Handbook for Internationally Comparative Education Statistics 2018* (OECD, 2018[8]) for more information and Annex 3 for country-specific notes (https://doi.org/10.1787/f8d7880d-en).

Source

Data on completion rates refer to the academic year 2016/17 and were collected through a special survey undertaken in 2018. Data for some countries may have a different reference year, please refer to Annex 3 for country-specific notes (https://doi.org/10.1787/f8d7880d-en). Countries submitted data using either the true cohort or cross cohort methodology.

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 B5 Tables

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/10.1787/888933981001

Table B5.1. Completion rate of full-time tertiary students, by level of education and gender (2017)

Panel A. True cohort completion

	Entered a short-cycle tertiary programme and completed any tertiary programme by…							Entered a bachelor's programme and completed any tertiary programme by…						
	Theoretical duration of programmes	The theoretical duration of the programme in which they entered			The theoretical duration of the programme in which they entered plus 3 years			Theoretical duration of programmes	The theoretical duration of the programme in which they entered			The theoretical duration of the programme in which they entered plus 3 years		
		Men	Women	Total	Men	Women	Total		Men	Women	Total	Men	Women	Total
		(1)	(2)	(3)	(4)	(5)	(6)		(7)	(8)	(9)	(10)	(11)	(12)
Countries														
Australia	*m*	m	m	m	m	m	m	*3-5*	29	37	34	66	73	70
Austria	2	64	73	69	81	87	84	*3*	22	30	26	53	63	58
Flemish Comm. (Belgium)[1]	*m*	m	m	m	m	m	m	*3*	27	38	33	61	72	67
French Comm. (Belgium)[2]	*m*	m	m	m	m	m	m	*3-4*	19	33	27	46	60	54
Brazil[3]	*m*	m	m	m	m	m	m	*4-5*	28	37	33	45	55	50
Canada[4]	*m*	m	m	m	m	m	m	*4*	41	53	48	m	m	m
Chile	*2-3*	15	31	23	38	54	46	*4-5*	11	19	16	45	60	54
Estonia	*a*	a	a	a	a	a	a	*3-4*	23	42	34	47	68	59
Finland	*a*	a	a	a	a	a	a	*4*	28	55	43	64	79	73
France[5]	2	62	60	61	78	75	77	*3*	34	44	41	61	70	67
Iceland	*m*	m	m	m	m	m	m	*3-4*	33	37	36	64	72	69
Ireland[6]	*2-3*	41	55	47	56	67	60	*3-6*	56	67	63	77	83	81
Israel[7]	*m*	m	m	m	m	m	m	*3-4*	55	64	60	79	87	83
Lithuania	*m*	m	m	m	m	m	m	*3-4*	52	68	61	57	72	65
Netherlands	*m*	m	m	m	m	m	m	*3-4*	20	35	28	62	77	70
New Zealand	2	59	69	65	68	76	73	*3*	27	40	35	73	79	77
Norway	2	61	41	55	68	57	65	*3-4*	38	47	44	65	77	72
Portugal	*m*	m	m	m	m	m	m	*3*	23	35	30	55	73	65
Slovenia	*3*	17	27	22	33	45	39	*4*	18	28	24	42	60	53
Sweden	2	30	45	37	39	57	48	*3*	32	48	42	45	63	56
Switzerland	*m*	m	m	m	m	m	m	*3*	35	42	39	78	84	81
United Kingdom[8]	2	57	62	59	71	79	75	*3-4*	70	74	72	83	87	85
United States[7]	2	9	8	9	30	32	31	*4*	33	43	38	65	72	69
Average		41	47	45	56	63	60		33	44	39	61	72	67

Panel B. Cross cohort completion

	Entered a short-cycle tertiary programme				Entered a bachelor's or equivalent programme			
	Theoretical duration of programmes	Men	Women	Total	Theoretical duration of programmes	Men	Women	Total
		(1)	(2)	(3)		(4)	(5)	(6)
Countries								
Germany[4]	*m*	m	m	m	*m*	76	83	80
Greece[4]	*m*	m	m	m	*4-5*	74	81	78
Japan	2	86	90	89	*4*	91	96	93
Korea	*2-3*	71	84	78	*4*	89	101	94
Latvia	2	51	69	61	*3-4*	33	53	48
Mexico	2	55	62	58	*5*	74	87	81
Slovak Republic	*2-3*	51	57	55	*3-4*	53	70	62
Spain	2	77	87	82	*4*	71	87	80
Average		65	75	70		70	82	77

Note: True cohort (individual-level data) and cross cohort (aggregate data) completion rates are not comparable with each other. Please refer to *Methodology* section for an explanation of the true cohort and cross cohort methodologies. The year of reference for the data (2017) corresponds to the graduation year three years after the theoretical duration of the programme. The reference year for the entrance cohort changes depending on the duration of programmes.

1. Completion rate of students who entered a bachelor's programme does not include students who transferred to and graduated from short-cycle programmes.
2. 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.
3. Data do not include entrants to 6-year bachelor's programmes, which correspond to about 2% of total entrants at this level.
4. Year of reference 2015.
5. Year of reference for entrance cohort is 2008. Graduation years vary depending on the theoretical duration of programmes.
6. Data for short-cycle tertiary refer only to the higher education provided in universities.
7. Year of reference for entrance cohort is 2003. Graduation years vary depending on the theoretical duration of programmes. The theoretical duration plus 3 years for bachelor's or equivalent programmes refers to the theoretical duration plus 2 years.
8. Data refer to estimated completion rates based on a modelled relationship between future graduates and students still enrolled.

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/10.1787/888933978208

Table B5.2. Completion rate of full-time tertiary students, by level of education and students' upper secondary programme orientation (2017)

True cohort only

	Panel A. Completion rate of students who entered a bachelor's or equivalent programme and completed any tertiary level														
	By the theoretical duration of the programme						By the theoretical duration of the programme plus 3 years						Share of students from vocational programmes in the entrance cohort		
	General upper secondary programmes			Vocational upper secondary programmes			General upper secondary programmes			Vocational upper secondary programmes					
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Countries															
Austria	15	24	20	28	37	33	49	60	55	58	66	62	54	48	51
Flemish Comm. (Belgium)[1]	33	47	41	22	26	24	76	87	83	48	55	52	46	40	43
French Comm. (Belgium)[2]	24	41	33	12	20	17	55	71	64	30	43	38	37	38	38
Chile	10	18	14	12	19	16	49	64	57	44	56	51	30	27	29
Estonia	23	41	33	18	41	27	49	69	60	34	60	45	14	8	11
Finland[3]	26	55	43	30	55	44	68	83	77	55	71	64	33	32	33
France[4]	35	45	42	c	c	c	64	72	69	c	c	c	c	c	c
Israel[1]	56	66	62	53	61	57	79	88	84	79	85	82	35	28	31
Lithuania	56	72	65	48	57	52	60	76	69	49	59	53	1	1	1
Netherlands	19	35	28	26	34	30	65	82	74	53	61	57	23	24	24
Norway	37	48	44	50	49	49	65	78	73	69	77	73	14	12	13
Slovenia	25	34	31	12	18	15	55	73	66	30	42	36	52	41	45
Sweden	34	49	43	33	55	47	49	67	59	44	69	60	24	29	27
Switzerland	29	40	36	50	50	50	78	85	83	80	81	80	34	17	25
Average	30	44	38	30	40	35	62	75	70	52	64	58	31	26	28

	Panel B. Completion rate of students who entered a short-cycle tertiary programme and completed any tertiary level														
Countries															
Chile	13	29	21	14	30	22	34	53	44	40	54	47	50	48	49
France[4]	65	67	66	48	32	40	83	84	84	59	42	51	21	21	21
Norway	44	43	43	71	39	67	57	64	61	77	55	74	84	31	69
Slovenia	26	36	32	14	19	16	44	54	50	28	38	32	69	51	60
Sweden	31	44	38	30	47	38	40	56	48	39	60	48	47	38	43

	Panel C. Completion rate of students who entered a master's long first degree programme and completed any tertiary level														
Countries															
Austria	33	44	40	42	44	43	61	72	68	59	64	62	35	37	36
Chile	32	33	33	12	9	10	76	81	78	41	50	46	1	1	1
Estonia	22	54	39	30	0	21	62	78	70	40	25	36	4	1	2
France[4]	52	50	51	m	m	m	m	m	m	m	m	m	m	m	m
Norway	54	52	53	61	50	56	88	91	90	90	91	90	4	3	4
Slovenia	31	39	36	31	26	29	57	70	65	47	57	51	7	3	5
Sweden	45	60	52	41	66	57	65	80	73	57	75	69	14	22	18

Note: The year of reference for the data (2017) corresponds to the graduation year three years after the theoretical end of the programme. The reference year for the entrance cohort changes depending on the duration of programmes.

1. Completion rate of students who entered a bachelor's programme does not include students who transferred to and graduated from short-cycle programmes.
2. 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
3. If the student has completed both upper secondary general and vocational education or if the data on previous education is missing, the student is reported under upper secondary vocational.
4. Year of reference for entrance cohort is 2008. Graduation years vary depending on the theoretical duration of programmes.

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/10.1787/888933978227

Table B5.3. Status of full-time bachelor's students at various timeframes after entry (2017)

True cohort only

	By the beginning of the second year of study				By the end of the theoretical duration of the programme					By the end of the theoretical duration of the programme plus 3 years				
		Transferred			Graduated					Graduated				
	Still enrolled in bachelor's or equivalent	To short-cycle tertiary	To a master's long first degree	Not enrolled in tertiary education[1]	From bachelor's or equivalent	From short-cycle tertiary or equivalent	From master's long first degree or equivalent	Still in tertiary education	Not graduated and not enrolled in tertiary education[1]	From bachelor's or equivalent	From short-cycle tertiary or equivalent	From master's long first degree or equivalent	Still in tertiary education	Not graduated and not enrolled in tertiary education[1]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Countries														
Australia[2]	87	0.5[d]	a	12	33	0.2[d]	a	49	17	69	0.6[d]	a	9	21
Austria	82	0.8	3.3	14	25	0.5	0.6	52	22	55	1.2	1.9	17	25
Flemish Comm. (Belgium)	86	m	a	14	33	m	a	42	25	67	m	a	3	30
French Comm. (Belgium)[3]	79	0.0	a	21	27	0.0	a	41	32	54	0.0	a	3	43
Brazil[4]	89	0.0	a	11	33	0.0	a	45	22	50	0.1	a	16	34
Canada[5]	86	2.7	0.0	12	45	3.1	0.0	33	19	m	m	m	m	m
Chile	80	3.2	0.2	17	13	2.3	0.1	59	25	47	6.5	0.3	17	30
Estonia	88	0.0	0.6	11	34	0.0	0.0	44	22	59	0.0	0.1	8	33
Finland	91	a	1.0	8	43	a	0.7	43	14	70	a	2.6	10	18
France[6]	79	11.0	1.7	9	34	7.2	0.0	39	20	59	8.0	0.4	12	21
Iceland	81	0.2	0.2	18	35	0.6	0.0	41	24	68	0.6	0.0	9	22
Ireland[6]	m	m	m	m	63[d]	x(5)	x(5)	m	m	81[d]	x(10)	x(10)	1	18
Israel	91	0.3	a	8	60	m	a	23	17	83	m	a	3	14
Lithuania	83[d]	x(1)	x(1)	17	61[d]	x(5)	x(5)	m	m	65[d]	x(10)	x(10)	m	m
Netherlands	88	0.2	a	12	28	0.1	a	55	17	69	0.3	a	12	18
New Zealand	89	1.3	a	10	32	2.6	a	51	14	74	2.9	a	6	18
Norway	86	0.3	1.3	12	43	0.2	0.2	39	17	70	0.4	1.7	9	19
Portugal	87	0.0	1.2	12	30	0.0	0.1	55	16	64	0.1	0.7	9	26
Slovenia	76	4.0	0.9	20	23	0.7	0.3	30	46	44	2.4	6.3	8	40
Sweden	82	0.5	1.8	15	41	0.5	0.6	30	29	54	0.6	1.8	12	32
Switzerland	92	0.0	0.0	8	39	0.0	0.0	49	12	81	0.0	0.0	7	12
United Kingdom	92	0.1	0.0	8	68	3.5	0.0	16	12	80	4.7	0.0	0	14
United States[7]	91	2.5	a	6	36	2.5	a	42	19	66	2.9	a	11	20
Average	85	1.5	0.9	12	37	1.3	0.2	41	20	64	1.8	1.3	9	24

Note: The year of reference for the data (2017) corresponds to the graduation year three years after the theoretical end of the programme. The reference year for the entrance cohort changes depending on the duration of programmes.

1. The columns for "not enrolled in tertiary education" or "not graduated and not enrolled in tertiary education" may include students who left the country before graduation.
2. Short-cycle tertiary includes students who transferred to/graduated from master's or doctoral programmes within the timeframe.
3. 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
4. Data do not include entrants to 6-year bachelor's programmes, which correspond to about 2% of total entrants at this level.
5. Year of reference is 2015.
6. Year of reference for entrance cohort is 2008. Graduation years vary depending on the theoretical duration of programmes.
7. Year of reference for entrance cohort is 2003. Graduation years vary depending on the theoretical duration of programmes. The theoretical duration plus 3 years refers to the theoretical duration plus 2 years.

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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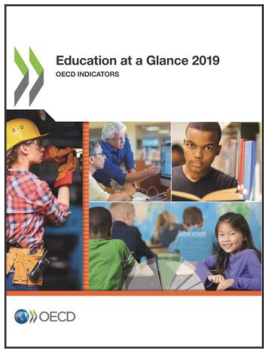

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