

Mobility between Bachelor and Master's degrees

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25 years ago, in 1999, 29 countries adopted the Bologna Declaration (EHEA, 1999). This declaration outlined the basic principles of today's European higher education system. A key objective was to increase student mobility. In order to achieve this and other goals of the Bologna Declaration, it was decided to introduce a two-cycle system, standardise credit points, mutually recognise degrees, and cooperate on quality assurance (which is a basic requirement for recognition).

When we think of student mobility, we often think first of exchange semesters (credit mobility, e.g. through the "Erasmus" programme). However, the standardisation in the European Higher Education Area, i.e. quality-assured, comparable degrees (meanwhile three cycles: Bachelor, Master and Doctorate) with comparable study durations measured in ECTS, should have facilitated degree mobility in particular, i.e. completing a full study programme in another country. Surprisingly, however, (political) attention is paid to the degree of mobility primarily in relation to the (first) university entrance qualification or as a proportion of international students in a country, i.e. only existing data is considered (see e.g. European Commission/EACEA/Eurydice, 2024). The dynamic perspective, i.e. completing a degree in one country and then studying in another, is hardly taken into account. This is probably also due to the fact that there is little reliable international data on this topic. However, EUROSTUDENT can help to close this gap.

Definitions of degree mobility and data sources

The collection of official education data is highly standardised worldwide and follows clear definitions. Almost all countries report core data to UNESCO, while OECD members also provide additional data to the OECD and European countries provide even more data to EUROSTAT. Data collection at the relevant ministries/statistical offices is carried out using a common data collection tool, the so-called "UOE tables". Comprehensive manuals containing all definitions are regularly published for this purpose. The data available from EUROSTAT, the OECD and UNESCO are therefore identical and follow the same definitions (UNESCO-UIS/OECD/EUROSTAT, 2024).

In the area of learning mobility, the country of origin is of definitional importance. To put it simply, the principle of the "location of prior education" applies. If the previous educational qualification was obtained in a country other than the country of current study, the student is considered an international student; if it was obtained in the country of study, the student is considered a domestic student – in both cases regardless of the respective citizenship. This means that even someone with the citizenship of the country of study can be an international student if he/she has completed his/her previous education abroad.

However, and this is the crucial point, "previous education" in the UOE tables refers only to the levels of primary, secondary and tertiary education, not to the different levels within tertiary education: *"The country of origin of a tertiary student is the country in which their upper secondary qualification was obtained (i.e., ISCED level 3 or 4 completion with access to tertiary education programmes). This can also be referred to as the country of prior education."* (UNESCO-UIS/OECD/EUROSTAT, p. 52, 2024). This definition therefore implies that it is not possible to distinguish between different cycles or ISCED levels within the tertiary sector. It therefore remains unknown who has (or how many have) obtained a Bachelor's degree in one country and a Master's degree in another country (and the same applies to Master's and Doctoral degrees or a second Bachelor's degree, etc.).

EUROSTUDENT also generally follows this definition, and we also distinguish between international and domestic students according to the country in which they last attended school. But in addition, we ask Master students where they completed their Bachelor's degree. This allows us to at least map (incoming) degree mobility between the first and second cycle.

Degree mobility between cycles: EUROSTUDENT data

Since we are interested in degree mobility between cycles in this Intelligence Brief, we will only consider consecutive Master programmes in the following analysis, i.e. programmes that require a Bachelor's degree. This means that not all programmes at ISCED Level 7 are included.¹ Moreover, in some countries, there are also other students, especially in so-called further training programmes or guest students, who are regarded as "extraordinary" students at national level. These students are included in the UOE tables but are not part of the EUROSTUDENT target group. For all these reasons, the figures presented here differ from the data in international databases. In some countries, the total student population based on the EUROSTUDENT conventions is smaller and the proportion of international students is therefore usually higher (since the non-included students in most countries are mostly domestic students).

Figure 1 shows that some countries already have a comparatively high proportion of international students in their Bachelor programmes. This is particularly true for Austria (21 %), but Ireland, Switzerland, the Czech Republic, and Malta also have a proportion of over 10 %, the EUROSTUDENT average is 7 %. In all countries, the proportion of international students is higher in Master programmes, in some cases even considerably

higher (exception: Croatia). In Sweden, the figure is 42 %, ² in Austria, Ireland, and the Netherlands, it is over 30 % and in Switzerland, Germany, and Denmark over 25 %. The EUROSTUDENT average is 18 %.

This means that the proportion of international students in Sweden is seven times higher at the Master level than at the Bachelor level, while in the Netherlands and Georgia it is just over four times higher, in Lithuania almost four times higher and in Ireland and Denmark, it is more than three times higher. The EUROSTUDENT average of international students is 2.5 times higher in the Master than in Bachelor programmes. This difference is lower in countries that already have a high proportion of international students at the Bachelor level, such as Austria (1.5 times). The considerably higher proportion at Master level is probably also due to the fact that more courses are offered in English at Master level than at Bachelor level (see also a similar discussion in European Commission/EACEA/Eurydice, 2024).

This large difference between the proportions of international students in Bachelor and Master programmes indicates that many students only came to the respective country after completing their Bachelor's degree elsewhere.³

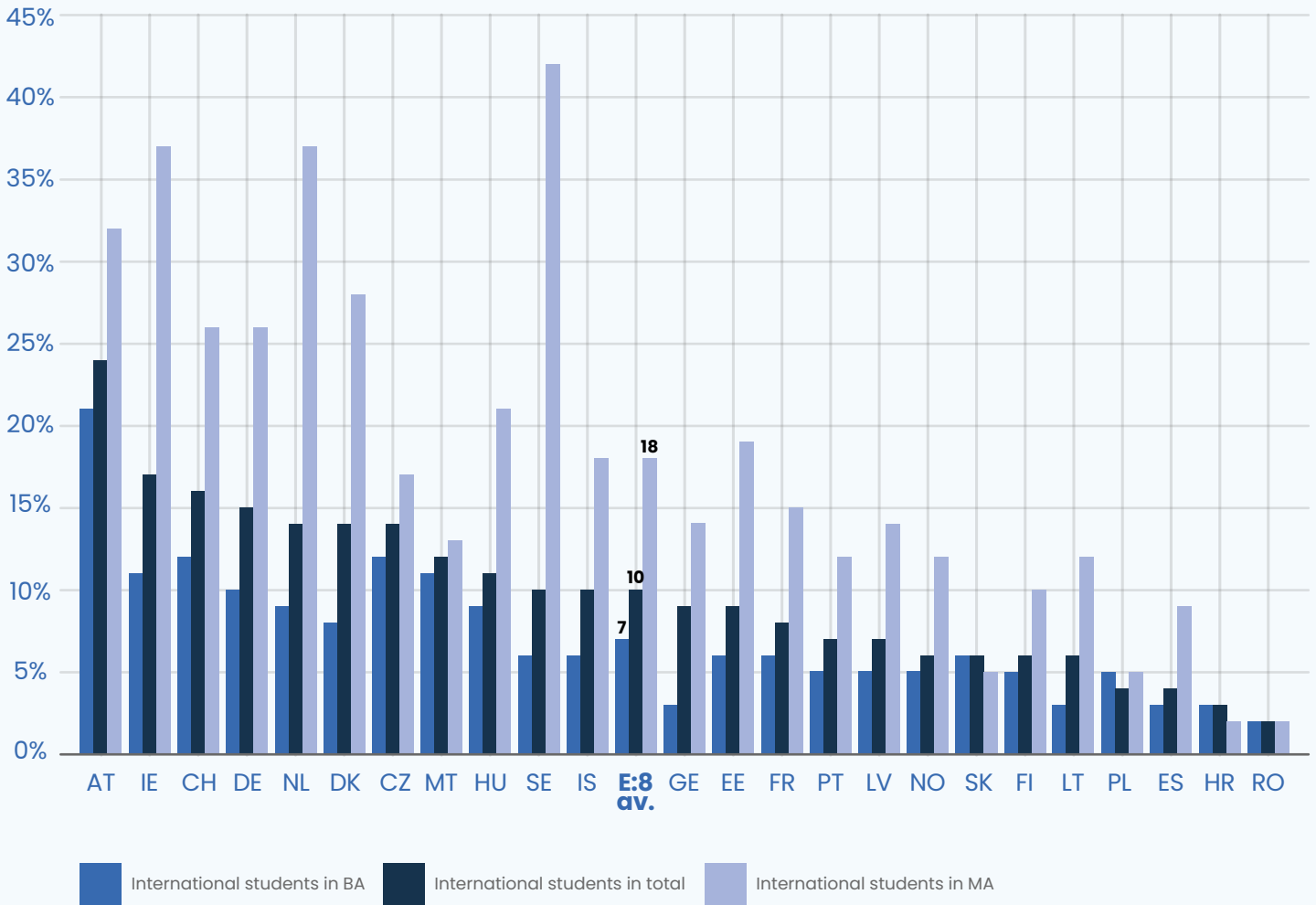
1 Not included are e.g. so-called integrated masters, i.e. long degree programmes at ISCED 7 level. Neither are students included who started their Master programme without a Bachelor's degree (e.g. because their professional experience was recognised), which applies in particular to a large proportion of Master students in Sweden.

2 If Master students who do not have a Bachelor's degree were included, in contrast to the analysis presented here, the proportion of international students would be 35 % in Sweden.

3 However, it is also mathematically possible that many domestic students do not continue their studies after their Bachelor's degree or have also gone abroad for their Master's degree. This would reduce the proportion of domestic students in the Master programmes and therefore increase the proportion of international students. It is therefore possible that the proportion, but not the absolute number of international students is higher in Master than in Bachelor programmes.

Absolute numbers can be found in the EUROSTAT database (table educ_uoe_mobs01, https://ec.europa.eu/eurostat/databrowser/view/educ_uoe_mobs01/default/table?lang=en&category=educ.educ_uoe_mob.educ_uoe_mobs) and at the UNESCO Institute for Statistics (UIS), although in some countries this is in both databases based on a different, i.e. broader definition of "students".

Figure 1. Proportion of international students in Bachelor’s and Master programmes and in total (ISCED 5 to 7)



Data source: EUROSTUDENT 8, C.4. **No data:** AZ.

Data collection: Spring 2022 – summer 2022 except CH (spring 2020), DE (summer 2021), AT, ES, FR, PT, RO (spring – summer 2023).

EUROSTUDENT question(s): 1.6 With which degree does your current #(main) study programme conclude?

Note(s): Countries sorted by total share of international students. Only consecutive Master programmes are counted as Master’s degrees here. Total includes ISCED 5 (if these studies are part of the EUROSTUDENT target group), ISCED 6 and all of ISCED 7 – i.e. more programmes than the Bachelor and Master programmes shown here. EUROSTUDENT average: unweighted average of countries.

Deviations from EUROSTUDENT survey conventions: AT, CH, CZ, DK, GE, LT, PL, SE.

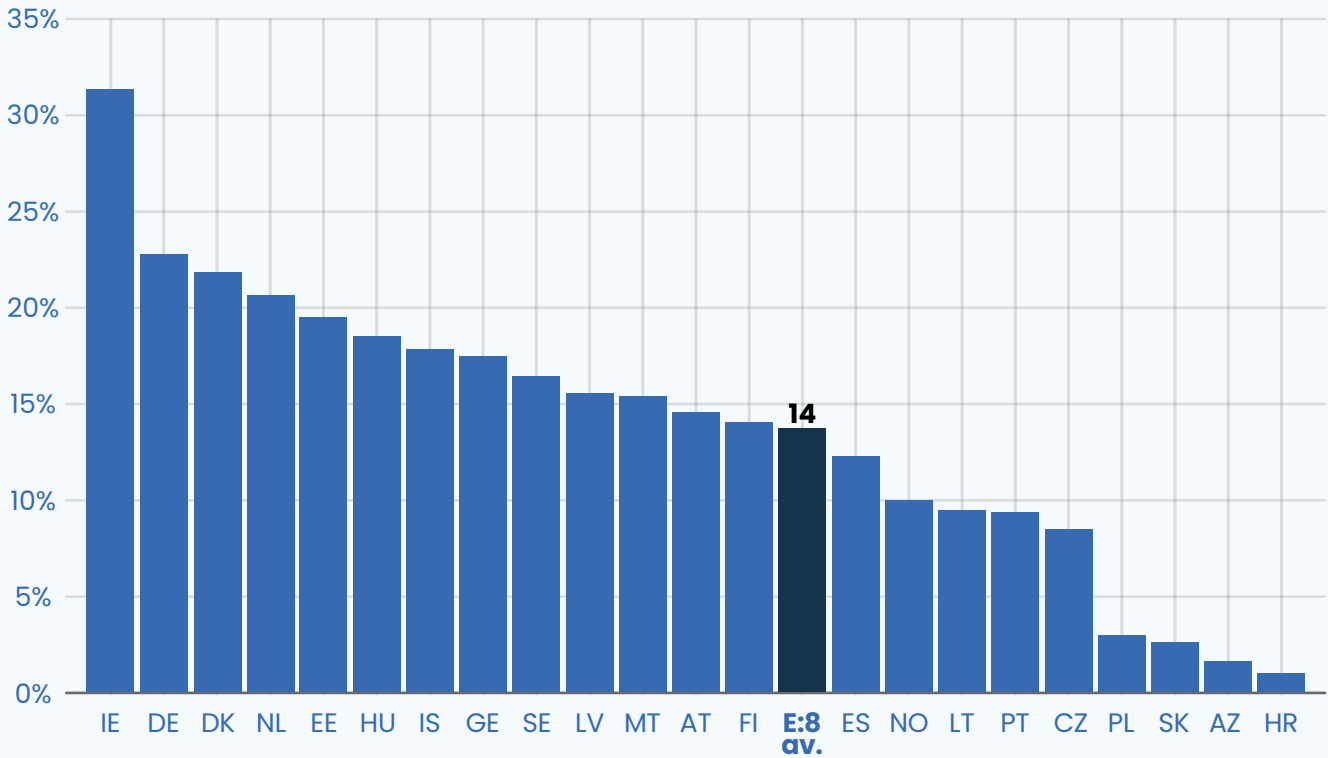
Deviations from EUROSTUDENT standard target group: IE, NL.

On average across all EUROSTUDENT 8 countries, 14 % of all (domestic and international) Master students acquired their Bachelor’s degree abroad in the survey years 2022/2023 (see Figure 2). In Ireland, the figure is 31 %, in Germany, Denmark, and the Netherlands just over 20 % and in Estonia, Hungary, Iceland, and Georgia just under 20 %. The proportion is comparatively low in some (South)Eastern European countries, namely Poland, Slovakia, Croatia and Romania, with 3 % to less than 1 %.

The definitions of mobility can be quite complicated in detail, but here it is simply a matter of what proportion of master students have obtained their previous degree in another country (regardless of their country or citizenship; this could therefore also be the nationality of the country of study). In a way, the data also shows which countries are particularly attractive for gaining a further qualification. These countries should then have an advantage in the international competition for highly qualified specialists,

because the future specialists are already in the country and then also have a national qualification that should make it easier for them to access the labour market.

Figure 2. Proportion of Master students who completed their Bachelor’s degree abroad (2022)



Data source: EUROSTUDENT 8, B.I. **No data:** CH, FR.

Data collection: Spring 2022 – summer 2022 except DE (summer 2021), AT, ES, PT, RO (spring – summer 2023).

EUROSTUDENT question(s): 1.9 [Only if 1.6 “#Master’s degree[ISCED 7]”, not “#Long national degree/ integrated Master [more than 3 years, ISCED 7]”] In which country did you finish your degree leading to your current Master programme (e.g. Bachelor)?

Note(s): Countries sorted by the proportion of Master students who completed their Bachelor’s degree abroad. Only consecutive Master programmes are counted as Master’s degrees here. EUROSTUDENT average: unweighted average of countries.

Deviations from EUROSTUDENT survey conventions: AT, GE, HU, NO, RO.

Deviations from EUROSTUDENT standard target group: IE, NL.

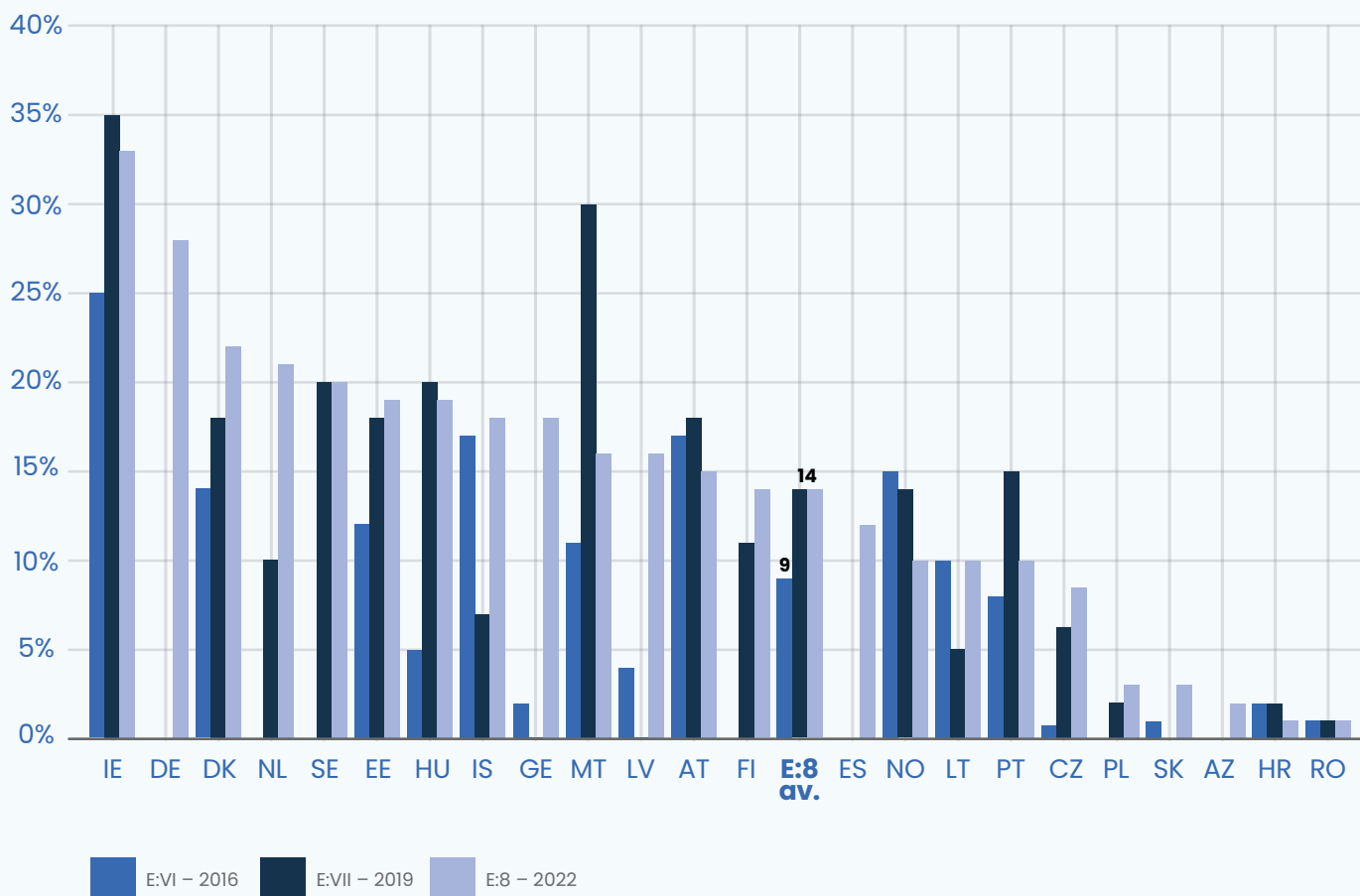
In a few countries, the number of Master students who have completed their Bachelor’s degree abroad is very low in the survey. As a result, there are somewhat greater fluctuations over time. Nevertheless, Figure 3 shows an increase in the proportion of Master students who completed their Bachelor’s degree abroad in most EUROSTUDENT countries in the six years between 2016 and 2022/2023. On average across all countries, it rose from 9 % to 14 %, i.e. by about 60 %. In the Czech Republic and Georgia, this proportion has increased almost tenfold (with low case numbers, therefore with a wide margin of fluctuation).

In Hungary, Latvia, and Slovakia, the shares have roughly quadrupled (starting from a low level). On the other hand, they have fallen somewhat in Austria, Norway, Croatia, and Romania, although the exact time of the survey during/after the Covid pandemic may also have played a role here.

On average across the EUROSTUDENT countries (which vary somewhat from round to round), the proportion of students who completed a semester abroad (credit mobility) increased from 2000 to 2013, was constant in 2016 and has been falling

slightly since then (see Figure B10.3 in Schirmer, 2024). It is therefore all the more remarkable that degree mobility between cycles has increased considerably since 2016.

Figure 3. Proportion of Master students who completed their Bachelor's degree abroad EUROSTUDENT 6-8 (2016, 2019, 2022)



Data source: EUROSTUDENT 8, B.1. **No data:** CH, FR.

Data collection: Spring 2022 - summer 2022 except DE (summer 2021), AT, ES, PT, RO (spring - summer 2023).

EUROSTUDENT question(s): 1.9 [Only if 1.6 “#Master’s degree[ISCED 7]”, not “#Long national degree/ integrated Master [more than 3 years, ISCED 7]”] In which country did you finish your degree leading to your current Master programme (e.g. Bachelor)?

Note(s): Countries sorted by proportion in E:8 (2022). Only consecutive Master programmes are counted as Master’s degrees here. EUROSTUDENT average: unweighted average of countries. E:VI: different field phase: AT 2015; LV, PT, RO 2017. E:VII: different field phase: CH, FR, PT, RO 2020

Deviations from EUROSTUDENT survey conventions: AT, GE, HU, NO, RO.

Deviations from EUROSTUDENT standard target group: IE, NL.

From where to where do students often move between cycles?

Another interesting result can be seen when looking at the countries in which the students completed their Bachelor's degree before starting their Master's degree in the country of the survey. This analysis includes 17 countries (CZ, DE, DK, EE, FI, HU, IE, IS, LV, MT, NL, NO, PL, PT, RO, SE, SK), as not all of the EUROSTUDENT countries asked about the country of the Bachelor's degree, or the sample size is too small. It should also be borne in mind that large countries with many international contacts are missing here, most of all the United Kingdom, France, Spain, and Italy – and thus also the corresponding languages that make these countries particularly attractive for international students.

On average across these 17 countries, around half of the Master students who gained their Bachelor's degree in another country had not previously studied in an EHEA country. Around a quarter had previously studied in Asia, and around 10 % both in Latin America (including the Caribbean) or Africa.

In terms of all Master students who have completed a Bachelor's degree abroad, the proportion of Master students who have previously studied in Asia is particularly high in Germany, Hungary, Ireland, and Latvia. In Portugal, the proportion of Bachelor graduates from Latin America is above average, as is the proportion of Bachelor graduates from North America in Iceland. In Latvia and Hungary, the proportion of Bachelor graduates from Africa is also comparatively high.

If we look only at mobility within the EHEA, the proportion of Bachelor graduates from non-EU countries (mainly (South)Eastern Europe) is particularly high (based on students with a Bachelor's degree from abroad) in Poland, Romania, Estonia, the Czech Republic, and Slovakia, i.e. mainly in Central or Eastern EU countries. In the 17 countries of comparison, this group makes up around 12 %. Bachelor graduates from Western European countries make up a larger proportion of Master

students in Scandinavia or the Netherlands. Those with a degree from a Central or Eastern European EU country make up larger proportions in the neighbouring countries of their region of origin (though with the notable exception of Poland, where their proportion is very low), as well as in Denmark and Malta. Graduates from Southern Europe also make up a larger proportion of Master students in Denmark, but also in the Netherlands.⁴ Graduates from the Nordic countries are clearly overrepresented in Master programmes in neighbouring Nordic countries, just as graduates from the Baltic States are more likely to be found in other Baltic States or Finland.

In total, 14 % of all master students in the countries surveyed obtained their bachelor's degree abroad. The brief analysis of the countries of origin shows that about half of the mobility (i.e. around 7 % of all master students) between the cycles cannot be directly attributed to the Bologna Process, since these students obtained their Bachelor's degree outside the EHEA. On the other hand, the other half of all Master students who obtained their Bachelor's degree abroad are also not a small number of students who benefit from the achievements of the Bologna Process. This is also 7 % of all Master students in the 17 EUROSTUDENT countries with sufficient data on average – and, as already mentioned, large, attractive countries such as the UK, France, Spain or Italy are still missing. In any case, more detailed analysis is needed here, for example, whether the increase in mobility between cycles over time (see Figure 3) is due to students from EHEA countries or from outside the EHEA.

A second finding is that degree mobility often takes place between neighbouring countries (see also European Commission/EACEA/Eurydice, 2024 on this issue). Here too, more in-depth analyses are needed to explore these patterns in more detail.

⁴ As a reminder, southern European countries such as Italy, Spain or Greece are included here as countries of origin but not as countries of destination.

Conclusion

The figures presented show that a significant proportion of student mobility in Europe remains unrecognised if mobility between cycles is not taken into account. This is not yet possible with administrative data, because the definition of international students does not allow to identify international mobility between cycles. Therefore, survey data, such as from EUROSTUDENT, must be used to analyse mobility between cycles.

However, this also implies a key recommendation for policy-makers: more attention should be paid to degree mobility between cycles, i.e. between Bachelor's and Master's degrees, but also between Master's and Doctoral degrees, as these also contribute to the realisation of the important goal of the European Higher Education Area to increase international mobility. However, 25 years after the Bologna Declaration, this part of the goal achievement still remains in the dark. In order to shed light on this, data collection in the EHEA states must be improved. This can be done without deviating from the international basic definitions of the UOE tables by additionally recording mobility between cycles. To do this, higher education

institutions would have to report which country's certificates were used to admit students to study programmes. As a first step, it would be sufficient to record whether it was a national or an international degree, although of course the countries in which the certificate was issued (which need not be the countries from which the students have their citizenship) are also of interest.

In the EUROSTUDENT project, the participating countries initially provide a large number of indicators that are used for the main report and the database. Meanwhile, at the end of each project round, more and more countries are also making their microdata available for a scientific use file that can be obtained from a data archive for scientific purposes.⁵ While the initial overview of mobility between cycles presented here is still based on the basic, aggregated indicators, researchers can also contribute to shedding more light on the subject with more detailed analyses carried out with the microdata set in the future. A detailed analysis of mobility flows between individual countries or regions would be particularly interesting in this regard.

⁵ Cuppen, Joris; Hauschildt, Kristina; Unger, Martin; Muja, Ardita; Mandl, Sylvia; Menz, Cordelia; Droll, Philipp and Stoffers, Kalle (2024) *Eurostudent 8. Data Collection: 2021-2024. Version: 1.0.0.* [Dataset] <https://doi.org/10.21249/DZHW%3Aes8%3A1.0.0>

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Methodological notes

Deviations from EUROSTUDENT survey conventions

Figure 1

Question 1.6 – AT: Only the following categories were asked: 2 “Bachelor degree”, 4 “Master degree”, 5 “Long national degree/integrated Master”. **AZ:** Only the response options: “Bachelor’s degree”, “Master’s degree”, “PhD/Doctoral degree” and “Other, e.g. single subjects” were given. **CH:** Phrasing deviation in the question and response options. Additional information: According to the Swiss ISCED Mapping, professional higher education is defined as educational programmes on the tertiary level that are designed for students to acquire the practical/technical/occupationally specific/entrepreneurial skills and knowledge needed for employment in a particular occupation with high levels of expertise and/or managerial responsibility, or for entry into a profession with high skill requirements. Professional programmes are typically provided by institutions or enterprises outside the university context and are designed for direct entrance into the labour market or are linked to existing employment. Therefore, these programmes are not included in the sample of the Swiss survey. Long national degree [more than three years, ISCED 7] – this pre-Bologna programme/qualification is regarded as an equivalent to the Bologna Master and will disappear in the next few years. This programme is included in the sample of the Swiss survey but not included in the Swiss EUROSTUDENT dataset (too few cases). **CZ:** Short-cycle programmes, short national degrees, “other” postgraduate degrees, and other (e.g. single subjects) are not included in the sample as they do not exist in the Czech higher education system. **DK:** Use of register data. Professional programmes were not included in the survey, long national degrees had too few cases to be included in the dataset. **GE:** Answer options: “Bachelor’s degree”, “Georgian language education program diploma”, “Teacher’s training educational program diploma”, “Master’s degree”, “One Stage Medical Program Diploma”, “Veterinary Integrated Master Program Diploma”, “Teacher’s Training Integrated Bachelor–Master Program Diploma”, PhD. **LT:** Adaption of national degree names. Non-existing study degrees were excluded. **PL:** Response options skipped: “Short-cycle degree”, “Short national degree”, “Other” (e.g. single subjects). **SE:** Question was only presented to students who responded that they study “Separate courses”. For everyone else the data were gathered through register data.

Figure 2, Figure 3

Question 1.9 – AT: International students only. Register data (excluding private universities) show a proportion of 17.1 % of Master’s students who have completed a previous degree abroad. About half of the underestimation of 2.5 percentage points in the survey is due to the domestic students who were not surveyed for this purpose. **GE:** In cases where a respondent obtained a BA degree in more than one country, it is preferable for them to indicate all of them. The response option “I haven’t finished any previous study programme” is not applicable in Georgia. **HU:** The response option “I haven’t finished any previous study programme” was not asked as this is not possible in Hungary. **NO:** The question was split. Those who chose “Other country” were given a follow-up question: “In which country did you finish your degree leading to your master programme?” The country was selected from a drop-down list. **RO:** The response option “I haven’t finished any previous study programme” does not apply to Romania.

About EUROSTUDENT

The EUROSTUDENT project collates comparable student survey data on the social dimension of European higher education, collecting data on a wide range of topics, e.g. the socio-economic background, living conditions, and temporary international mobility of students. The project strives to provide reliable and insightful cross-country comparisons. The data presented here stem from the eighth round of the EUROSTUDENT project (2021–2024).

Countries participating in EUROSTUDENT

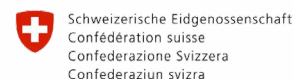
- Azerbaijan (AZ)
- Austria (AT)
- Croatia (HR)
- Czech Republic (CZ)
- Denmark (DK)
- Estonia (EE)
- Finland (FI)
- France (FR)
- Georgia (GE)
- Germany (DE)
- Hungary (HU)
- Iceland (IS)
- Ireland (IE)
- Latvia (LV)
- Lithuania (LT)
- Malta (MT)
- Norway (NO)
- Poland (PL)
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