Student diversity and social inclusion: insights from the new UMR data

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Introduction

Social inequality in access to higher education remains a challenge to both politicians and institutional leaders and has for a long time been a major issue in the education policy agenda of many nations as well as the European Commission. The 2022 EU Report "Towards equity and in higher education in Europe" (Eurydice report) states that "The social dimension should be central to higher education strategies at the system and institutional level, as well as at the EHEA and the EU level. Strengthening the social dimension of higher education and fostering equity and inclusion to reflect the diversity of society is the responsibility of a higher education system as a whole and should be regarded as a continuous commitment." (p. 18)

At the same time, the growing diversity of students, i.e. the growth in numbers of non-traditional students and students from underrepresented groups, such as mature students, students with children, students with disability, and students with non-academic family backgrounds remains a challenge to the organisation of teaching and learning.

Reliable data are a necessary precondition for an evidence-based improvement of the social dimension of higher education. The Eurydice report indicates that on many student characteristics only a few European countries have administrative data (p.50). Up to now, there are also no systematic and comprehensive European (nor global) data on the level of individual higher education institutions.

The 2022 edition of U-Multirank started to investigate the enrolment of some of the categories of 'underrepresented students:

- Students from a non-academic family background
- Students with disabilities
- Mature students
- Students with children
- Female students

Here we focus on the first two categories. The choice for these two emerged from several UMR experts and stakeholder consultations, in which a priority regarding these categories was discussed.

In addition to the two categories of underrepresented students, U-Multirank also collected data on the outreach programmes of higher education institutions, targeted toward various groups of underrepresented students.

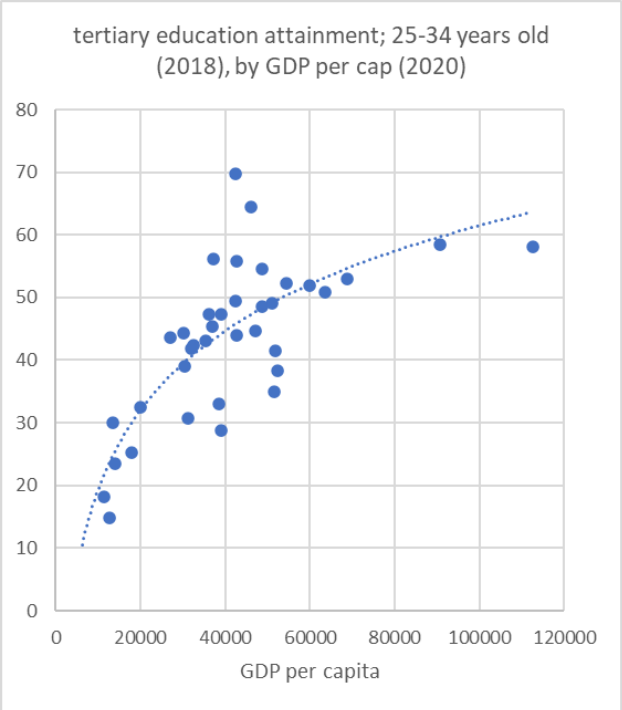
First-generation students

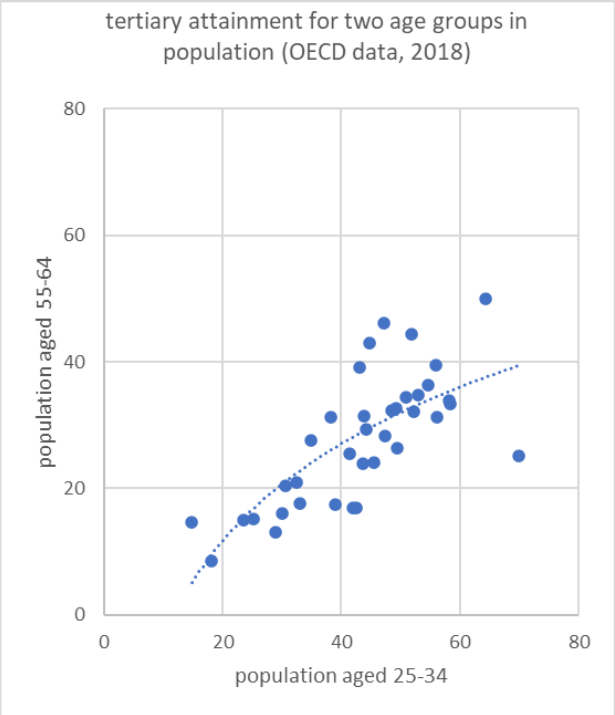
An overview in the Eurydice Report (p.50) indicates that administrative data on first-generation students are available only in 12 out of 37 European countries. Since many institutions also have no data on these groups, we collected the information about the educational attainment of the parents through the UMR students survey, first in 2020.

The diversity of the student body and the participation of students from underrepresented groups is the result of the aggregated decisions of individual potential students to enter higher education. Potential students from underrepresented groups see more barriers to entry than other potential students. Higher education institutions can develop special programmes and activities to lower or remove those barriers but part of the problem of underrepresentation is beyond the control of the individual higher education institution. In addition to the barriers in primary and secondary education, there are national characteristics that are most likely to have an impact. We focus on two barriers at the national system level: the relative wealth of a country and the historical rate of participation in higher education.

National context

Higher education provision is a costly activity and this is reflected in the fact that wealthy countries (OECD, 2022) have a higher rate of participation and show a higher level of education attainment (as in the percentage of 25-35 years old population with a tertiary degree) (OECD, 2021, Indicator A1). OECD data clearly show this relation.

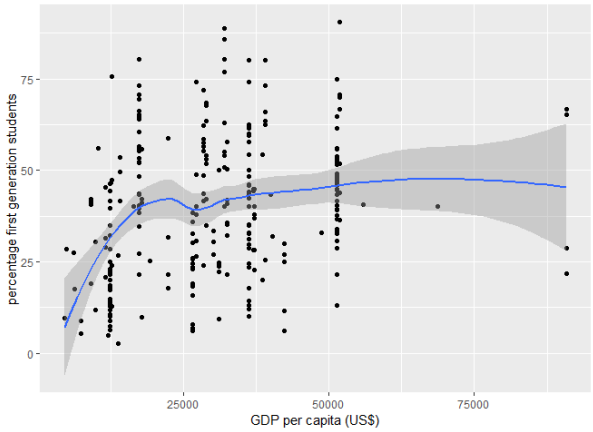


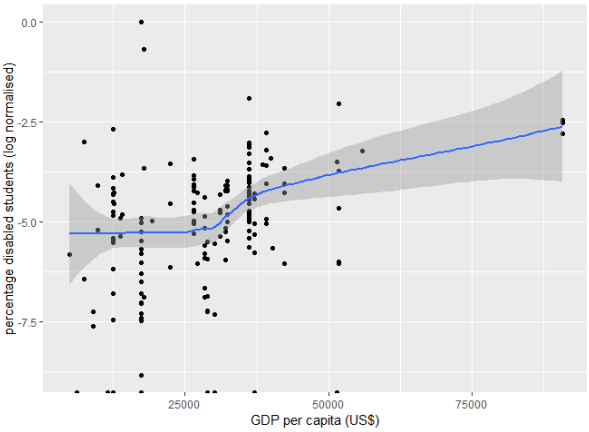


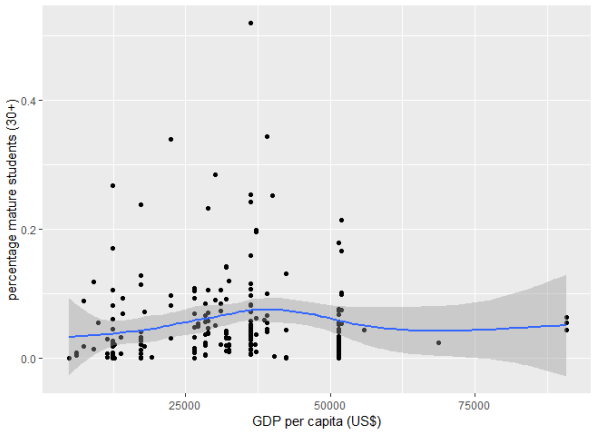
National higher education systems differ in tertiary education attainment and they differ even more in the rate the participation in higher education has changed over time. If we compare the attainment of the population aged 55-64 years old to the attainment of the younger age group, we can see large differences in the growth rate of tertiary education attainment.

Do the wealthy countries have fewer first-generation, disabled or mature students? It proved to be difficult to find clear patterns in the data. For the low-income systems, we see a positive relationship

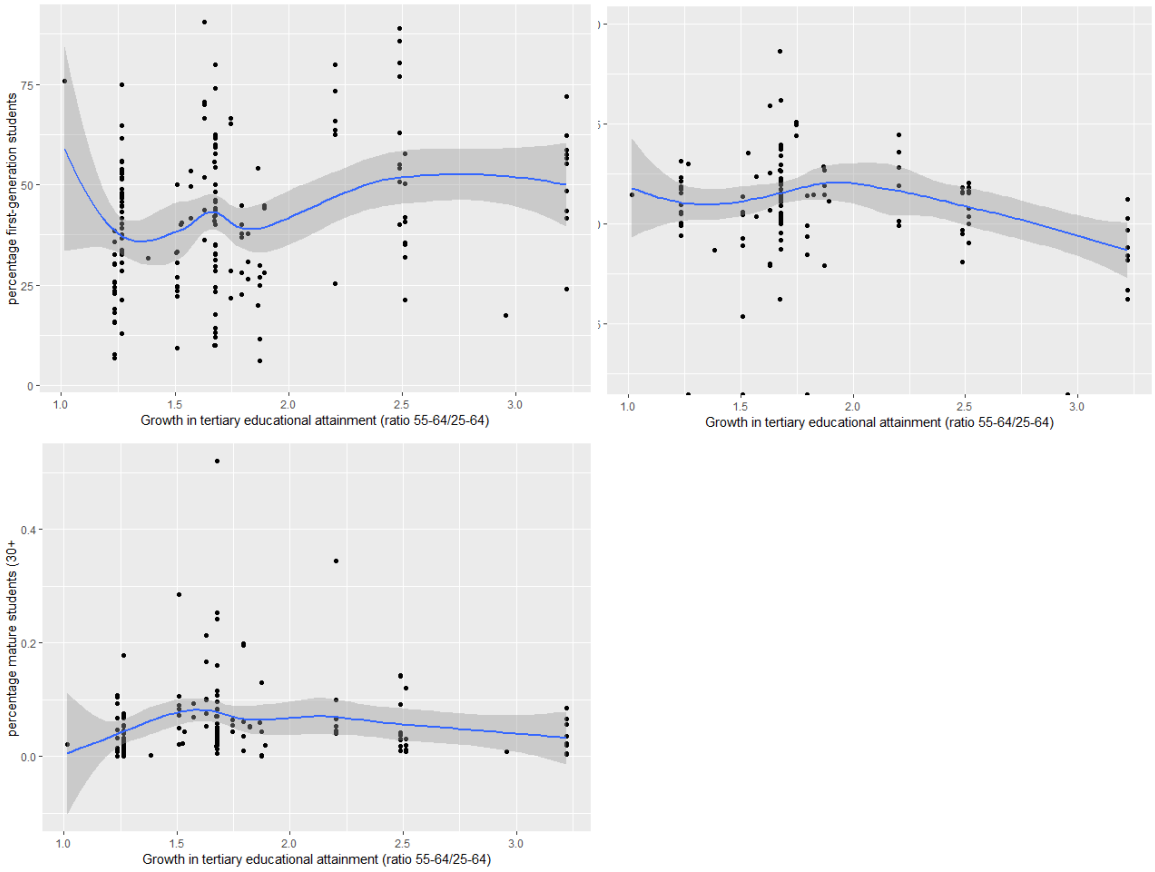
between GDP per capita and the percentage of first-generation students. For other systems, there is no relation. For disabled and mature students the pattern is less clear.







Do the fast-growing systems have more first-generation students, disabled or mature students? Patterns are not very clear, but the data do not lead to conclude that our assumptions are invalid. Systems that have grown fast tend to have a higher percentage of first-generation students and a lower percentage of disabled students.



Institutional differences

The UMR data also show that the percentage of first-generation students is linked to some characteristics of the higher education institution and the programmes provided. We find that HEIs that relatively few graduate students have more first-generation students. There is a similar result for the highest degree offered: HEIs that offer master's as their highest degree have on average more first-generation students than PhD granting HEIs. In the UMR HEIs have also characterized their type of institution and those results hint at a similar result: UAS have more first-generation students than research universities and specialized and technical universities have fewer first-generation students.

Multivariate analyses aimed at building a categorization of HEIs, using a larger set of (descriptive) mapping indicators: age, expenditure on research, percentage of graduate students, the highest level of degrees offered, new entrants from the region, size and scope do produce clusters of HEIs with characteristics that are in line with the bivariate analyses. However, due to the limited number of observations regarding first-generation students and a large number of variables in the clustering, no clear patterns emerged from those analyses.

Despite these findings, we can conclude that institutional characteristics do make a difference when interpreting data on first-generation students.

Subject-based differences

The U-Multirank students survey is part of the data collection for the 30 UMR subject rankings and hence restricted to those subjects. Subject data are updated in a rolling three-year cycle. In the 2020 and 2021 surveys, sciences and engineering, health subjects, psychology and social work were included. The data includes answers on parental educational background for 62,000 students from 314 institutions worldwide.

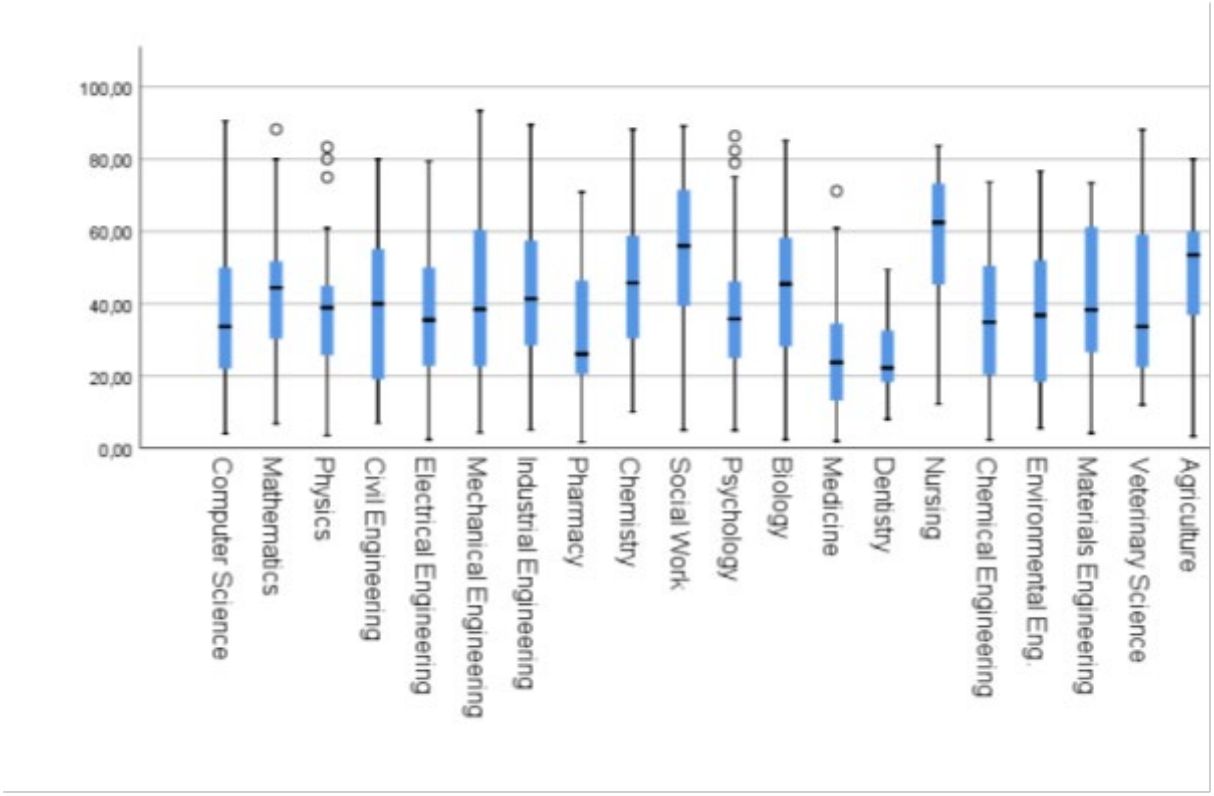
Results on first-generation students show marked differences by subjects. The highest percentage of first-generation students can be found in social work, nursing and agriculture; the lowest shares in medicine, dentistry and pharmacy. In general, the shares in the sciences are slightly higher than in engineering. Social work and nursing are among the subjects that have been “upgraded” from vocational to higher education most recently. In contrast, medicine, dentistry, and pharmacy have a long academic tradition and train for professions with high prestige. In many countries, education and nursing are offered by universities of applied science.

Why do higher education institutions differ in the percentages of first-generation new entrants?

These differences in national context, institutional profile and subject field may have an impact on the choice of potential students to access higher education. Based on the insights of the academic literature, we have formulated a few assumptions on how this impact may take its effect.

To be able to present an explanation, we have looked for conceptual frameworks that help understand why young people from underrepresented groups do not (as often) decide to enter higher education. A promising concept in that respect is the concept of individual risk aversion. Our first assumption is embedded in behavioural economics: the literature on individual loss or risk aversion when making important decisions (like going to higher education) and the differences in risk aversion between groups in society. The assumption is that potential students from underrepresented groups are more risk-averse than other students. They see more risks involved in enrolling into higher education, like the costs of a long study, and chances of not succeeding. This may be assumed to be particularly the case for first-generation students. Their parents lack the experience that may give them and their children a more realistic view of the risks. Consequently, young people from underrepresented groups decide not to enter higher education (as frequently as other young people) and when they do, they enrol in programmes with assumed lower risks: less expensive, with a relatively short duration or with a higher chance of completion (Vossensteyn, 2005, p.93-94). The UMR results on the subject level appear to corroborate this theoretical expectation, as the programmes with higher participation of first-generation students are those that are bachelor programmes, closely related to specific professions, in many systems ‘recently’ upgraded to higher education (e.g. nursing versus medicine).

Percentage of first-generation students by subject



The UMR data show that HEIs that offer master's as highest degree (that take a shorter time to complete (which leads to a smaller risk of failure and lower total cost) have more first-generation students than PhD granting institutions. The result regarding the percentage of graduates students underlines this conclusion. and offer more frequently the type of programmes/subjects that are popular among first-generation students.

There is however also a potential system-level explanation of the differences in participation of first-generation students. If the educational attainment of the older age groups (the parents of the potential students today) is low, it is most likely that the percentage of first-generation students will be relatively high (especially if current participation rates are much higher than participation rates in the past). To check this assumption, the data on first-generation students were linked to system-level data. In the UMR student survey, coverage of institutions differs by country; a sufficient number of institutions is available for 13 countries. Countries with low percentages of first-generation students include Ukraine and Hungary, and countries with high percentages of first-generation students include Portugal and Italy. How do these countries score in tertiary attainment? Data on Ukraine is not available and Hungary scores medium in tertiary attainment among the population aged 25-34 (31%) and the population aged 55-64 (20.3). In terms of growth of tertiary educational attainment, both countries score relatively low, which is in line with the assumption. Portugal and Italy score high in the growth of tertiary educational attainment, again in line with the assumption.

Disabled students

According to the Eurydice Report, only 16 out of 36 European countries regularly collect comprehensive data on students with disabilities. The definition of disability in our UMR institutional

survey is based on a UN definition: ”Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others"[1].

In the latest UMR data collection access of disabled students was addressed. Based on the more than 500 answers to the questions on this issue, the percentage of new entrants with a disability varied from 0 to 33%.

Students with disabilities were also most frequently mentioned when characterizing the target groups of institutional outreach activities: 137 out of 345 institutions responding to this question. Do the institutions that mention disabled students as a target group for outreach activities also have a higher percentage of new entrants with disabilities? On average, institutions that target disabled students in their outreach activities score twice as high as the other institutions (3.7% vs 1.8%), but the variation within both groups is too large to draw any firm conclusions from that result.

Why do HEIs differ in the percentages of new entrants with a disability?

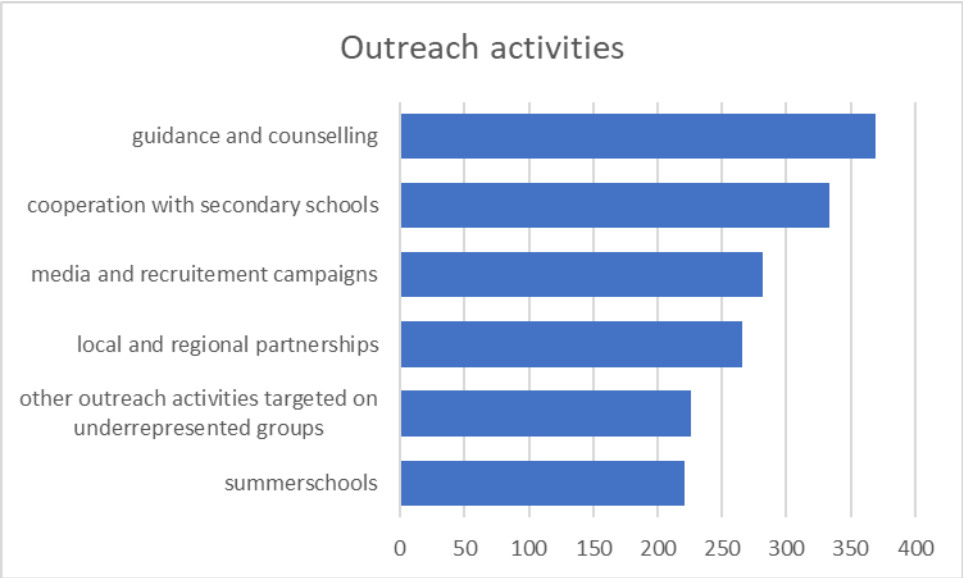
Also concerning the differences in the participation rates of disabled students the differences between national and institutional contexts needs to be taken into account. Our assumption is that larger institutions in more wealthy countries can accommodate more disabled students than smaller institutions in poor countries. Although the relationship is statistically not very strong, the data do not contradict our initial assumption. For half of the institutions, there seems not to be any relation but for the other half, a (limited) positive correlation can be found.

[1] https://www.un.org/disabilities/documents/convention/convention_accessible_pdf.pdf.

What can higher education institutions do? Outreach activities.

Types of outreach activities

What can institutions do to enhance the participation of students from underrepresented groups? In our 2021 survey, we asked the institutions participating in U-Multirank what outreach activities targeting underrepresented groups they had in place.



One third of the institutions responded to that question, of which 18% reported to have no data on outreach activities available, 15 % to have no outreach activities focused on underrepresented groups and 67% reported one or more types of outreach activities. Among the responding institutions, guidance and counselling were most popular, followed by cooperation activities with secondary schools. Summer schools for underrepresented groups were mentioned least often.

Whether the outreach activities have been effective in attracting more students from underrepresented groups is not yet possible to assess. The UMR comprise information on the types of outreach activities in place, but there is no information on how long the activities are already implemented.

There are no clear patterns in the participation of first-generation students or disabled students and the type of outreach programmes in place.

Target groups in outreach

345 institutions responded to the question on the *target groups* of their outreach activities. A wide variety was mentioned. The major target groups were: disabled students, students from a low socio-economic background, pupils at secondary schools, female pupils/students (often in combination with access to STEM programmes), refugees, migrant students, and mature students. Around one-third of the institutions specified one target group, one-third two, and the rest mentioned more than two target groups for their outreach activities. For those HEIs that mentioned low-income groups as the target group, the percentage of first-generation students was on average slightly lower than for

the other HEIs. For the small number of HEIs that mentioned first-generation students as a specific target group, the percentage of first-generation students is higher than for the rest. The same goes for disabled students as the target group: HEIs that mention that as a target group have on average a slightly higher percentage of first-generation students.

For disabled students, we saw that there is a positive, be it not very strong, relation between disabled students as a target group and % of disabled students.

If we look at the **type** and **number** of outreach activities, there is no clear pattern regarding disabled new entrants as a target group.

There is also no clear pattern in the number of outreach activities reported and the percentage of first-generation students. The same for the percentage of disabled new entrants.

Conclusion

Data on the participation of students from underrepresented groups are not commonly available among higher education institutions in Europe and beyond. UMR has introduced several questions in its data collection at the subject and institutional level to gain some insights into the actual participation of students from underrepresented groups. The results of the first round of data collection show that there are clear differences in the participation of two major categories of underrepresented groups: first-generation students and disabled students. These differences appear to be related to factors at the subject level, the institutional level and the national level. When trying to understand differences in participation between institutions these multi-level differences need to be taken into account. This limits the use of the information for ranking purposes but enriches the potential for understanding and interinstitutional mutual learning.

Higher education institutions can engage in activities and programmes that may have an impact on the participation of students from underrepresented groups. Data on institutional outreach activities are still incomplete, but of the institutions that responded to the question on outreach activities one third did not have targeted outreach activities in place or had no information on it. This implies that institutions can step up their effort, both in developing outreach activities as well as in collecting and providing information on underrepresented groups and outreach activities in place.

Given the result that there are also national differences in participation and outreach activities, it is not only at the institutional level where an effort can be made in creating circumstances that are favourable for more equal participation. Structural and cultural aspects play a role, and (financial) resources are also important (as the results of a recent Australian study (Devlin 2022) show[2]). System-level policies regarding social inclusion, addressing specific categories of underrepresented students may be expected to have a major impact.

[2] The study showed that investments per student are much higher for low SES students than for other students. This has to do with the costs of outreach activities. If it requires a certain level of resources and scale to organize such activities effectively, as the Australian results suggest, it does make sense that size and wealth are positively related to participation of underrepresented groups.

References

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