International students: A growing group of migrants in the OECD

Elisabeth Kamm

This chapter provides an overview of international students in OECD countries, their origin and destination countries as well as drivers of their mobility. It discusses how international students differ from domestic students in the OECD and provides the latest enrolment and permit statistics, in part impacted by the COVID-19 pandemic.

In Brief

- In 2020, there were 4.4 million international students enrolled in the OECD, accounting for 7% of all tertiary students. The most important receiving countries are the United States (22% of all international students), the United Kingdom (13%) and Australia (10%).
- The share of international students is higher at higher levels of education. Across OECD countries, international students make up 5% of students enrolled at bachelor's, 14% at master's, and 24% at the doctoral level in the academic year 2020.
- Since 2010, there has been a strong increase in international students in the OECD virtually everywhere. The absolute increase was largest in the United States, Canada and Australia, followed by Germany and the Republic of Türkiye, while the relative growth was largest in smaller destinations such as the Baltic countries and Slovenia.
- While the destinations of international students have diversified over the past decade, the main origin countries have largely remained stable, with China and India accounting for 22% and 10% of all international students, respectively. One in twelve international students in the OECD is a Chinese student in the United States.
- International students tend to study in their region of origin. In 2020, 29% of international students in OECD countries originated from the same broader geographical region. This was notably the case for three-quarters of international or foreign students in Austria, the Czech Republic, Denmark, Slovenia and the Slovak Republic (Europe); Chile, Colombia and Costa Rica (Latin America) and Japan and Korea (Asia).
- In most OECD countries, international students are more likely to study STEM subjects than domestic students, especially natural sciences, mathematics and statistics, and ICT subjects. In turn, international students are less likely to study subjects in the fields of education, health, and welfare. National data indicate a preference for studies in the field of engineering among Indian students.
- Despite the strong increase in recent years, international students enrolled account for only about 3% of all foreign-born people in an OECD country. In some destinations, however, this share is twice as high, as is the case in Japan, Poland and Türkiye, at around 7%.

Introduction

In the academic year 2020, 4.4 million international students¹ were studying in an OECD country, 70% more than a decade ago. International students are thus a rapidly expanding group of foreign-born.

For the individuals concerned, studying abroad is often an opportunity to access higher quality education and acquire new skills. International study experience is also a way to improve employability, not only in the origin and host countries, but also in alternative destinations. It also helps international students to expand their knowledge of other societies and to improve their language skills, especially English.

From a migration policy perspective, international students are a unique group of migrants, as they are often seen as pre-integrated migrants who have domestic credentials that are easily recognisable by employers and who have at least some experience and knowledge with respect to the host country, including the language.

Against this backdrop, this chapter provides an overview of the state of international student migration to OECD countries.² It begins with a comprehensive overview of international student populations in OECD countries, their fields of study, destinations, and origin countries, and how these evolved over time. It provides the latest data, including enrolment and permit data, and discusses impacts of the COVID-19 pandemic. Chapter 6 of this publication looks into specific policies to attract and retain international students, and Chapter 7 investigates the retention of international students and their economic impact.

Overview of international students in OECD countries

What is an international student?

For the purposes of this chapter, international students are individuals who left their country of origin to move to another country for study. This chapter therefore takes a broad definition of international students that goes beyond the one used in international education statistics (see Box 5.1). Indeed, from a migration management perspective, any type of study abroad that may affect the migration pathway is of interest, as long as the entry category is associated with educational purposes.

That notwithstanding, the focus of this chapter is on students enrolled in an educational course classified as ISCED5 and higher. This includes everyone enrolled in tertiary education, regardless of age, notably also in short-cycle tertiary education which is often more practically based, occupationally-specific or prepares for a degree programme. However, in some cases, other types of students from abroad may also be included, if they are covered by the same permit regime. The term international students may thus encompass students in non-university education such as VET and individuals attending specific language courses.

Specific language institutes and schools that offer intensive language training exist across the OECD. In many countries, it is enough to obtain a regular tourist visa to attend a language course, which is often only for a few months. In other countries, language programmes serve as a preparatory course to enrol in a full-degree programme and persons enrolled in such courses are considered international students. This is common in Specialised Training Colleges, post-secondary courses of Japan and in some Eastern European countries, where such preparatory courses allow international students to be able to study in the national language schools was 16% in 2011 and went up to 30% in 2018, although it declined slightly since (27% in 2019, 22% in 2020). In most countries, however, these groups of international students are rather small. In Germany for example, language courses and visa for non-tertiary education account for about 8% of the total international student visas. In practice, who is considered an "international student" depends on the data source used. In particular, education statistics build on enrolment data and may not well capture the underlying migration category (see Box 5.1).

A key distinction with respect to international students is between credit and degree mobility. Credit mobility refers to a situation where international students study abroad for a short period not leading to a specific degree. They then obtain educational credits from the host institution and thereafter return to their sending institution to complete their degree. In contrast, the term degree mobility refers to individuals who move to a country to obtain a full degree (such as a master's degree) at the destination. The lines between the two are increasingly blurring, however, due to dual degree programmes, which give a degree in both host and sending countries.

Box 5.1. Data and statistics on international students

Enrolment versus permit data

The most important data source on international students is the OECD-UNESCO database, which is based on enrolment statistics in education institutions and mainly focuses on tertiary degrees. Countries are requested to determine as country of origin of students the country in which they obtained the upper secondary qualification that provides access to tertiary education. When countries do not have access to this information, alternative measures may be used. These include, in order of preference, the country of permanent or usual residence, or citizenship. The term foreign student is used for students who do not have the citizenship of the country in which they study and is only used as an approximation in some countries when data on the other mentioned grounds is not available. This is notably the case in Colombia, Costa Rica, the Czech Republic, Hungary, Israel, Italy, Korea, the Slovak Republic and Türkiye (see Annex Table 5.A.1).

OECD countries also record residence permits issued for study or educational purposes. This permit data works to capture international students who do not benefit from free mobility zones (such as within the EU) as well as their families. Permits are issued for both credit and degree mobility, as well as sometimes for language courses, and can include students attending other educational programmes such as au pairs.

The COVID-19 pandemic and its impact on 2020 international students data

The COVID-19 pandemic had a major impact on international student migration, as is evidenced in the permit data presented below. However, it had only a minor impact on most enrolment statistics reported in this chapter. This is because reported enrolment data for 2020 generally refers to the academic year 2019/20, which in most OECD countries started in the fall of 2019. However, in a few OECD countries, the academic year 2020 started in February to April 2020, i.e. the early phase of the pandemic. This is the case in Japan, Australia and New Zealand. Especially the two latter countries registered a large decline in student enrolment in 2020.

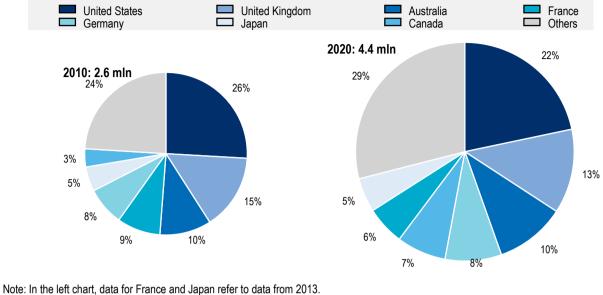
A profile of international students

Few origin countries dominate an increasingly diverse set of destinations

In 2010, less than one in four international students was enrolled in an OECD country outside of the United States, the United Kingdom, Australia, Germany, France, Canada and Japan. However, the share of international students enrolled in an OECD country outside these top-7 destinations has grown constantly, having increased to almost 30% by 2020 (Figure 5.1).

In 2020, 4.4 million international students were enrolled in the OECD area, more than a third of these (1.4 million) in a European OECD country. In the same year, more than one in five (22%) international students in the OECD studied in the United States, followed by more than one in ten in the United Kingdom and Australia. Despite a slight decline in the dominance of these destinations, in 2020 almost half of all international students (45%) in the OECD were still studying in these top-3 English-speaking countries. Germany and France are the major recipient countries in Europe, hosting about 14% of international students to the OECD as a whole, and 45% of those studying in a European OECD country. Among the top-7 destinations, Canada has seen the sharpest increase in its popularity among international students; 7% of all international students in the OECD studied in Canada in 2020, up from just 3% in 2010.

Figure 5.1. Main OECD destinations remain but others are increasing their market share

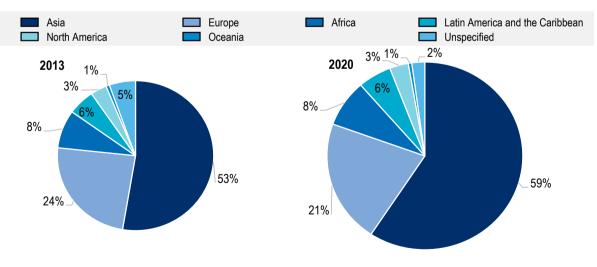


International students enrolled in OECD countries by destination, 2010 and 2020

Source: OECD Education at a Glance Database, 2022.

Most international students in OECD countries come from Asia. In 2020, about three in five international students in the OECD came from the continent, with half of the Asian students originating from two main origin countries: China (overall 22%) and India (overall 10%). Compared to 2013, the earliest year for which origin country data is available, the share of students from Asia has increased, while the share of Europeans remained stable (Figure 5.2).

Figure 5.2. International students in the OECD mainly come from Asia and Europe



Share of international students enrolled in an OECD country by continent of origin, 2013 and 2020

Note: For comparability reasons, data in 2013 include data from all OECD member countries as of 2022, to the extent available. Source: OECD Education at a Glance Database, 2022.

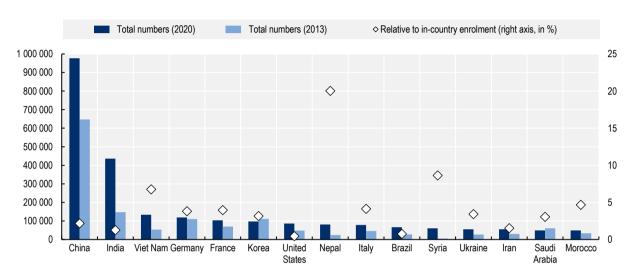
StatLink and https://stat.link/z3apdv

StatLink and https://stat.link/csu9eg

In 2020, 86% of international students in Australia originated from Asia, their share tops 76% in the United States, and 59%, in the United Kingdom. Taken together, these top-3 receiving countries alone host 57% of all international students from Asia.

A cross-tabulation by destination and origin shows China as the key origin and the United States as the key destination country. About 1 in 12 international students in the OECD is a Chinese student in the United States. This share has remained constant over the past decade.

Figure 5.3. China and India are key origin countries of international students in the OECD



Students enrolled in OECD countries by origin country and percentage relative to in-country enrolment, 2013 and 2020

Note: Relative to in-country enrolments refer to data from 2019 for Viet Nam, 2016 for Syria and 2014 for the United States. Source: OECD Secretariat calculations based on OECD Education at a Glance Database, 2022 and UNESCO tertiary enrolment data.

StatLink ms https://stat.link/4liya3

In spite of their large absolute numbers, relative to their overall in-country enrolment in tertiary education, numbers of international students in the OECD from China and India are not particularly high (Figure 5.3). Among the top-15 origin countries, Nepal, on the other hand, stands out as a country with a significant proportion of international students. The number of Nepalese students enrolled in the OECD in 2020 is equivalent to 20% of all tertiary students enrolled domestically in Nepal.

An estimation based on the global youth population aged 20-29 confirms this picture. About a third of the world's population in this age group lives in China and India, and thus their presence as international students in the OECD relative to their national youth population is not high. In contrast, among the top-15 origin countries, Syria has the highest share of the country's total youth cohort residing as international students in the OECD (2%). Among these, 62% of Syrian students in the OECD were studying in Türkiye and a further 26% in Germany. Indeed, in some cases taking up studies can be a complementary pathway for humanitarian migration (Box 5.2).

124 |

Box 5.2. Study as a complementary pathway for humanitarian migration

Complementary pathways for humanitarian migration, while no substitute for asylum, are an additional way for individuals in need of international protection to be admitted. Such regulated pathways include family reunification, work, and study permits. Particularly during periods of large-scale influx of (highly-educated) refugees (e.g. the current crisis in Ukraine), granting visas for educational purposes to humanitarian migrants provides host countries with an additional avenue of admission. Across OECD countries, study permits and visas for academic scholarships are primarily issued for tertiary programmes, although secondary programmes and apprenticeships are also not uncommon.

Since 2017, the OECD and the UNHCR provide a joint monitoring of such pathways. The latest edition shows that, in 2019, study permits made up 15% of the permits granted for non-humanitarian reasons to the seven populations in the study (Afghanistan, Eritrea, Iran, Iraq, Somalia, Syria, Venezuela), less than for work (17%) and family reasons (67%). In 2019, the 24 000 new study permits delivered to the seven populations considered amounted to 2% of the total number of study permits delivered by OECD countries.

Complementary pathways are generally associated with legal and administrative hurdles for refugees. Study permits, with eligibility (often) tied to educational attainment, are particularly difficult to access for humanitarian migrants. As such, while the number of visas granted for educational purposes was very low among the (low-educated and younger) refugee populations from Somalia, Eritrea and Afghanistan, it was comparatively higher among (better-educated) humanitarian migrants from Iran and Venezuela.

Overall, data from 2010 to 2019 show however that the number of study permits granted was stable over the decade (between 20 000 to 30 000) apart from a peak in 2014 and even declined in 2019. This is in contrast to the steady increase of work permits over the same period and a strong increase until 2017 among family permits. This suggests that study as a complementary pathway for migrants from these countries was not used to the same extent as other pathways.

Source: OECD-UNHCR (2021_[1]), Safe Pathways for Refugees II – OECD-UNHCR Study on Third-country Solutions for Refugees: Admissions for family reunification, education, and employment purposes between 2010 and 2019, <u>https://www.oecd.org/els/mig/Safe-Pathways-for-Refugees 2021.pdf</u>.

Countries in Central Asia (Turkmenistan, Uzbekistan, Afghanistan), the Near East (Azerbaijan, Syria), as well as Sub-Saharan Africa (Somalia and Guinea-Bissau) are the origin countries with at least 1 000 international students in the OECD in 2020 which have seen the strongest increase compared to 2013. Among the top-15 in 2020, as shown in Figure 5.3, the increase was strongest in Syria (a 12-fold increase), followed by Nepal and India, where numbers tripled. By contrast, the numbers of international students from Saudi Arabia slightly declined.

International students are of varying, yet overall increasing, importance in the OECD

In almost all OECD countries, the share of international students in tertiary education has increased over the last decade (Figure 5.4). Italy, Belgium, France and New Zealand stand out as the only OECD countries with a slight drop in the share of international students over this period, and only in Italy and Greece was the absolute number of enrolled international students in 2020 lower than in 2010.³ In most countries, one observes a parallel increase in absolute numbers of international students and their share of the student population. While the absolute increase since 2010 was largest in the United States, Canada and Australia, followed by Germany and Türkiye, the relative increase was largest in the Baltic countries and Slovenia.

126 |

Figure 5.4. International student mobility has been expanding virtually everywhere

2020
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
2010
<li

International students as a share of all tertiary students (in percentages), 2010, 2015, and 2020

Note: Divergence in data sources and definitions can lead to shares different from those reported by national sources. 2020 data typically refer to the academic year 2019/20 and thus the impact of COVID-19 is most visible in countries where the data refer to 2020, notably Australia and New Zealand.

Source: OECD Education at a Glance Database, 2022.

StatLink msp https://stat.link/5s839r

The share of international students is higher at upper levels of education, but this pattern varies across countries. On average across OECD countries, international students make up 5% of students enrolled at the bachelor's level, 14% at the master's level, and 24% at the doctoral level for academic year 2020 (Table 5.1).

In most countries, an increase in international students at the master and doctoral levels drives the overall growth observed over the last years. Relative to 2015, the increase among those enrolled in a PhD programme was largest in Hungary, Estonia and Germany. The increase among master's students was largest in Latvia, Estonia and Ireland. There is virtually no decline in shares of international students by education level observed between 2015 and 2020 with the exception of the United States, the only OECD country to experience a strong decline in the share of international students in PhD programmes. In 2020, 26% of PhD students in the United States were international students, down from 38% in 2015. Data suggest, however, that the drop actually occurred as early as in the academic year 2017.

Despite the increase in recent years, stocks of international students only account for a small share of the overall foreign-born population in OECD countries, on average 3% in 2019.⁴ In some destinations, however, this share is twice as high, reaching approximately 7% in Poland, Japan and Türkiye. Moreover, in countries that have a comparatively small foreign-born population, international students make up a larger share of the foreign-born. In contrast, in countries that have a large foreign-born population such as Luxembourg and Israel, or which have received large numbers of humanitarian migrants in recent years, the share of international students relative to the overall foreign-born population is small, below 2%.

Table 5.1. The share of international students is higher at higher levels of tertiary education

International students enrolled in OECD countries, 2020

	International tert	ary students	International	students as a s	hare of all (%)	Top three countries of origin in 2020		
	Total (thousands)	2020/19 change (%)	Total tertiary education	Master's or equivalent level	Doctoral or equivalent level			
Australia	458	-11	26	50	33	China, India, Nepal		
Austria	76	2	18	23	37	Germany, Italy, Bosnia and Herzegovina		
Belgium	53	2	10	20	33	France, Netherlands, Cameroon		
Canada	323	14	18	20	36	India, China, France		
Chile	13	20	1	4	19	Peru, Colombia, Venezuela		
Colombia	5	-5	0	1	2	Venezuela, Ecuador, Mexico		
Costa Rica	3	48						
Czech Republic	48	4	15	18	22	Slovak Republic, Russia, Ukraine		
Denmark	31	-4	10	20	36	Germany, Norway, Romania		
Estonia	6	16	12	18	26	Finland, Russia, Nigeria		
Finland	24	1	8	10	25	Viet Nam, Russia, China		
France	252	2	9	13	38	Morocco, China, Algeria		
Germany	369	10	11	17	23	China, India, Syria		
Greece	22	-26	3	1	2	Cyprus, Albania, Germany		
Hungary	38	7	13	21	25	Germany, China, Romania		
Iceland	2	23	9	11	42	United States, Philippines, Germany		
Ireland	24	-4	10	23	36	India, China, United States		
Israel	13	14	3	5	9	United States, Russia, France		
Italy	59	7	3	4	16	China, India, Iran		
Japan	223	10	6	10	21	China, Viet Nam, Nepal		
Korea	112	13	4	11	17	China, Viet Nam, Uzbekistan		
Latvia	10	16	13	27	12	India, Uzbekistan, Germany		
Lithuania	7	4	6	12	7	Belarus, India, Ukraine		
Luxembourg	4	14	48	75	89	France, Germany, Belgium		
Mexico	43	23	1	2	8			
Netherlands	125	13	13	19	48	Germany, Italy, China		
New Zealand	44	-20	17	34	49	China, India, Australia		
Norway	13	5	4	7	23	China, Sweden, Germany		
Poland	62	11	4	5	8	Ukraine, Belarus, India		
Portugal	44	19	12	14	33	Brazil, Cabo Verde, Guinea-Bissau		
Slovak Republic	14	9	12	11	12	Ukraine, Czech Republic, Serbia		
Slovenia	6	15	8	9	20			
Spain	82	6	4	11	19	France, Colombia, Ecuador		
Sweden	32	3	7	12	36	China, India, Finland		
Switzerland	58	4	18	29	57	France, Germany, Italy		
Türkiye	185	4	2	8	7	Syria, Azerbaijan, Turkmenistan		
United Kingdom	551	10	20	40	41	China, India, United States		
United States	957	-2	20 5	40	26	China, India, Korea		
		-2						
OECD average	116	47	10	17	27	China India Viat Nam		
OECD Total OECD – Europe	4390 1388	17 8	7 8	14 13	24 24	China, India, Viet Nam China, Germany, India		

Note: Stocks of international students: Data for Colombia, Costa Rica, the Czech Republic, Hungary, Israel, Italy, Korea, the Slovak Republic and Türkiye refer to foreign students instead of international students; exclude Erasmus students in European countries. Source: OECD Education at a Glance Database, 2022.

In 2020, the number of enrolled students OECD-wide roughly corresponded to about 14% of the foreignborn youth cohort aged 15 to 34. Thus, about one in seven young immigrants in the OECD is an international student. In Eastern European countries with small migrant populations, such as Poland, and in countries where the foreign-born population is rather old, as in Latvia and Lithuania, international students account for more than half of all young foreign-born. In Estonia, they account for over a third and more than one in five young foreign-born in Canada, Australia, Finland, the Netherlands and Portugal is an international student.

In terms of socio-demographics, international students are more likely to be male and slightly older than the national student population. In 2019, 52% of international students in the OECD were men, which contrasts with the prevalence of women in OECD tertiary education systems. Male students account for over 55% of international students in some countries, including the Baltic countries, Finland, Japan and Türkiye. In contrast, in Belgium, Iceland, Israel, Korea, the Slovak Republic and Slovenia, at least 55% of international students are women. Research has also shown that female students are over-represented in the European ERASMUS+ credit mobility programme (Böttcher et al., 2016_[2]). There is no standardised age data available on international students in the OECD, but data from the EUROSTUDENT VII survey show that, on average, international students in Europe are somewhat older than the overall student population in their host country, a fact related to their likelihood to enrol in more advanced degree programmes. These survey data do not, however, include PhD students. In France, where the overall student population is the youngest in Europe at a median age of just 21, international students have a median age of 24 years. In the Nordic countries, by contrast, the median age of students is the highest, reaching 25 years and even higher. International students in these countries have a median age between 25 and 32.

International students make distinct academic choices

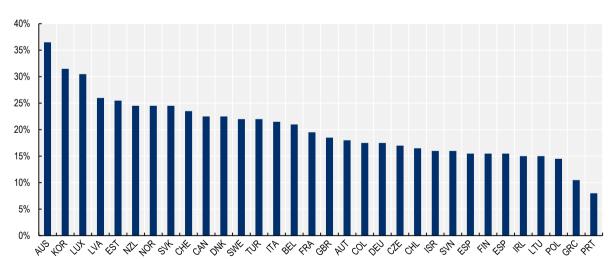


Figure 5.5. Field-of-study-choices within countries are often similar

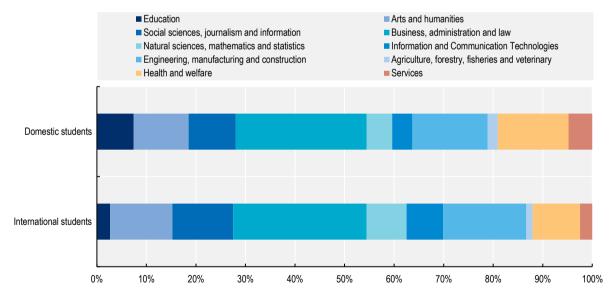
Dissimilarity index between international and domestic students, by broad field of study, percentages, 2020

Note: The dissimilarity index measures the percentage of international students that would need to change their study field to mirror the study choice distribution of domestic students in the host country. A 100% score would reflect complete mismatch between the study choices of international students and domestic students, a 0% would reflect full overlap. The percentage score is calculated by summing the absolute percentage differences for each study field between international students and domestic students, divided by two. Source: OECD Secretariat calculations.

International students enrol in different study subjects from domestic students. A dissimilarity analysis shows that, overall, the differences are not very large. In most countries, around 20% of international students would need to change their study field to mirror the study choice distribution of domestic students in the host country (Figure 5.5). The countries that stand out for the most unequal study choices between international and domestic students are Australia, Korea and Luxembourg, where more than 30% of international students would have to change fields of study to match the distribution of domestic students across fields. However, the dissimilarity index does not provide a complete picture of subject-specific differences, given the fact that different fields of study are more popular overall in certain countries.

In most OECD countries, international students are somewhat more likely (32% vs. 24%) to study science, technology, engineering, mathematics (the so-called STEM subjects) and Information and Communication Technologies (ICT) (Figure 5.6). However, this is not the case in Colombia, Italy, Korea, Lithuania, Portugal, the Slovak Republic and Spain. In Australia, the difference in those enrolled in the field of ICT is particularly large: while 14% of international students are enrolled in ICT subjects, this share is only 4% among domestic students. Across OECD countries, international students are less likely to study subjects in the fields of education, health, and welfare. Large differences exist in several countries (see Annex Table 5.A.2 for an overview). For example, in Austria and Korea, international students are more than twice as likely as domestic students to study a subject in the field of social sciences, journalism, and information. This is also true, though less pronounced, in Lithuania and Slovenia. In Iceland, Norway, Sweden and Switzerland, international students are about three times more likely to study natural sciences, mathematics, and statistics than domestic students (in Chile, Israel, France and Türkiye, they are about twice as likely to do so). Finally, international students are about twice as likely as domestic students to study as subject.

Figure 5.6. International students are overrepresented in natural sciences and ICT



Share of international students and domestic students, by field of study, OECD total, 2020

Note: International students include nationals who pursued upper-secondary studies abroad and returned to their home country. Source: OECD Education at a Glance Database, 2022.

StatLink and https://stat.link/1kljar

National data⁵ on field or subject choice by origin country reveal large differences, with few patterns by origin or destination. They suggest, however, that Indian students are strongly overrepresented in STEM subjects, particularly in engineering. In the United States, in the 2017/18 school year, almost half of international students were studying STEM subjects. This share was around 45% for Chinese students and 79% for Indian students (Congressional Research Service, 2019_[3]). In the Netherlands in 2016/17. over half of Indian students were enrolled in engineering degree programmes, a strong overrepresentation compared to other origin countries (Nuffic, 2017[4]). The three largest groups of international students in Germany predominantly study subjects in the field of engineering, with about 66% of Indian, 61% of Syrian, and 50% of Chinese students enrolled in 2021. Overall, about 40% of international students studied engineering in Germany, while the share was only 24% among domestic students (Destatis, 2022(5)). In France, in 2018/19, almost two in three (63%) Indian students were enrolled in a science course. This concentration is higher than that of any other top-20 origin country in France. Moroccan and Algerian students also often chose a subject in the field of sciences, each at 44%, and only a few (5-6%) were studving law and political sciences. Chinese students in France are more equally distributed across study fields, including economics, social, and natural sciences but seldom study law or political science (2%) or health and medicine (1%). Students from Sub-Saharan Africa, by contrast, are most likely to study political sciences and law (15-20%) than students from other top-20 origin countries (Campus France, 2020₍₆₁), In Luxembourg, non-EU students enrolled in masters' programmes account for half of all enrolled students in disciplines related to science, technology, and medicine, while they comprise only 17% of the overall enrolled student population.

In Germany, international students⁶ appear less likely than the overall student population to change their study subject. An analysis based on the course of study statistics shows that, of all the students who began their first year at German universities in the 2018/19 semester, while 14% of all bachelor's level students changed their study subject by their third semester, only 9% of international bachelor's students had done so. The change rate for those starting a bachelor's degree was highest for those studying mathematics and natural sciences, for all students (19%) as well as international students (14%). Overall, the change rate at the master's level was much lower, at 4% for all and 3% for international students (Destatis, 2022_[7]).

The COVID-19 pandemic profoundly impacted on international student migration

In 2020, there was a strong decline in permits issued to international students across almost all OECD countries (Table 5.2). However, in those countries where 2021 data are already available, these numbers are back to pre-pandemic levels in about half of the countries. The full picture of the impact of COVID-19 on international students has not yet emerged, as the pandemic is not reflected in most of the 2020 enrolment data (Box 5.1).

The COVID-19 pandemic affected not only international student numbers but also influenced the decisionmaking processes of receiving institutions and countries. This includes the development of new policies for attraction, study, and retention, but also a shift in the general focus on the salience of international study for countries of origin and destination. Many of these consequences are still unfolding, as the temporary provisions in place have often ended.

Across the OECD, specific measures were put in place to ensure that international students could still be eligible for student visas as well as to prevent visas and permits from being withdrawn. To limit delays in the application procedure for international student visas, many OECD countries allowed online application for visas or submission of application documents.

From an attraction perspective, the COVID-19 pandemic challenged in-person outreach efforts. In some cases, for example in Japan, the work of national agencies and universities to attract students shifted to virtual formats including virtual student fairs. Reports from higher education institutions suggest that, while there is a desire to develop a hybrid approach, virtual outreach is likely to shape recruitment in the future, given that it allows institutions to reach additional audiences at lower costs.

Table 5.2. Inflows of international tertiary-level students in OECD countries, 2016-21

Number of residence permits issued for study purposes

		Nu	mber of residence	permits issued		
	2016	2017	2018	2019	2020	2021
			Thousa	nds		
Australia	136.8	156.6	162.9	173.4	122.6	65.6
Austria	4.5	4.1	3.8	3.6	2.2	4.0
Belgium	6.3	6.9	6.9	8.7	5.7	9.2
Canada	105.9	134.7	151.9	171.4	50.8	216.7
Chile	1.5	1.5				
Czech Republic	5.7	2.9	3.5	6.1		
Denmark	9.2	8.9	8.9	8.5	5.0	5.3
Estonia	0.9	1.1	1.2	1.3		
Finland	6.3	5.2	5.2	5.2	3.2	5.8
France	71.2	78.1	80.9	86.5	70.2	82.0
Germany	37.3	39.5	48.0	49.2	12.4	
Greece	0.3	0.3	0.3	0.3		
Hungary	7.8	10.8	10.8			
Iceland	0.4	0.5	0.5	0.4		
Ireland	21.4	27.6	30.2	34.7	14.7	
Italy	8.5	2.9	3.2	2.9	0.7	
Japan	108.1	123.2	124.3	121.6	49.7	11.7
Korea	65.1	72.7	82.7	86.6	52.4	65.9
Latvia	1.3	1.6	2.3	2.4		
Lithuania	0.9	0.9	1.1	1.2		
Luxembourg	0.2	0.4	0.3	0.4	0.2	
Mexico	4.3	3.7	6.1	5.7	2.8	4.6
Netherlands	15.8	17.0	18.3	20.2	11.8	20.4
New Zealand	39.5	39.1	37.5	38.6	8.8	1.1
Norway	3.2	3.8	3.6	3.8	2.0	3.4
Poland	21.3	21.6	26.0	6.1		
Portugal	3.5	4.9	8.4	13.4	12.3	10.9
Slovak Republic	1.5	1.7	2.0	2.6		
Slovenia	1.3	1.3	1.5	1.8		
Spain	35.6	39.7	42.0	45.0	28.1	
Sweden	9.0	10.4	10.2	10.8	6.6	8.5
Switzerland	11.3	11.2	11.2	11.4	11.4	
United Kingdom	270.7	305.8	330.6	376.1	221.9	368.6
United States	471.7	393.6	362.9	364.2	111.4	366.3
Total	1 488.5	1 534.0	1 589.1	1 663.9		
Total EU/EFTA	285.0	303.1	330.2	326.4		

Note: Data refer to international tertiary-level students, including students enrolled in language courses (excluding free mobility students). The data do not include professional training courses.

Source: OECD International Migration Database, 2022.

StatLink ms https://stat.link/1co0l3

In many countries, it was – and remains – impossible to obtain a residence permit for purely online studies. However, given the pandemic, Israel admitted international students for 2020/21 whether or not classes were online. In Australia, the shift to remote studies did not have an impact on compliance with visa conditions, and in the United States, international students enrolled for the fall semester 2020 were allowed to remain in the country even though studies were remote. Periods of online study have also been counted for access to post-

graduation permits in some countries. This was possible in Australia, Austria, Canada, Denmark, Greece, Hungary, Japan, Korea, Lithuania and Poland. In Switzerland, online study from abroad was excluded from this calculation, but online study from within the country was allowed to access post-graduation permits.

In most OECD countries, provisions for labour market access during study differed by type of study (inperson or virtual). It was only in the Netherlands, Poland, the Slovak Republic and Switzerland that periods of online studies were treated the same way as in-person for the purpose of work, provided the student was physically present in the national territory.

Many countries also lifted restrictions on maximum allowable work hours during the study period and opened up international students' access to national funds and other financial support mechanisms. Australia, Ireland, New Zealand, and the United Kingdom were four countries that lifted working hour limits, with certain exceptions. In the United Kingdom, the lifting of restrictions only applied to certain jobs in the health sectors for example. Norway and Poland introduced specific scholarships for students in financial hardship.

Given the all-online study environment, the pandemic also raised questions about the connection between student fees and international students' ability to benefit from services. Notably, only a few countries adapted their student fees during the COVID-19 pandemic, among them Hungary, Italy, Korea, the Netherlands, Poland, and the United States, though to varying degrees (OECD, 2020_[8]). Survey evidence suggests that a large majority of prospective international students (80%) feels that fees should be discounted if students are unable to study in person (Quacquarelli Symonds, 2021_[9]). It is not yet clear if this has led to an actual shift in international students' destination choices.

From a retention perspective, a decline in incoming international students implies a decreased potential talent pool in the years to come. In reaction, some countries where international students are a core feeder to high-skilled migration schemes provided specific temporary provisions. From May to November 2021, Canada temporarily granted 40 000 international graduates already in Canada eligibility to apply for permanent residency.

The special case of intra-European study exchange and Erasmus+

Erasmus+ is the EU's programme to support, among other objectives, international student migration. By the end of 2020, Erasmus+ and its predecessor programmes⁷ have reached close to 12 million overall participants (European Commission, 2021_[10]).

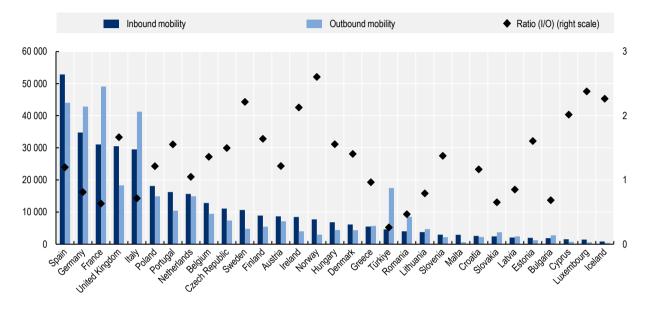
The higher education programme allows students to spend 2-12 months, typically one or two academic semesters abroad, generally without obtaining a degree in the higher educational institution abroad. Hence, international students in the programme are credit seeking, in contrast to degree seeking students, which are the focus of the remainder of this chapter.

A relatively easy access through an established institutional framework of co-operation between universities via an inter-institutional agreement characterise the higher education programme. A student can benefit from Erasmus+ mobility for up to 12 months at each level of studies (bachelor, master, PhD) and receives a scholarship for covering additional costs connected to living abroad. The amount depends on the country and contributes to covering costs of living abroad and related travel.

The higher education programme has grown enormously over the past decades, in part due to new countries accessing the programme and an inclusion of new forms of mobility such as traineeship in its framework. Created in the academic year 1987/88 and supporting around 3 200 students across the initial 11 participant countries back then, annual participation in tertiary student mobility was 350 000 participants in 2018/19. This figure includes both students enrolled for one or two semester in higher education (about 2/3 of the total) as well as more practical learning experiences such as traineeships (European Commission, 2020[11]).

Five large European OECD countries accounted for the bulk of the higher education programme in recent years: Spain, Germany, France, the United Kingdom and Italy (Figure 5.7). In 2018/19, half of all incoming students stayed in one of these five countries, and 58% of those outgoing came from one of these countries.

Figure 5.7. Most countries welcome more students than they send abroad with Erasmus+



Inbound and outbound Erasmus+ students in higher education, call 2018/19

Note: The data includes student mobility for studies and traineeships. Partner countries are not included in the graph. 96% of outbound and 99% of inbound mobility in 2018 was realised between the programme countries included in the figure. Source: Data adjusted from ANNEX 15 – KA103/KA107 – Higher Education student mobility under Call 2018 – Mobility periods summary per country, European Commission (2020[12]), "Erasmus+ annual report 2019: statistical annex", <u>https://data.europa.eu/doi/10.2766/431386</u>.

StatLink ms https://stat.link/185jno

Some countries show a strong imbalance in regards to numbers going abroad (outbound mobility) and numbers arriving (inbound mobility). Türkiye and Romania, for example, send much more students abroad then they receive under Erasmus+, while the opposite is the case for Norway, Ireland and Sweden.

In 2019/20, Germany, France and Italy were net sending countries, while Spain and the United Kingdom were net receiving countries. Since the start of the new Erasmus+ programme cycle in 2021-27, the United Kingdom is no longer participating in the programme.

Among the 2 million student mobilities realised in higher education over the latest Erasmus+ programme cycle (2014-20), 64% were bachelor and 31% at master level. Only 3% were from the short study cycle (ISCED 5) and 1.4% from doctoral level (European Commission, 2021_[10]).

Eurostudent⁸ data shows that overall credit-mobility for tertiary study in Europe is more common during the master than bachelor cycle. About 8% of respondents have realised at least a temporary enrolment abroad; 14% of respondents in master degrees and 7% of respondents in bachelor degrees. Among all students in Europe covered by the survey that went to another country for study, two-thirds (64%) took part in Erasmus+. In total, 19% of the surveyed students have realised study-related stays abroad during tertiary education below PhD level, when other forms of mobility such as internships or work placements are included (Hauschildt et al., 2021_[13]).

Some other characteristics of Erasmus+ participants are noteworthy. Participants are more likely to study humanities and arts, social sciences, business and law, as well as engineering, manufacturing and construction. In addition, women are more likely to participate in Erasmus+ than men, 58% over the period 2014-20, and this figures has remained relatively stable over time (European Commission, $2021_{[10]}$). The gender gap is observed across countries and subjects (Böttcher et al., $2016_{[2]}$; Benedictis and Leoni, $2020_{[14]}$). What is more, students with low socio-economic background are less likely to participate (European Commission, $2019_{[15]}$; Netz and Grüttner, $2020_{[16]}$). In particular, students with high-educated parents more often indicate intending or preparing a temporary study abroad, and financial support by parents is mentioned as a contributing factor (Hauschildt et al., $2021_{[13]}$; Meng, Wessling and Mühleck, $2020_{[17]}$). The latest impact study identified the Erasmus+ scholarship as particularly important for students from Central and Eastern Europe. One in three participating students from Central and Eastern European Programme countries reported the grant to be a main driver for participation, compared with one in four for participating students from a disadvantaged background⁹ (European Commission, $2019_{[15]}$).

For the current programme cycle 2021-27, the Erasmus+ programme budget almost doubled to EUR 26.2 billion, compared with EUR 14.7 billion for 2014-20. The aim is to triple the number of beneficiaries, reach out to students from all social backgrounds, build stronger relations with the rest of the world, focus on promoting forward-looking study fields, and promote a European identity (European Commission, 2021^[18]).

Who studies where? Drivers of international student migration

Many factors drive an individual's decision to study abroad and to select a specific destination. This section discusses macro factors beyond the control of policy makers as well as selected determinants of individuals' destination choice that can be directly influenced by national policy. Hence, the focus is on key "pull" factors in the host countries, rather than on economic and social forces within the home country, which "push" students abroad. Various other factors, including personal liberty and safety, lifestyle and climate preferences, family and network ties, as well as the perceived educational quality, drive destination choices but are not covered here. The attractiveness of certain OECD countries to particular students is a result of the interplay of various driving factors, as well as policies in place (Box 5.3).

Box 5.3. The attractiveness of OECD countries to university students

In 2019, the OECD assessed for the first time how OECD countries fare in attracting talented migrants. Three different profiles of talent were considered: workers with graduate (master's or doctorate) degrees, entrepreneurs, and university students. The top-5 most attractive countries to university students in this exercise were Switzerland, Norway, Germany, Finland, and the United States. The analysis highlighted how international university students are attracted to a different set of countries than workers or entrepreneurs and examined the key role of policies.

In the assessment, most English-speaking countries (United States, Canada, Australia, the United Kingdom and New Zealand) score high due to language environment in addition to their tertiary education spending. By contrast, Norway, Germany and Switzerland rank high as they allow international students broad access to work during studies, as well as applying the same or no (Norway) tuition fees to domestic and foreign students. Future prospects are also considered, favouring countries like France and Italy, which allow easy transition to work permits after graduation.

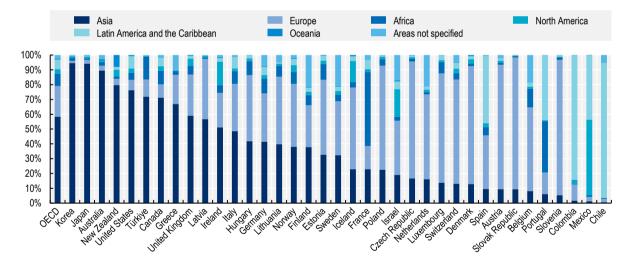
Note: An update of the OECD Indicators of Talent Attractiveness is forthcoming.

Macro factors shape international students' destination choices

Several macro factors beyond the control of policy makers shape international students' destination choice. Key among them are geographical proximity, shared official languages, and the presence of a diaspora community.

Geographical distance from the country of origin has been found to have a significant negative effect on international student flows in several cross-national studies (Abbott and Silles, 2015_[19]; Beine, Noël and Ragot, 2014_[20]; Didisse, Nguyen-Huu and Tran, 2018_[21]; Kaushal and Lanati, 2019_[22]). Many students remain in their region of origin even when seeking an international experience (Figure 5.8). Overall, in 2020, 29% of international students in OECD countries originated from the same geographical region as their country of study. This share is particularly high in some countries. In Korea and Japan, over 90% of international or foreign students originated from Asia. Similarly, 95% of international students studying in Mexico are from the American continent. Fellow Europeans dominate the share of international students in Austria, the Czech Republic, Denmark, the Slovak Republic and Slovenia. New Zealand is the only OECD country with a sizeable share of international students from Oceania (7%), mostly from Australia. In about two-thirds of OECD countries, at least half of the international student population originates from only one world region. However, the international student population is somewhat more diverse in Finland, France, Germany, Ireland, Israel, Portugal and Türkiye, where at least 10% originate from three different continents.

Figure 5.8. Most international students stay in their region of origin



Percentage of international students in OECD countries by broad region of origin, 2020

Note: The OECD average is based on the weighted average of countries included in the graph. Source: OECD Education at a Glance Database, 2022.

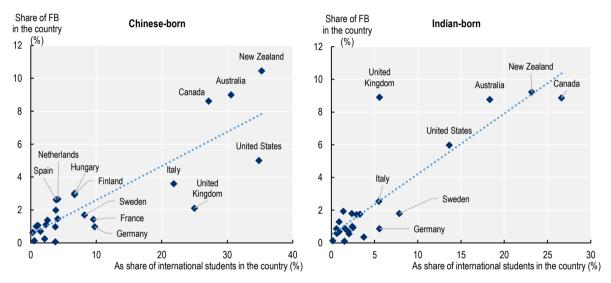
StatLink ms https://stat.link/7z3pmo

In addition to geographic distance, shared first language is a key factor in international tertiary educational mobility. In 2020, half of the international students in France came from the African continent, with French-speaking Morocco (13%) and Algeria (9%) accounting for by far the largest shares. Overall, one in three students from an African country studying in an OECD country was studying in France. The same pattern is evident for Brazilian (41%) and Portuguese-speaking African international students (22%) enrolled in

136 |

Portugal and for Latin American students in Spain (46%). However, this might reflect a broader set of factors beyond language, including economic ties and existing networks. Indeed, previous studies have shown a positive network effect – an increasing share of international students studying in a country with a diaspora of the same origin country (Perkins and Neumayer, $2014_{[23]}$). The literature has described the presence of country nationals at the destination as a "magnet for international students", the effect of which increases with the level of education of the network at the destination (Beine, Noël and Ragot, $2014_{[20]}$). National evidence, for example from the United States, shows that skilled work visa issuances to a country are positively and significantly related to the number of international students from that country (Shih, $2016_{[24]}$).

Figure 5.9. Shares of Chinese- and Indian-born students correlate with their migrant population



The share of Chinese- and Indian-born students relative to their share of the foreign-born population, 2019

Note: All data refer to the year 2019. Indian-born students in Latvia were excluded from the graph. Source: OECD Secretariat based on Education and Migration Databases, 2022.

For the two main countries of origin, a strong correlation between the share of foreign-born population and the share of international students is only visible for English-speaking countries (Figure 5.9). The United Kingdom provides an interesting case of contrasts. The share of international students from China is high (25%), while the share of Chinese-born among the overall foreign-born population is low (2%). Available evidence for the United Kingdom suggests that many Chinese do not stay in the United Kingdom following their studies (UK Department for Education, 2022_[25]). For Indian-born, this picture is reversed. The United Kingdom has a rather low number of Indian international students relative to the United Kingdom's large Indian-born population. Key factors, in addition to language and historic ties, seem to be study fees and options to stay in the country after studies. Data from Australia, for instance, suggest that Indian students enrol at universities that charge lower course fees relative to the top universities for the same access to a post-study work visa and potential to obtain a permanent visa (Birrell, 2019_[26]). Generally, it may be that Indian students tend to choose countries with good stay prospects after graduation but comparatively lower study fees.

StatLink msp https://stat.link/n4ucya

Tuition fees and admission

The role tuition fees play in attracting international students is not clear-cut. Student fees can act as a signal of the quality of education, in particular in those countries with a positive reputation. In such cases, higher fees tend to attract international students. A reverse causality effect also exists, whereby those countries and universities that already attract high numbers of international students, predominantly English-speaking OECD countries, can afford to charge high fees based on their popularity (Beine, Noël and Ragot, 2014_[20]). Charging tuition fees allows universities to maintain a constant funding stream, which, in turn, allows them to improve their educational rankings, increase in prestige and research output, and subsidise the cost of enrolling additional domestic students (Chen, 2021_[27]).

Changes in study fees for international students have led to a variety of outcomes. For instance, the introduction of tuition fees in Sweden for students of countries outside the EU and EEA in 2011 led to a sharp decrease of new enrolments from this group the first year, down by 80%. The sharp decrease in new students consisted for the most part of fewer students from Bangladesh, Ethiopia, Türkiye and Ukraine. A similar reform in Denmark in 2006 introduced tuition fees for foreign students and led to a reduction by 20% in the first year (Sanchez-Serra and Marconi, 2018[28]). After the first year, the number of new international enrolments started to increase in both Denmark and Sweden and have since then returned to about the same levels as before the respective reforms. One important reason for this is the expansion and introduction of new scholarships. An evaluation of the Swedish reform has shown that the long-term impact of the reform has been on the composition of incoming student groups, with fewer students from poorer or/and less democratic countries seeking entry. Without scholarships, it is estimated that only a fraction of students would likely originate from these countries (Bryntesson and Börjesson, 2019[29]). A recent evaluation of a similar reform in Finland in 2017 showed that while the number of international students in Finland initially declined as well, the number now exceeds the level preceding the introduction of fees. Here the reform coincided with an increase in the provision of foreign-language degrees as well as enhanced efforts to attract and support international students, likely explaining the different outcome (Ministry of Education and Culture, 2022[30]).

In Germany, throughout the years 2006-14, 7 out of the 16 federal states introduced a fee only to repeal it soon thereafter. Analysis of these reforms shows that only one state (Lower Saxony) significantly reduced its international student intake upon introducing fees, while the remaining fee-reintroducing states did not lose international students (Zullo and Churkina, 2021_[31]). Recent evidence from Italian universities shows a robust and negative effect of fees on international student intake (Beine, Delogu and Ragot, 2020_[32]). Offering foreign students the same subsidies to tuition fees as domestic students (and also granting them and their partners some rights to work) more than doubled the number of new entrants to doctoral programmes in New Zealand in 2006, the year the changes took effect, compared to a slight decline in other tertiary programmes (OECD, 2017_[33]).

The existence of affordable tuition options is usually listed in international student surveys as a key decision factor when choosing a course (Quacquarelli Symonds, 2021_[9]). However, the definition of "affordable" is origin country-specific. For example, survey data from the Czech Republic suggest that the main reason North Americans choose to study in the Czech Republic is the comparatively low tuition fee (57%), while for the Slovaks, who face similar if not cheaper costs in their home country, this is among the least important reasons (13%) (Michaela Kudrnáčová et al., 2020_[34]). Tuition fees can also be an obstacle to attracting students from lower socio-economic backgrounds. Previous work has shown that students from wealthier socio-economic groups are more likely to go abroad for their tertiary education (Waters and Brooks, 2010_[35]; Hauschildt et al., 2015_[36]). In the latest EUROSTUDENT survey wave, 60% of respondents identified financial burden as the main obstacle to (temporary) enrolment abroad. Likewise, 37% of respondents to a special Eurobarometer in 2018 identified lack of financial means as a key reason not to study abroad, though this ranked as a third concern, behind the lack of an opportunity and family, personal, and work reasons.

An additional admission factor that appears relevant, though understudied in the academic literature, is how quickly international students receive a response after submitting their application. Survey data show that international students have high expectations, and among over 100 000 respondents, 71% claim that it is extremely or very important that they hear back quickly from a university after making an enquiry. Indeed, 31% of prospective international students expect their application to be processed within three days (Quacquarelli Symonds, 2021^[9]).

The role of language of instruction

Language affects tertiary education mobility decisions in multiple ways. First, a common official language has been shown to be a key explanatory variable for bilateral student mobility (Abbott and Silles, 2015_[19]), a connection also evident in OECD stock data, as discussed above. Second, the goal of improvement of host-country language skills is a key factor for student mobility, in particular for those choosing English-speaking destinations. English language improvement has been shown to be among the top-3 influential factors for picking the United States as the destination (Nicholls, 2018_[37]), and improving foreign language skills has been found to be one important reason for Chinese students to study abroad, especially in the United Kingdom (Counsell, 2011_[38]).

On the other hand, research on the role of language learning in students' motivation to study in non-English-speaking destinations is limited. A study of ERASMUS (internal European) mobility found that language improvement was ranked only sixth on a 14-item scale, and so can be considered as relatively unimportant (Lesjak et al., 2015_[39]). A survey examining students' decision to enrol in international exchange programmes in Spain or Germany specifically, however, found that language improvement and practice ranked third and second on a list of 26 key motivations (Castillo Arredondo et al., 2017_[40]).

A perceived lack of foreign language skills has been shown as an obstacle to the individual decision to study abroad (see (Netz, 2015_[41]) for examples of European countries). In a 2018 Eurobarometer survey, one-third of young European respondents, across all education levels, declared themselves unable to study in more than one language. Nevertheless, 77% of young Europeans say they would like to learn a new language, while 84% would like to improve the knowledge of a foreign language they had previously acquired.

The language of instruction – and in particular, English as the medium of instruction (EMI) – in higher education has become a dominant theme of discussion, both in academic literature and the political sphere (for an overview see (Unangst, Altbach and de Wit, 2022_[42])). Debates include discussion of perceived advantages, such as attracting more international students and opportunities for national students through improved English knowledge, as well as concerns about language quality and the risk of exclusion of certain groups (Macaro et al., 2017_[43]). For example, recent survey data from the Czech Republic suggest that almost a quarter of international students (23%) are dissatisfied with the quality of teaching, mainly due to a low standard of English spoken by teachers, whereas among those studying in Czech, only 7% are dissatisfied with their course (Michaela Kudrnáčová et al., 2020_[34]).

International students are strongly overrepresented in English-course programmes. In Denmark for example, in 2020, international students made up 40% of those studying in English-language programmes compared to just 2% in programmes taught in Danish. In Poland, in the academic year 2020/21, foreign students made up 4% of the programmes thought in Polish, but 65% of those taught in English. Overall, however, about 61% of foreign students studied in Polish, a high share. Hungary is an interesting case, as it offers higher education programmes in English, French, Hungarian and German. Data on enrolment rates by the language of education in Hungarian higher education from the 2021/22 winter semester show that only 4% of students studying in Hungarian are international students. By contrast, 95% of those studying in German are international students, whereas just 5% are Hungarian. Among those enrolled in English and French programmes, about four in five are international students.

Labour market access during and after studies

The possibility to work while pursuing studies can be a driver for international students to select a country. According to a 2018 survey by the Canadian Bureau for International Education, 62% of international postsecondary students stated that they chose Canada because of the possibility to work during their studies (CBIE, 2018_[44]). A 2017 survey on 2 000 current and former international students in the United States found that 46% of the respondents considered the ability to work while studying important in selecting an institution (World Education Service, 2017_[45]).

International students also consider their staying prospects when deciding where to study. A 2019 survey of international graduates in Australia showed that as many as 76% considered access to post-study work rights an important factor in their decision to choose Australia as their study destination (Nghia, 2019_[46]). Likewise, research from Canada shows that three in four international students consider the opportunity to work in Canada following their studies as an important factor in destination choice (CBIE, 2018_[44]). In addition, international survey data suggest that about half of prospective international students want to remain in the country of their studies at least temporarily after they graduate (Quacquarelli Symonds, 2021_[9]).

Overall, many factors influence international students' destination choices. Notably some of them including geographical proximity and the presence of a diaspora are outside of the immediate control of policy. Others, including tuition fees and the language of instruction are concrete policy choices, though not necessarily of migration policy makers. Then again, other policy in particular granting labour market access during and after study, admitting family members and efforts to retain international graduates for work in the country allow countries to stir international student migration – though to varying degrees. This chapter provided an overview of the state of international student migration to the OECD. It serves as the background for the two following chapters; one on attraction, admission and retention policies, another on stay rates and the economic impact of international students.

References

Abbott, A. and M. Silles (2015), "Determinants of International Student Migration", <i>The World Economy</i> , Vol. 39/5, pp. 621-635, <u>https://doi.org/10.1111/twec.12319</u> .	[19]
Beine, M., M. Delogu and L. Ragot (2020), "The role of fees in foreign education: evidence from Italy", <i>Journal of Economic Geography</i> , Vol. 20/2, pp. 571-600, <u>https://doi.org/10.1093/JEG/LBY044</u> .	[32]
Beine, M., R. Noël and L. Ragot (2014), "Determinants of the international mobility of students", <i>Economics of Education Review</i> , Vol. 41, pp. 40-54, <u>https://doi.org/10.1016/J.ECONEDUREV.2014.03.003</u> .	[20]
Benedictis, L. and S. Leoni (2020), "Gender bias in the Erasmus network of universities", <i>Applied Network Science</i> , Vol. 5/1, <u>https://doi.org/10.1007/s41109-020-00297-9</u> .	[14]
Birrell, B. (2019), "Overseas students are driving Australia's Net Overseas Migration tide", <u>https://tapri.org.au/wp-content/uploads/2019/04/Overseas-students-are-driving-NOM-final-18-</u> <u>April-2019.pdf</u> (accessed on 11 April 2022).	[26]
Bryntesson, A. and M. Börjesson (2019), "Internationella studenter i Sverige Avgiftsreformens påverkan på inflödet av studenter", <u>http://www.delmi.se</u> (accessed on 4 May 2022).	[29]

140	
-----	--

Campus France (2020), <i>Key figures 2020</i> , <u>http://www.campusfrance.org/en/resource/key-figures-2020</u> (accessed on 11 May 2022).	[6]
Castillo Arredondo, M. et al. (2017), "Motivations of educational tourists in non-English-speaking countries: the role of languages", <i>Journal of Travel & Tourism Marketing</i> , Vol. 35/4, pp. 437-448, <u>https://doi.org/10.1080/10548408.2017.1358238</u> .	[40]
CBIE (2018), <i>The Student's Voice: National Results of the 2018 CBIE International Student Survey</i> , Canadian Bureau for International Education, <u>https://cbie.ca/wp-content/uploads/2018/08/Student_Voice_Report-ENG.pdf</u> .	[44]
Chen, M. (2021), "The Impact of International Students on US Colleges: Higher Education as a Service Export", SSRN Electronic Journal, <u>https://doi.org/10.2139/ssrn.3859798</u> .	[27]
Congressional Research Service (2019), <i>Foreign STEM Students in the United States</i> , <u>https://crsreports.congress.gov/product/pdf/IF/IF11347</u> (accessed on 10 May 2022).	[3]
Counsell, D. (2011), "Chinese students abroad: Why they choose the UK and how they see their future", <i>China: An international journal</i> , Vol. 9/1, pp. 48-71, <u>https://muse.jhu.edu/article/423826</u> .	[38]
Destatis (2022), Sonderauswertung. Studienverlaufsstatistik.	[7]
Destatis (2022), "Studierende an Hochschulen - Fachserie 11 Reihe 4.1 - Sommersemester 2021", <u>https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bildung-Forschung- Kultur/Hochschulen/Publikationen/ publikationen-innen-hochschulen-studierende-endg.html</u> (accessed on 9 May 2022).	[5]
Didisse, J., T. Nguyen-Huu and T. Tran (2018), "The Long Walk to Knowledge: On the Determinants of Higher Education Mobility to Europe", <i>The Journal of Development Studies</i> , Vol. 55/6, pp. 1099-1120, <u>https://doi.org/10.1080/00220388.2018.1475647</u> .	[21]
European Commission (2021), <i>Erasmus+ annual report 2020</i> , Publications Office of the European Union, <u>https://data.europa.eu/doi/10.2766/36418</u> .	[10]
European Commission (2021), <i>The new Erasmus+ programme for 2021-2027 has launched</i> !, <u>https://www.eacea.ec.europa.eu/news-events/news/new-erasmus-programme-2021-2027-has-launched-2021-03-25_en</u> (accessed on 2 August 2022).	[18]
European Commission (2020), <i>Erasmus+ annual report 2019</i> , Publications Office of the EU, <u>https://data.europa.eu/doi/10.2766/651849</u> .	[11]
European Commission (2020), <i>Erasmus+ annual report 2019: statistical annex</i> , Publications Office, <u>https://data.europa.eu/doi/10.2766/431386</u> .	[12]
European Commission (2019), <i>Erasmus+ higher education impact study</i> , Publications Office of the EU, <u>https://data.europa.eu/doi/10.2766/162060</u> .	[15]
Hauschildt, K. et al. (2015), "Social and economic conditions of student life in Europe : synopsis of indicators : EUROSTUDENT V 2012-2015".	[36]
Hauschildt, K. et al. (2021), Social and Economic Conditions of Student Life in Europe. Eurostudent VII 2018-2021 Synopsis of Indicators, <u>https://doi.org/10.3278/6001920dw</u> .	[13]

Kaushal, N. and M. Lanati (2019), "International student mobility: Growth and dispersion", <i>NBER working paper series</i> , <u>http://www.nber.org/papers/w25921</u> .	[22]
Lesjak, M. et al. (2015), "Erasmus student motivation: Why and where to go?", <i>Higher Education</i> , Vol. 70/5, pp. 845-865, <u>https://doi.org/10.1007/s10734-015-9871-0</u> .	[39]
Macaro, E. et al. (2017), "A systematic review of English medium instruction in higher education", <i>Language Teaching</i> , Vol. 51/1, pp. 36-76, <u>https://doi.org/10.1017/s0261444817000350</u> .	[43]
Meng, C., K. Wessling and K. Mühleck (2020), <i>Eurograduate pilot study: key findings</i> , European Commission, Directorate-General for Education, Youth, Sport and Culture, <u>https://www.eurograduate.eu/results</u> (accessed on 12 April 2022).	[17]
Michaela Kudrnáčová et al. (2020), <i>Studying and living in the Czech Republic from the perspective of foreign students: Report on Research at Czech Universities</i> , Czech National Agency for International Education (DZS), <u>https://www.dzs.cz/sites/default/files/2020-09/DZS_zprava_o_zahranicnich_studentech_BOOK_EN_nahled3%20%281%29.pdf</u> .	[34]
Ministry of Education and Culture (2022), <i>Introduction of tuition fees did not halt the</i> <i>internationalisation process of higher education institutions – room for growth in tuition fee</i> <i>revenue - OKM - Ministry of Education and Culture, Finland</i> , <u>https://okm.fi/en/-/introduction-of-</u> <u>tuition-fees-did-not-halt-the-internationalisation-process-of-higher-education-institutions-room-</u> <u>for-growth-in-tuition-fee-revenue</u> (accessed on 27 April 2022).	[30]
Netz, N. (2015), "What deters students from studying abroad? Evidence from four european countries and its implications for higher education policy", <i>Higher Education Policy</i> , Vol. 28/2, pp. 151-174, <u>https://doi.org/10.1057/HEP.2013.37</u> .	[41]
Netz, N. and M. Grüttner (2020), "Does the effect of studying abroad on labour income vary by graduates' social origin? Evidence from Germany", <i>Higher Education</i> , Vol. 82/6, pp. 1195- 1217, <u>https://doi.org/10.1007/s10734-020-00579-2</u> .	[16]
Nghia, T. (2019), "Motivations for Studying Abroad and Immigration Intentions", <i>Journal of International Students</i> , Vol. 9/3, <u>https://doi.org/10.32674/jis.v0i0.731</u> .	[46]
Nicholls, S. (2018), "Influences on international student choice of study destination: Evidence from the United States", <i>Journal of International Students</i> , Vol. 8, pp. 597-622, <u>https://doi.org/10.5281/zenodo.1249043</u> .	[37]
Nuffic (2017), International degree students in the Netherlands: a regional analysis, http://www.nuffic.nl/en/publications/international-degree-students-in-the-netherlands-a- regional-analysis (accessed on 10 May 2022).	[4]
OECD (2020), <i>Education at a Glance 2020: OECD Indicators</i> , OECD Publishing, Paris, https://doi.org/10.1787/69096873-en.	[8]
OECD (2017), "Tuition fee reforms and international mobility", <i>Education Indicators in Focus</i> , No. 51, OECD Publishing, Paris, <u>https://doi.org/10.1787/2dbe470a-en</u> .	[33]
OECD-UNHCR (2021), Safe Pathways for Refugees II - OECD-UNHCR Study on Third-country Solutions for Refugees: Admissions for family reunification, education, and employment purposes between 2010 and 2019, <u>https://www.oecd.org/els/mig/Safe-Pathways-for-Refugees_2021.pdf</u> .	[1]

142 |

Perc, M. (ed.) (2016), "Gender Gap in the ERASMUS Mobility Program", <i>PLOS ONE</i> , Vol. 11/2, p. e0149514, <u>https://doi.org/10.1371/journal.pone.0149514</u> .	[2]
Perkins, R. and E. Neumayer (2014), "Geographies of educational mobilities: exploring the uneven flows of international students", <i>The Geographical Journal</i> , Vol. 180/3, pp. 246-259, https://doi.org/10.1111/GEOJ.12045 .	[23]
Quacquarelli Symonds (2021), "EU International Student Survey 2021", in <i>Supporting recovery and driving growth in global higher education</i> , Quacquarelli Symonds, London.	[9]
Sanchez-Serra, D. and G. Marconi (2018), "View of Increasing International Students' Tuition Fees: The Two Sides of the Coin", <i>International Higher Education</i> , <u>https://ejournals.bc.edu/index.php/ihe/article/view/10278/8953</u> (accessed on 19 April 2022).	[28]
Shih, K. (2016), "Labor market openness, H-1B visa policy, and the scale of international student enrollment in the United States", <i>Economic Inquiry</i> , Vol. 54/1, pp. 121-138, <u>https://doi.org/10.1111/ecin.12250</u> .	[24]
UK Department for Education (2022), <i>Graduate outcomes (LEO), Tax Year 2018-19</i> , <u>https://explore-education-statistics.service.gov.uk/find-statistics/graduate-outcomes-leo/2018-19#dataBlock-cb5bd289-e28a-4996-93f3-d2c70e9fc52b-tables</u> (accessed on 11 April 2022).	[25]
Unangst, L., P. Altbach and H. de Wit (2022), "English as medium of instruction in non- Anglophone countries : A global comparative analysis of policies, practices, and implications", in <i>International Student Recruitment and Mobility in Non-Anglophone Countries</i> , Routledge, <u>https://doi.org/10.4324/9781003217923-3</u> .	[42]
Waters, J. and R. Brooks (2010), "Accidental achievers? International higher education, class reproduction and privilege in the experiences of UK students overseas", <i>British Journal of Sociology of Education</i> , Vol. 31/2, pp. 217-228, <u>https://doi.org/10.1080/01425690903539164</u> .	[35]
World Education Service (2017), "Career Prospects and Outcomes of U.SEducated International Students: Improving Services, Bolstering Success", <u>https://knowledge.wes.org/wes-research-report-career-outcomes</u> .	[45]
Zullo, M. and O. Churkina (2021), "A quasi-experiment in international student mobility: Germany's fee re-introductions", <i>https://doi.org/10.1080/21568235.2021.1983451</i> , https://doi.org/10.1080/21568235.2021.1983451.	[31]

Annex 5.A. Supplementary tables

Annex Table 5.A.1. Criteria used for defining international students (or foreign students)

AUS AUT	Residence Upper secondary diploma	5 August 2020	
ALIT	Upper secondary diploma	-	
AUT		1 October 2019	In case country of upper secondary diploma is not available, occurrence in the statistical database on enrolments in former years is used instead
BEL	Upper secondary diploma	1 February 2020	Data on international tertiary students do not include students of social promotion education in the French Community, and students of the Open University, the Institute for Tropical Diseases and the Evangelic Theological Faculty in the Flemish Community. Therefore, the coverage of international and foreign students is different and the data cannot be compared. Data for ISCED 5 – associate degree – higher vocational adult education – only includes data from the Flemish Community and use information on citizenship rather than on the country of upper secondary completion
CAN	Residence	21 April 2021	Non-Canadian citizens excluding landed immigrants (permanent residents)
CHE	Prior education	15 November 2019	
CHL	Residence	30 June 2020	Tertiary Education Institutions report if students are non-foreign, foreign residents or foreign non-residents. As of 2018, it is considered that mobile students are those who obtained an upper secondary education diploma in a country different from Chile. For cases when the country of upper secondary diploma is not available, it is considered that mobile students are those who are classified as non-residents
COL	Citizenship	31 December 2020	
CRI	Citizenship		
CZE	Citizenship	30 September 2019	
DEU	Prior education	1 September 2019	The number of mobile students in professional programmes in ISCED 554 and 65 is negligible and reported with the value zero
DNK	Upper secondary diploma	1 October 2019	International students are defined as students who have obtained their upper secondary education abroad. If the country of origin is unknown, citizenship is used as a proxy for the country of prior education
ESP	Residence	31 October 2019	The country of upper secondary diploma is used as a criterion at ISCED Level 5.
EST	Residence	10 November 2019	Country of origin
FIN	Upper secondary diploma	20 September 2019	A mobile/international student is a student who has taken upper secondary diploma abroad (outside Finland). If the data on the specific country of origin is no available based on upper secondary diploma it is defined based on the citizenship of the student
FRA	Upper secondary diploma		A "mobile student" is the one who obtained her/his upper secondary diploma abroad. As her/his country (of origin) is unknown, her/his citizenship is used as a proxy for the country
GBR	Residence	16 January 2020	
GRC		20 May 2020	
HUN	Citizenship	1 October 2019	Citizenship is used to determine the country of origin
IRL	Residence	30 September 2019	,
ISL	Prior education	15 October 2019	Citizenship, for a minority of cases where country of prior education is missing
ISR	Citizenship	30 June 2020	
ITA	Citizenship	1 March 2020	
JPN	Student Visa	1 May 2019	
KOR	Citizenship	1 April 2020	
LTU	Upper secondary diploma	1 September 2019	
LUX	Upper secondary diploma	30 October 2020	Country of upper secondary diploma is used for mobile students in ISCED 5 to 8

	Criterion	Date of data collection	Additional Notes
LVA	Prior Education	10 October 2019	
MEX	Place of birth	30 September 2019	
NLD	Upper secondary diploma	31 December 2019	Country of upper secondary diploma only distinguishes between The Netherlands and "abroad". Among that second category, citizenship is used to determine the country of origin. Data on international and foreign students do not include those enrolled at the Open University
NOR	Upper secondary diploma	1 October 2019	
NZL	Residence	1 July 2020	A student is considered mobile if he, or she, is a non-resident. For mobile students, citizenship is used to determine the country of origin
POL	Upper secondary diploma	30 September 2019	Country of upper secondary diploma for ISCED 7 and ISCED 6, not postgraduate. Lack of data on country of upper secondary diploma on some programmes at ISCED 6 and 8 level. As a best national estimate Poland used data on: ISCED 6 (postgraduate studies) and ISCED 8 level – country of prior education (country of master's diploma); ISCED 6 – postgraduate studies – country of prior education
PRT	Upper secondary diploma	31 December 2019	Definition of the international student is "Country of upper secondary diploma" from 2013/14. Until 2013/14, it was defined on the basis of their country of prior education (meaning "previous education": in case of a student at ISCED 7 level, the country of origin is the country where the ISCED 6 degree has been awarded)
SVK	Citizenship	15 September 2019	Citizenship is used to determine the country of origin
SVN	Residence	15 September 2019	
SWE	Residence	15 October 2019	International students are defined as students who have a student residence permit or are either non-residents or have moved to Sweden not more than six months before starting their studies. For students at ISCED 8 the time limit is 24 months. Students with student residence permit are reported by country of citizenship while other students are reported by country of birth. Exchange students (credit mobile students) are not included in the definition above
TUR	Citizenship	1 December 2019	Turkish citizens who live abroad and study in high school there and then study in Türkiye can also apply for foreign student admission quota
USA	Residence	1 September 2019	Students who are not citizens of the United States and who are in the country on a temporary basis and do not have the right to remain indefinitely

Source: Adjusted from Education at a Glance, Metadata, 2022.

Annex Table 5.A.2. International and domestic students by subject

Share of international students and domestic students enrolled by field of study, 2020 (%)

		Education	Arts and humanities	Social sciences, journalism and information	Business, administration and law	Natural sciences, mathematics and statistics	Information and Communication Technologies (ICTs)	Engineering, manufacturing and construction	Agriculture, forestry, fisheries and veterinary	Health and welfare	Services
AUS	International	4	6	3	46	4	14	12	1	11	1
	Domestic	11	12	9	23	7	4	8	1	24	2
AUT	International	5	14	16	20	11	5	16	2	9	1
	Domestic	14	9	7	25	8	5	17	1	9	4
BEL	International	3	14	13	12	6	2	12	5	32	2
	Domestic	10	8	10	24	4	4	11	2	26	2
CAN	International	1	7	9	28	13	10	18	1	5	5
	Domestic	5	10	12	20	11	5	10	1	17	5
CHE	International	5	13	12	19	17	5	18	0	9	3
	Domestic	11	8	8	26	7	4	14	1	18	3
CHL	International	5	4	5	34	5	6	18	2	17	4
	Domestic	11	4	5	22	2	4	21	3	22	5
COL	International	6	9	15	28	2	3	17	2	16	2
	Domestic	8	4	12	36	2	5	21	3	7	3
CZE	International	2	10	10	21	8	11	13	3	18	4
	Domestic	14	9	9	19	6	5	14	4	13	7
DEU	International	2	14	8	18	11	10	29	2	7	1
	Domestic	9	12	8	24	9	7	19	1	9	3
DNK	International	2	10	9	28	7	8	21	2	9	4
	Domestic	8	10	9	23	5	5	11	1	25	2
ESP	International	4	9	12	26	5	3	12	2	22	5
	Domestic	12	11	10	20	6	6	13	1	16	6
EST	International	3	14	10	36	7	12	11	4	4	0
	Domestic	8	13	6	20	6	10	15	2	14	6
FIN	International	3	10	4	23	6	19	19	2	11	4
	Domestic	6	11	7	18	5	9	19	2	19	4
FRA	International	1	16	10	29	13	6	16	0	7	2
	Domestic	3	13	7	25	7	3	16	2	15	10
GBR	International	2	13	14	34	9	6	13	1	7	0
	Domestic	6	14	16	21	10	5	8	1	17	0
GRC	International	5	16	13	16	12	4	15	3	12	3
	Domestic	4	13	13	20	10	4	21	4	8	3
IRL	International	1	11	7	20	10	11	12	1	24	2
	Domestic	8	15	6	22	10	6	11	2	17	4
ISL	International	8	41	10	8	15	2	8	2	4	1
	Domestic	15	8	17	19	4	6	9	1	17	4
ISR	International	13	13	16	14	14	6	12	1	11	0
	Domestic	20	8	18	14	6	8	17	0	9	0
ITA	International	1	31	12	15	6	2	21	2	9	1
	Domestic	8	16	14	18	8	2	15	3	14	3

		Education	Arts and humanities	Social sciences, journalism and information	Business, administration and law	Natural sciences, mathematics and statistics	Information and Communication Technologies (ICTs)	Engineering, manufacturing and construction	Agriculture, forestry, fisheries and veterinary	Health and welfare	Services
KOR	International	3	22	13	31	2	4	11	1	4	11
	Domestic	6	16	6	13	5	6	23	1	14	9
LTU	International	1	10	16	23	2	4	15	2	26	1
	Domestic	4	9	9	27	4	6	17	3	19	2
LUX	International	5	7	13	37	11	11	9	6	2	0
	Domestic	19	13	10	24	6	7	9	0	12	0
LVA	International	1	3	4	38	1	10	11	1	25	7
	Domestic	8	8	8	25	3	7	16	2	15	9
NOR	International	4	20	11	15	15	6	12	1	11	4
	Domestic	17	10	11	19	4	5	10	1	18	5
NZL	International	5	8	7	33	9	11	13	2	8	4
	Domestic	8	13	13	19	10	5	10	2	18	3
POL	International	2	12	16	27	4	6	9	2	17	7
	Domestic	9	10	11	23	4	5	15	2	14	8
PRT	International	4	12	13	25	5	2	20	2	12	5
	Domestic	3	10	11	22	6	3	21	2	16	6
SVK	International	9	8	6	11	3	4	11	2	42	3
	Domestic	13	8	10	19	5	5	13	2	18	7
SVN	International	4	10	15	18	8	9	20	1	7	9
	Domestic	10	9	8	19	6	5	19	3	14	8
SWE	International	3	14	13	11	14	7	25	1	11	1
	Domestic	14	14	11	14	5	4	17	1	18	2
TUR	International	5	12	13	20	5	2	24	2	14	3
	Domestic	4	13	10	39	2	2	10	2	13	5
OECD	International	3	13	12	27	8	7	17	1	10	2
	Domestic	7	11	10	26	5	4	15	2	14	5

Source: Adjusted from Education at a Glance Database, 2022.

StatLink and https://stat.link/23xlhm

Notes

¹ The term *international student* in the following refers to individuals coming from abroad for studying a fulltime degree at a tertiary learning institution.

² This work was produced with the financial support of the German Federal Ministry of Education and Research. It includes a contribution by Ewa Krzaklewska (Jagiellonian University of Krakow).

³ In part, these changes are due to changing methodology of the definition of international student. For a detailed overview, see *Education at a Glance*, yearly details of Annex 3.

⁴ This share is calculated based on national definitions of international students (i.e. foreign students) in each country. For the stock of foreign-born, the data refers to foreigners in Japan and Korea.

⁵ Unless mentioned otherwise, data and policy evidence were collected via a questionnaire on international student attraction, admission and retention policies, from January 2022 as well as from the national reports of the OECD Expert Group on Migration.

⁶ Nationally defined as foreign students who have acquired their university entrance qualification abroad or at a preparatory college.

⁷ Since 2014, the programme incorporates previously separate programmes key among them the higher education programme, previously known and sometimes still referred to as "Erasmus". The higher education programme has been introduced under changing frameworks (Socrates I (1994-99), Socrates II (2000-2006), Lifelong Learning 2007-2013, Erasmus+ 2014-00 and Erasmus+ 2021-27). Before 2014, student mobility was under the Lifelong Learning Programme. Herein, the name Erasmus referred to the higher education exchange. Other programmes covered other target groups, such as the Leonardo da Vinci programme for vocational education, the Comenius for pupils and the Grundtvig programme for adult education. Since 2014, the Erasmus+ programme brings together programmes that previously operated separately; the Lifelong Learning Programme, the Youth in Action programme, Erasmus Mundus, and adds the area of sports activities. Erasmus+ allows students to go abroad not only in the EU but also beyond, as mobility may take place between 33 programme countries, or programme and worldwide partner countries. Programme countries include all EU member states: Belgium, Bulgaria, the Czech Republic, Denmark, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Austria, Poland, Portugal, Romania, Slovenia, the Slovak Republic, Finland, Sweden and the United Kingdom until 2020. It further includes third countries associated to the programme, namely: Iceland, Liechtenstein, North Macedonia, Norway, Serbia and Türkiye.

⁸ The EUROSTUDENT project collects and analyses comparable data on the social dimension of European higher education. It is a European-wide survey on the social and economic conditions of student life in Europe. The seventh round of the EUROSTUDENT project took place from June 2018 to August 2021. In total, 26 countries of the European Higher Education Area participated and about 270 000 students were surveyed.

⁹The Erasmus+ Programme Guide defines participants with disadvantaged backgrounds and fewer opportunities based on the following criteria: disability, educational difficulties, economic obstacles, cultural differences, health problems, social obstacles and geographical obstacles.



From: International Migration Outlook 2022

Access the complete publication at: https://doi.org/10.1787/30fe16d2-en

Please cite this chapter as:

OECD (2022), "International students: A growing group of migrants in the OECD", in *International Migration Outlook 2022*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/ec0742a4-en

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <u>http://www.oecd.org/termsandconditions</u>.

