

Students' social integration with fellow students in higher education¹

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Students' social integration in higher education is an important predictor of students' study success and retention (Braxton, 2000). Students in a new environment need to integrate with fellow students, lecturers and the social climate in their higher education institution (HEI), in addition to becoming academically integrated (Tinto, 1993). How students in higher education interact with the institution's social and academic system is influenced by a range of (family) background characteristics and goal commitments (Pascarella & Terenzini, 1980). Students who do not have a higher education background may struggle to integrate into the unknown culture and practices within higher education (Bourdieu, 1984; Holmegaard, Madsen, & Ulriksen, 2017). Research shows that students from better educated families have better chances of getting tertiary degrees themselves (Bar Haim & Shavit, 2013; OECD, 2018) and that family financial status strongly influences educational attainment across generations (Pfeffer, 2018; Wightman & Danziger, 2014). Not having to work besides studies can increase the time spent on studies (Masevičiūtė, Šaukeckienė, & Ozolinčiūtė, 2018), which may also benefit social integration. The social integration of students and their sense

of belonging in higher education varies due to actual differences in the learning environment, such as type of housing (Riker & Decoster, 2008; Schudde, 2011), but has also been shown to vary according to student characteristics, such as impairments (Hauschildt, Gwosć, Schirmer, & Wartenbergh-Cras, 2020), parental education (Gillen-O'Neel, 2019), minority status (e.g. Fan et al., 2021) and socioeconomic status (Ahn & Davis, 2020). Studies have shown that students with higher degrees of social integration are more motivated and display higher persistence (e.g. Noyens et al., 2019; Tinto, 2017).

Building on these findings, this Intelligence Brief takes a closer look at how specific social background characteristics (i.e. parental and educational background), work and study experiences (i.e. time spent on work and studies) influence the social integration of students from different countries. Our research questions are as follows:

- Which factors contribute to students' social integration at higher education institutions?
- How do these factors vary across countries?

¹ This intelligence brief builds upon the Thematic Review "What determines students' social integration in higher education?", by Ardita Muja, Sylvia Mandl, Joris Cuppen, and Kristina Hauschildt (2021). Whereas in the Thematic Review we have investigated both students' integration with fellow students as well as with lecturers, in this IB we focus on students' integration with fellow students only.

EUROSTUDENT Micro data

Making use of the EUROSTUDENT VII Scientific Use File (SUF), we have analyzed answers of over 130.000 students within 13 countries² which factors are related to students' social integration. With this SUF, several other topics can be investigated, namely students' time budget, socioeconomic background, transition into higher education, types and modes of study, employment and internships, resources and expenses, housing situation and students' international mobility. In EUROSTUDENT VII survey 26 countries participated,

Students' social integration

Building on Tinto's (1975) framework of social integration, we have built a similar statistical model in which we investigate, among other aspects, students' socioeconomic background and its relation to students' sense of social integration, and whether this relationship differs between countries. Socioeconomic background is measured in two ways: first of all, students were asked what their parents' highest educational attainment³ is, and secondly, how well-off their parents are compared to others⁴. In addition to the socioeconomic background, we were specifically interested in the relationship between social integration and the amount of

however, at the time of our analyses, data of only 13 countries were available in the SUF: Austria, Croatia, Denmark, Estonia, Finland, Georgia, Hungary, Ireland, Lithuania, Luxembourg, Netherlands, Poland, and Slovenia, which all carried out their fieldwork in the first half of 2019. In EUROSTUDENT VII not all participating countries will add their micro data to the SUF, but there will be more countries added to the SUF during 2021 and 2022.

time spent on study and work⁵. Students' sense of social integration is measured in two separate items, adapted from Dahm et al. (2016), namely their evaluations to the following statements:

- "I know a lot of fellow students with whom I can discuss subject-related questions";
- "I have contact with many students in my current study programme".

In the following graph, the mean scores of the combined score⁶ of all the students within the 13 countries on both scales are shown.

² For more information, see: <https://doi.org/10.21249/DZHW.es7:1.0.0>

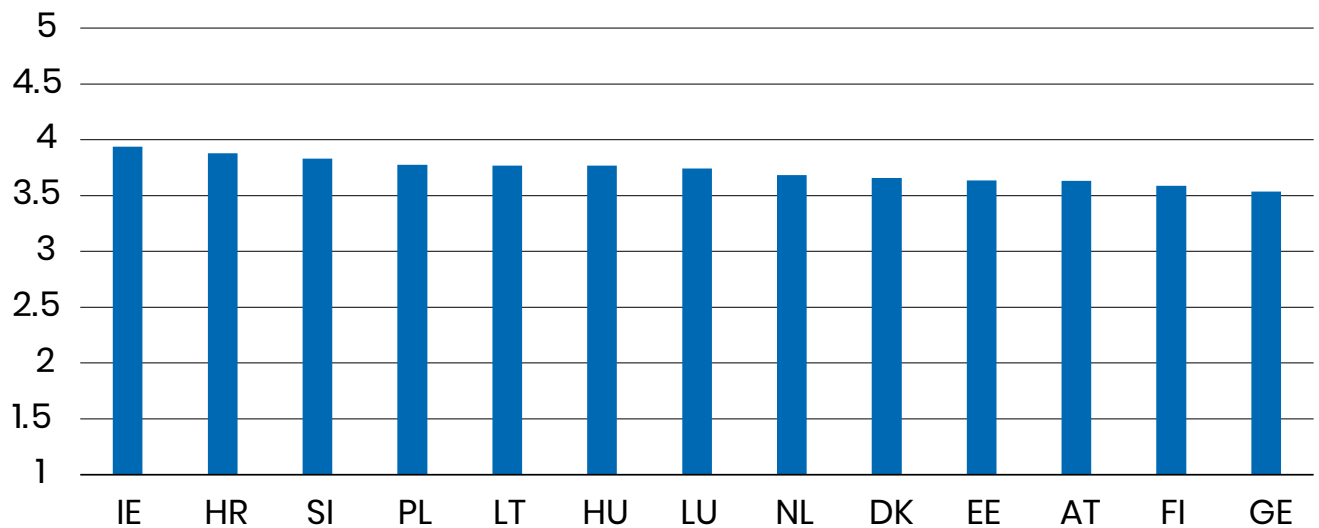
³ Divided into: 'Low' (ISCED 0-2), 'Medium' (ISCED 3-4), and 'High' (ISCED 5-8)

⁴ Originating from the PIRLS survey (2006) with possible answers being: "Not very or not at all well-off", "Averagely well-off", and "Somewhat or very well-off"

⁵ Time spent on work (per week) is recoded in three categories: "Low" (0 hours), "Medium" (1- 20 hours), and "High" (> 20 hours). Study intensity was measured in weekly hours spent on taught studies/lectures, personal study time, and study related activities. It was then recoded into three categories: "Low intensity" (0-20 hours), "Medium intensity" (> 20 - 40 hours), and "High intensity" (> 40 hours).

⁶ With a Cronbach's alpha of 0.82

Figure 1. Average students' sense of social integration with fellow students



Source: EUROSTUDENT VII Aggregated Data (2021) (fieldwork Spring 2019).

EUROSTUDENT question(s): v3.3 Generally, to what extent do you agree with the following statements with regard to your current #(main) study programme?: I know a lot of fellow students with whom I can discuss subject-related questions / I have contact with many students in my current study programme

Deviations from EUROSTUDENT survey conventions: AT

First of all, for all listed countries, the majority of students state they are well integrated with fellow students, with means varying from 3.5 to 3.9. However, within countries there are several differences for different student groups. Since student populations vary among countries, we must take these factors into account when looking into differences of students' integration. We therefore have created several multilevel logistic regression models (with students nested within countries) to determine which factors

matter. In these models, we accounted for the influence of gender, age, migration background, delayed transition into higher education, the type of higher education institution (HEI), being a first-year student, students' living situation, financial dependency, and students' field of study. After we excluded missing values for all variables through listwise deletion, the sample of the micro data was reduced to 124,695 respondents across 13 countries.

Multivariate results

To what extent does the feeling of being socially integrated with fellow students differ between countries? The extent to which social integration with fellow students is explained by country differences is 0.7% and thus very low⁷. This indicates that the level of social integration does not seem to differ that much between countries. However, countries can still show different patterns in the relationship between, for example, socioeconomic background and social integration with fellow students. To examine this, we ran logistic two-level models. First, we show the general findings (i.e. the average effects)

across all thirteen countries (see Figure 2). In the next section, we present the findings per country.

Figure 2 illustrates the findings of the full model on students' level of social integration with fellow students, including all independent variables. Each $\exp(B)$ of the model is depicted by a separate bar. Positive statistical effects are shown as green bars, whereas negative effects are shown as red bars. Note that only dark-colored bars indicate significant effects ($p < 0.05$), while light-colored bars indicate non-significant effects.

Socioeconomic background

Socioeconomic background in the EUROSTUDENT survey is based on information on parental educational background and parental financial situation of the students. Starting off with

parental educational background, Figure 2 demonstrates that there is no significant relation between parents' educational attainment and students' level of social integration with their

⁷ ICC_{students} = 0.7% (N_{countries} = 13; N_{individuals} = 124,695).

fellow students when controlling for other factors. Contrary to our expectations based on sources indicated earlier (Bourdieu, 1984; Holmegaard et al., 2017), we did not find that students with parents with higher educational attainment feel more socially integrated with other students. However, this model presents the average effect across all thirteen countries. An explanation for this unexpected finding is that this relation varies across countries, which we will explore later on.

Time spent on work

Regarding time spent on work, Figure 2 provides no evidence that time spent on working is negatively related to students' integration with fellow students. In fact, students who spend more time working feel more socially integrated with their fellow students. This indicates that time spent on work does not seem to conflict with being able to socially integrate with fellow students, i.e. there seems to be no trade-off between these two indicators.

Control variables

There are some student groups across EUROSTUDENT countries which feel less socially integrated with fellow students compared to their peers. These groups include:

- Female students;
- Older students, especially those older than 30 years;
- Students with a migration background (i.e. at least one of the parents is born abroad);
- International students;
- Students in the field of business (vs. all other fields of study).

Next, turning to the role of the financial situation of parents, we found that students with parents who are not at all well-off feel less socially integrated compared to students with parents who are on average well-off. On the other hand, students with very well-off parents, feel more socially integrated with fellow students compared to students with parents who are less well-off. This is in line with findings from previous research (Ahn & Davis, 2020).

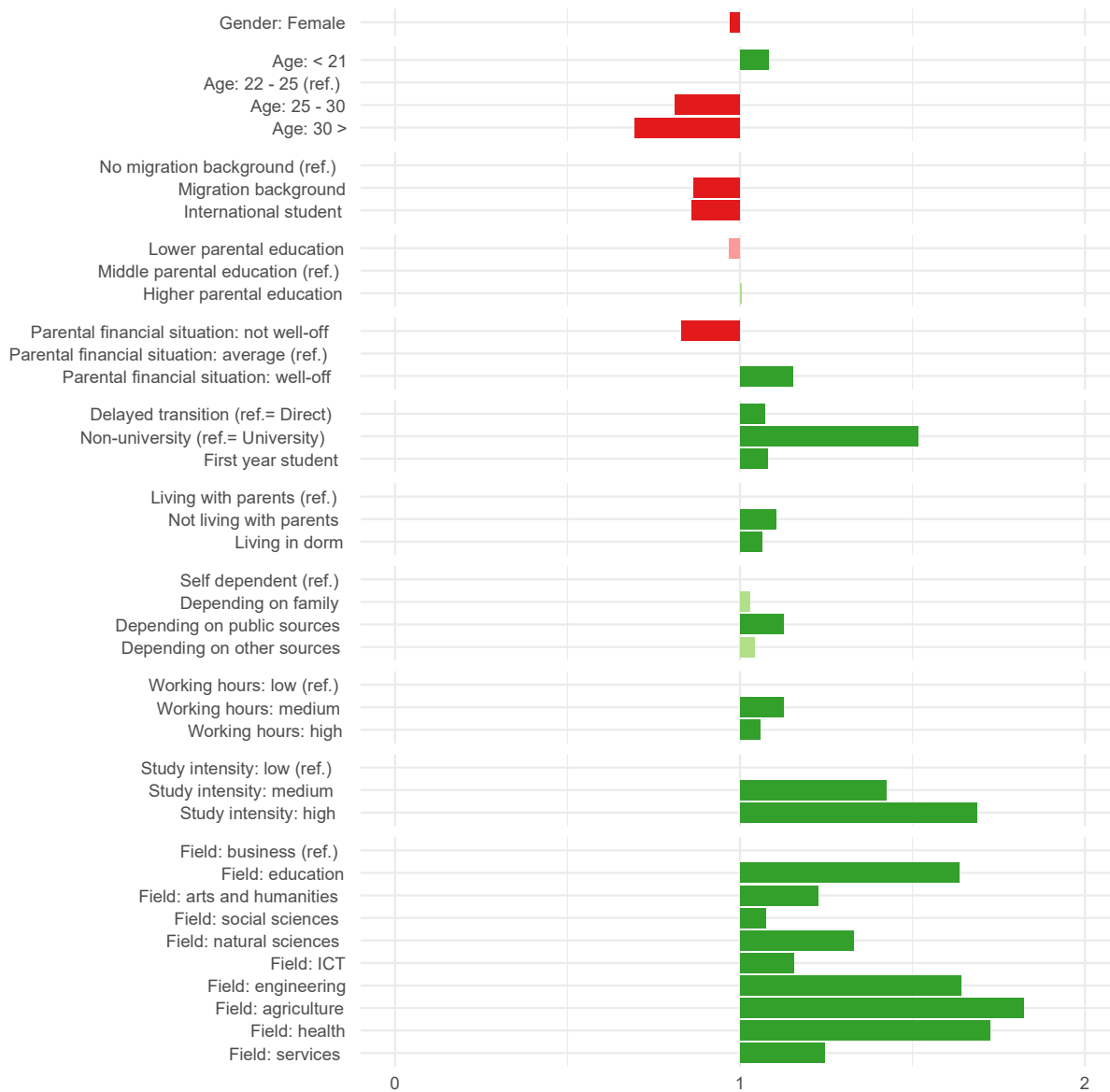
Study intensity

The relationship between study intensity and the feeling of being socially integrated with other students is positive. Students who indicate medium or high study intensity feel more socially integrated with fellow students than those who indicate that their study intensity is low.

In contrast, the following groups of students feel, on average, more socially integrated with other students:

- Delayed transition students, i.e. students who entered HE with a delay of more than 2 years after leaving school;
- Non-university students (vs. university students);
- First-year students;
- Students who do not live with their parents and students living in dorms (vs. students living at the parental home);
- Students who financially depend more on public funds (vs. those who financially depend more on their own income/ earnings).

Figure 2. Two-level logistic regression on social integration with fellow students



Country differences

Now that we have discussed the average (fixed) effects across all countries, we focus on differences between countries for our three main topics of interest, namely the relationship of (1) students' socioeconomic background, (2) time

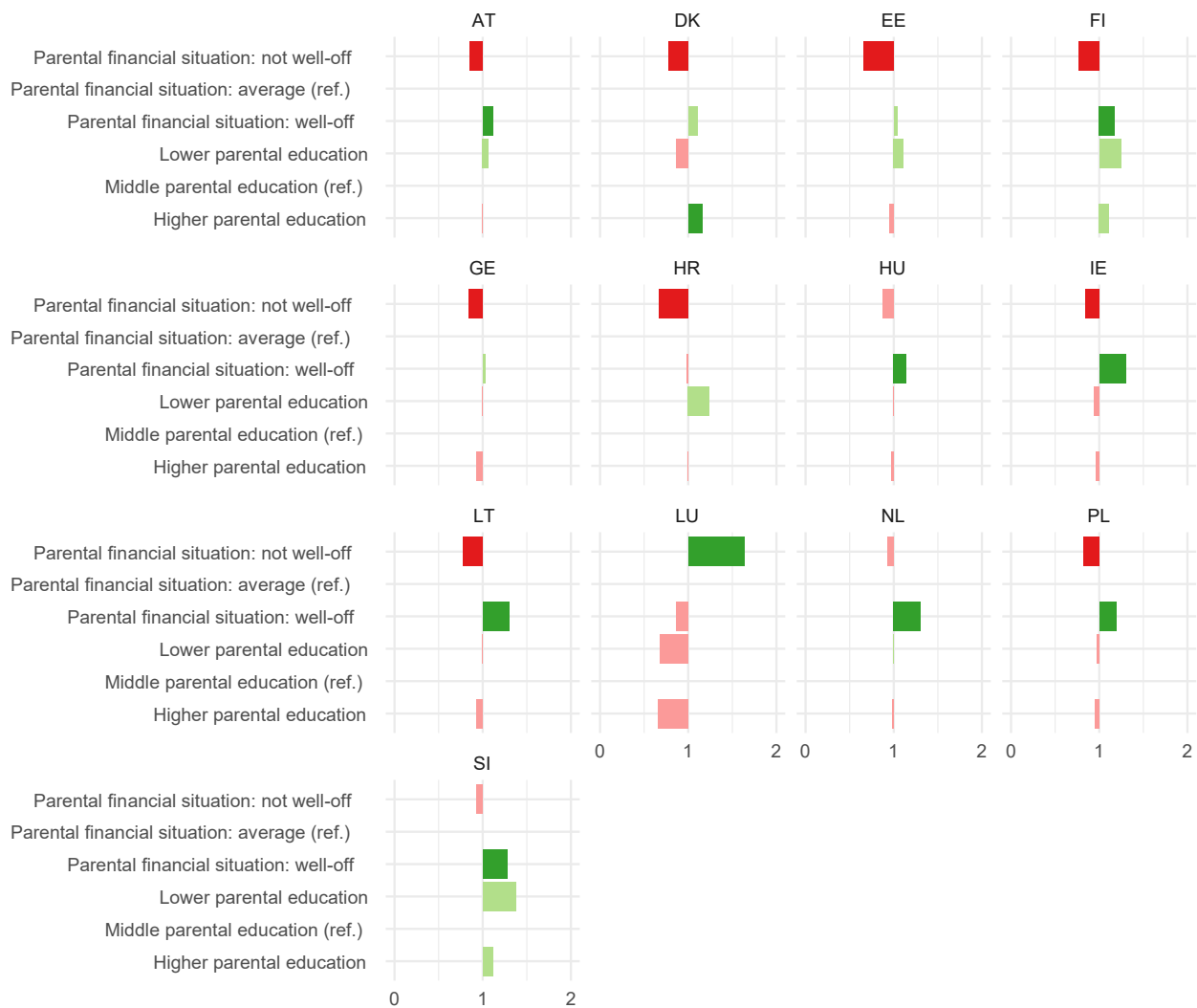
spent on work, and (3) their study intensity, with students' level of social integration with fellow students. We ran logistic multivariate models including all independent variables for each country separately.

Socioeconomic background

Starting off with the parental financial situation, different patterns are found across countries (see Figure 3). In 9 out of 13 countries, students with parents who are not well-off feel less socially integrated with other students compared to students with parents that are averagely well-off. In addition, in 10 out of 13 countries, students with parents who are well-off feel more socially integrated with other students than their counterparts who are averagely well-off. Only

Luxembourg stands out, where students with not well-off parents feel more socially integrated with their fellow students. Three countries (Hungary, the Netherlands, and Slovenia) show no significant difference between these groups. All in all, most countries show similar patterns: students with parents who are more well-off feel more socially integrated than students with parents who are less well-off.

Figure 3. Logistic multivariate regressions per country: effects of students' socioeconomic background on social integration with fellow students.



Next, the findings in Figure 2 showed that, on average (i.e. across all countries) the relationship between parental educational background and social integration with other students is not significant. When looking at the country patterns,

we only find a positive relationship in Denmark. Thus, in most countries, parental educational background seems to have a very limited relation with students' level of social integration with peers, while taking other factors into account.

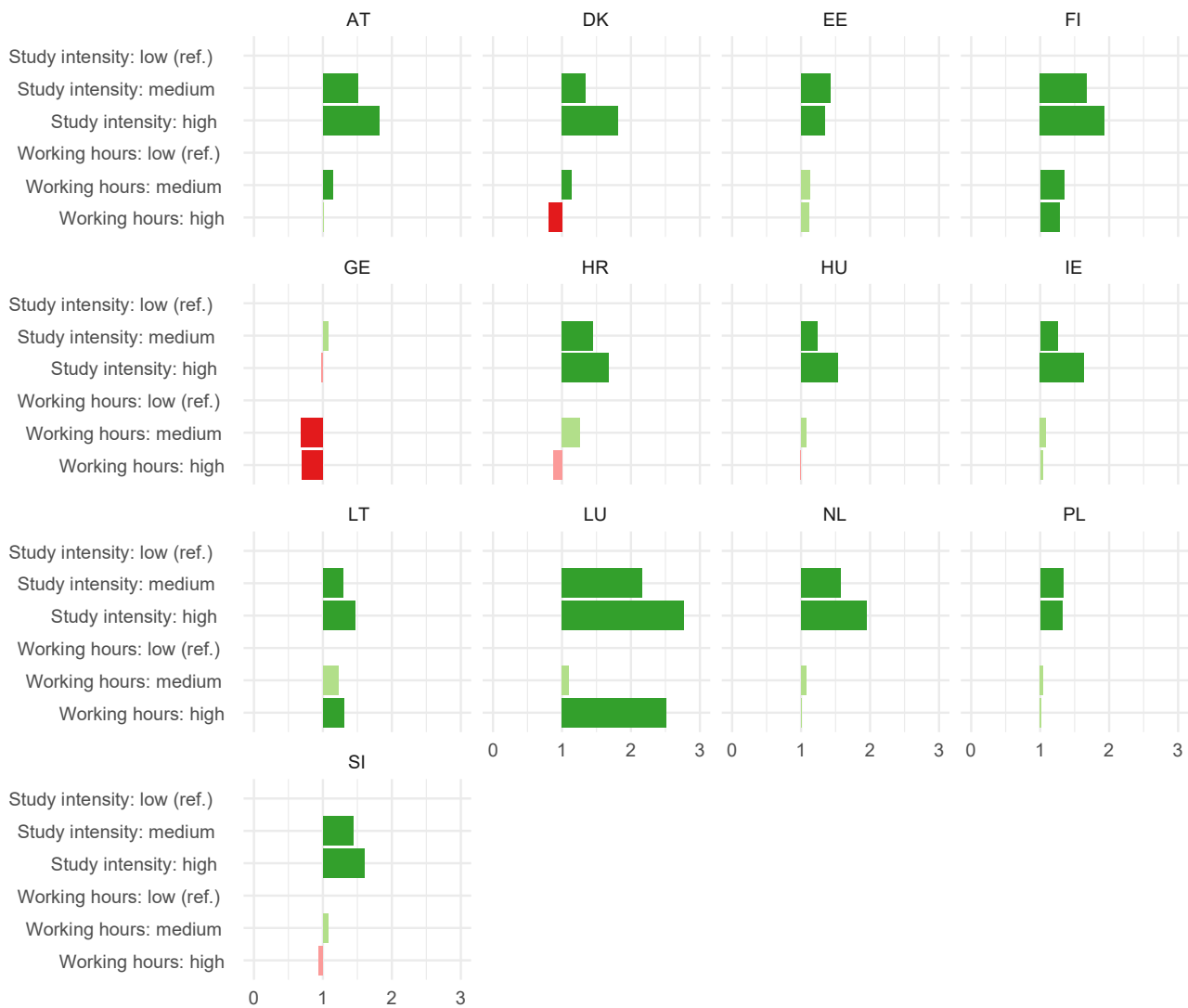
Time spent on work and study intensity

The general findings showed that time spent on work is positively related to students' level of social integration with their peers. However, this relationship is much more diverse between countries, as can be seen in Figure 4. In most countries (7 out of 13; Estonia, Croatia, Hungary, Ireland, the Netherlands, Poland and Slovenia), no significant relationship is found when controlling for all other variables. In 4 out of 13 (Austria, Finland, Lithuania, and Luxembourg) countries, students feel more socially integrated with other students when they spend a medium or high amount of time on work. The opposite is found in Georgia.

Here, students feel less socially integrated the more time they spend on working. This is also the case in Denmark, but only among students who indicate to spend a high amount of time on work (i.e. more than 20 hours a week).

Figure 4 also shows how study intensity relates to students' level of social integration with fellow students in each country separately. For all countries, except for Georgia, we see a similar relation: the higher the study intensity, the higher the probability that students indicate that they feel socially integrated with their fellow students.

Figure 4. Logistic multivariate regressions per country: effects of students' time spent on study and work on social integration with fellow students.



Conclusion and discussion

All in all, the findings indicate that a majority of students feel relatively well integrated with fellow students. However, within the total student population there are subgroups who feel less integrated than others. Regarding the role of parental educational background, we do not find a relationship with students' social integration with fellow students. However, in single country models, parents' education does prove to be significant in some countries – however, not necessarily in a way that could be expected. In Denmark, students with highly educated parents actually report feeling less well integrated with their fellow students. Parental educational background in general seems to have a very limited effect when other variables are taken into account.

However, that does not mean that parental resources do not at all matter; we do find that

the parental financial resources are important. Students with parents who are relatively well-off are, on average, more socially integrated with fellow students. These patterns can be found in almost all countries under investigation and this result is in line with findings from previous empirical research (e.g. Ahn & Davis, 2020).

As for time spent on studying, there is a clear effect: the more time is being spent studying, the more students feel socially integrated. Also, when looking at individual countries, this is the case for all countries but one (i.e. Denmark). The relation between time spent on work on students' level of social integration with other students is more diffuse. Although generally we see that students who spend more time working feel more socially integrated, when looking at each country separately, these effects can be negative in some countries, non-existing in others and in some

countries the effect is positive. The conclusion we draw from this is that there is no clear competition between time spent on work and the sense of feeling socially integrated with fellow students. Moreover, different patterns between countries indicate that country characteristics (e.g. macro-economic conditions, public funding or social welfare policies) may play a role in this relationship.

With the use of the EUROSTUDENT VII Scientific Use File we have explored students' sense of feeling socially integrated in 13 countries in the European Higher Education Area (EHEA), and factors

contributing to this. With the help of the micro data, we were able to investigate influences of individual factors, while taking into account that there are numerous factors at play. Disseminating the micro data is therefore an important step towards more open research into social and economic factors of higher education students. In the future we aim to add more countries to the EUROSTUDENT micro database, and to investigate national institutional characteristics, such as admission policies, study organization and funding policies.

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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

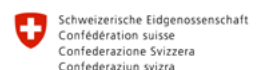
temporary international mobility of students. The project strives to provide reliable and insightful cross-country comparisons. The data presented here stem from the seventh round of the EUROSTUDENT project (2018–2021).

Countries participating in EUROSTUDENT VII

Albania (AL)**	Germany (DE)	Poland (PL)
Austria (AT)	Hungary (HU)	Portugal (PT)*
Croatia (HR)	Iceland (IS)	Romania (RO)*
Czech Republic (CZ)	Ireland (IE)	Slovenia (SI)
Denmark (DK)	Italy (IT)*	Sweden (SE)
Estonia (EE)	Lithuania (LT)	Switzerland (CH)
Finland (FI)	Luxembourg (LU)	The Netherlands (NL)
France (FR)	Malta (MT)	Turkey (TR)*
Georgia (GE)	Norway (NO)	

* reference period during COVID-19 pandemic; ** results will be available in database.

Consortium members



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