

# What really matters in the end

Factors influencing income concentration  
among students

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**DZHW**

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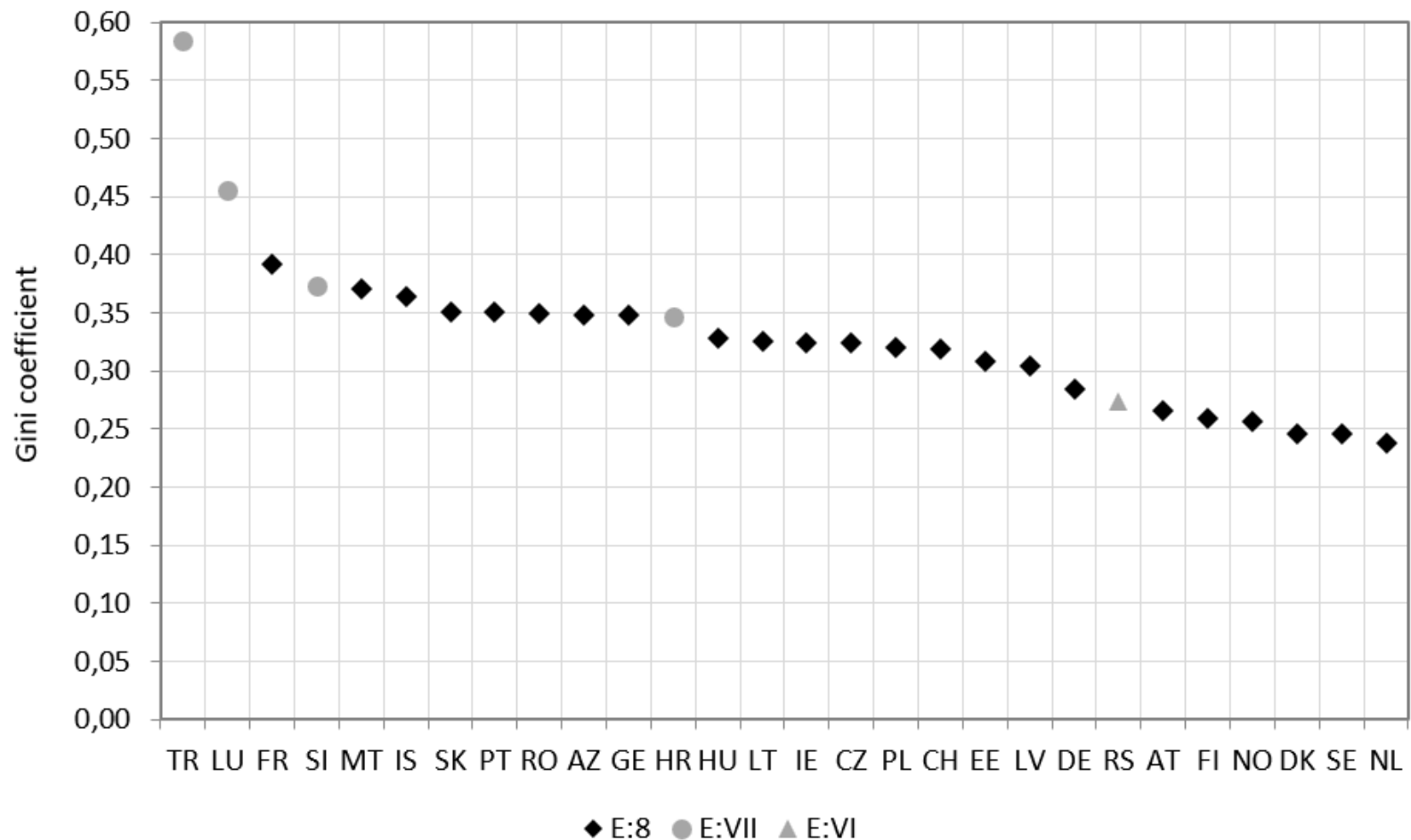
# Introduction

- In financial respect, students in the European Higher Education Area are heterogenous both within and across countries.
- Previous research has shown that the degree of financial heterogeneity – as measured by the Gini coefficient – differs markedly across countries (Hauschildt et al., 2021; 2018; 2015; Orr et al., 2011).
- Research question: What are the driving forces behind the degree of income inequality among students in international comparison?

# Introduction

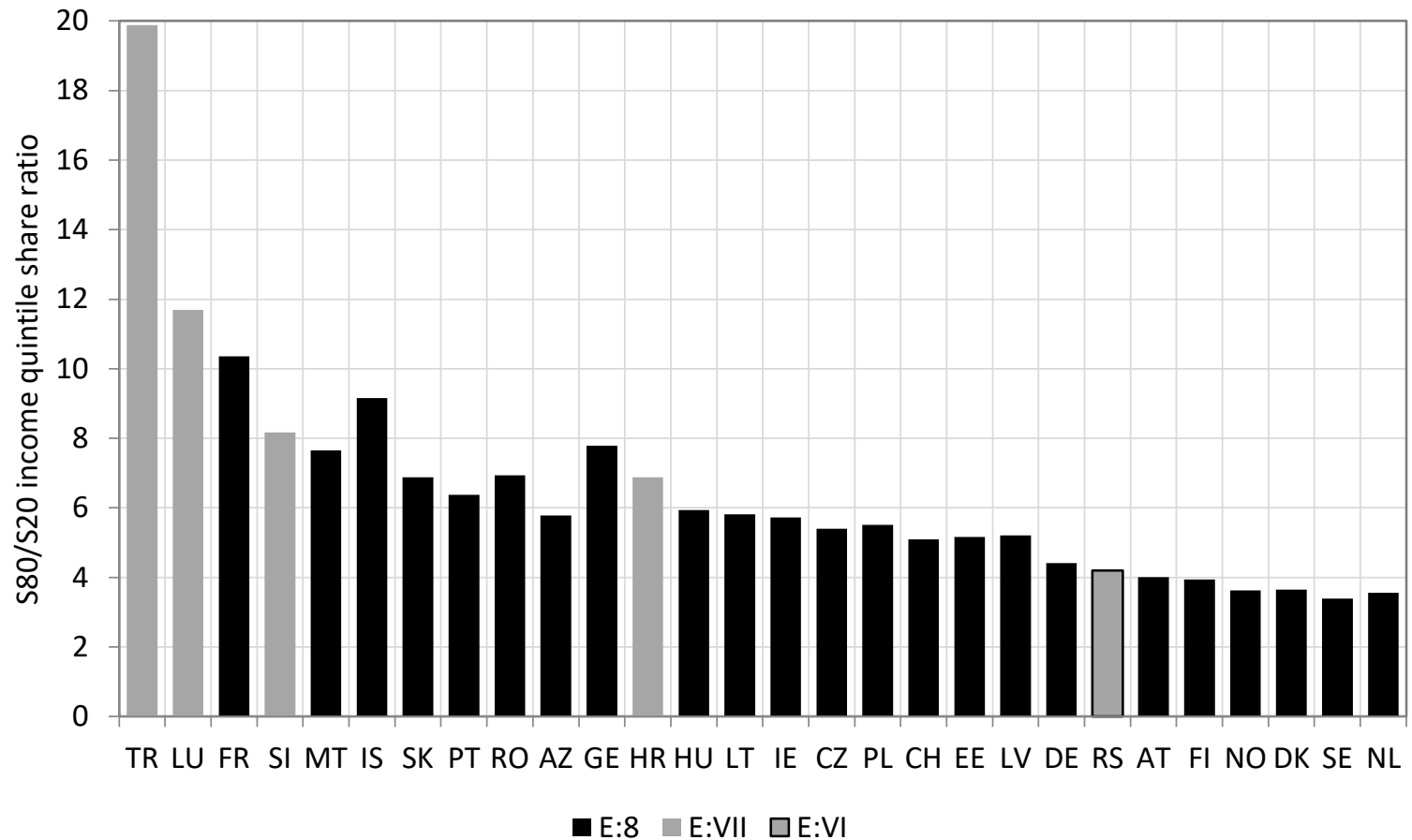
- Data: EUROSTUDENT VI/VII/8 pooled aggregate data
- Method: Simple linear and LASSO regressions (Gini coefficient as dependent variable, several indicators from the areas finances, socio-demographics, mode of study, and lifestyle as independent variables), explorative approach.

## Gini coefficient based on students' total monthly income (incl. transfers in kind), 2016-2024



Source: Schirmer & Gwosć (2026).

## S80/S20 income quintile share ratio based on students' total monthly income (incl. transfers in kind), 2016-2024



Source: Schirmer & Gwosć (2026).

Table 1: Results of simple linear regressions with the Gini coefficient as dependent variable

| Independent variables                                                      | Coefficient ( $\beta$ ) | Standard error | Significance (p) | adj. R <sup>2</sup> |
|----------------------------------------------------------------------------|-------------------------|----------------|------------------|---------------------|
| <b>Finance-related variables</b>                                           |                         |                |                  |                     |
| Share of national public student support in students' total monthly income | .994                    | .001           | 0.000            | .277                |
| Share of family support in students' total monthly income                  | 1.004                   | .002           | 0.029            | .133                |
| Share of students receiving family support                                 | 1.003                   | .002           | 0.063            | .092                |
| Share of students receiving national public student support                | .998                    | .001           | 0.088            | .086                |
| Share of foreign public support in students' total monthly income          | .917                    | .063           | 0.217            | .039                |
| Share of self-earned income in students' total monthly income              | 1.000                   | .002           | 0.844            | .014                |
| Share of other income in students' total monthly income                    | 1.003                   | .009           | 0.725            | .010                |
| Share of students employed during the whole semester*                      | .999                    | .001           | 0.623            | .010                |

\*: Due to differing aggregation categories in EUROSTUDENT VI, VII, & 8, deviating definitions had to be used for the three project rounds (EUROSTUDENT VI: Share of students employed during the lecture period and lecture-free period (except AT and DE, there: Share of students employed during the whole lecture period), subtopic H.31; EUROSTUDENT VII: Share of students employed during the (whole) lecture period at least from time to time and employed during a lecture-free period within the last 12 months, subtopic H.3; EUROSTUDENT 8: Share of students employed during the whole lecture period and employed from time to time during the lecture period, subtopic H.1).

Table 1: Results of simple linear regressions with the Gini coefficient as dependent variable

| Independent variables                           | Coefficient ( $\beta$ ) | Standard error | Significance (p) | adj. R <sup>2</sup> |
|-------------------------------------------------|-------------------------|----------------|------------------|---------------------|
| <b>Socio-demographic variables</b>              |                         |                |                  |                     |
| Share of students from non-academic backgrounds | 1.005                   | .002           | 0.010            | .146                |
| Share of students with disability               | .992                    | .004           | 0.077            | .116                |
| Average age of students                         | .985                    | .015           | 0.344            | .026                |
| Share of students with children                 | 1.000                   | .004           | 0.943            | .016                |
| Share of male students                          | 1.004                   | .008           | 0.631            | .008                |
| <b>Study-related variable</b>                   |                         |                |                  |                     |
| Share of part-time students                     | 1.002                   | .002           | 0.341            | .009                |
| <b>Lifestyle-related variable</b>               |                         |                |                  |                     |
| Share of students living with parents           | 1.005                   | .001           | 0.001            | .210                |

Source: Schirmer & Gwośc (2026).

# Results

The simple linear regressions reveal that there are only four variables out of 15 that have a statistically significant influence on the Gini coefficient:

- The share of national public student support in students' total monthly income,
- the share of family support in students' total monthly income,
- the share of students from non-academic backgrounds,
- the share of students living with parents.

Table 2: Results of LASSO regression with the Gini coefficient as dependent variable

| Independent variables                                                      | Coefficient ( $\beta$ ) | Standard error | Significance (p) |
|----------------------------------------------------------------------------|-------------------------|----------------|------------------|
| Share of other income in students' total monthly income                    | 1.005                   | .008           | 0.537            |
| Share of students from non-academic backgrounds                            | 1.002                   | .002           | 0.207            |
| Share of students living with parents                                      | 1.003                   | .002           | 0.190            |
| Share of national public student support in students' total monthly income | .996                    | .002           | 0.062            |
| Constant                                                                   | .280                    | .027           | 0.000            |
| R <sup>2</sup>                                                             |                         | 0.372          |                  |
| Adjusted R <sup>2</sup>                                                    |                         | 0.330          |                  |
| n observations                                                             |                         | 65             |                  |
| n cluster (countries)                                                      |                         | 28             |                  |

Source: Schirmer & Gwosć (2026).

# Results

The LASSO regression model shows that ...

- the two origin-related variables (share of students from non-academic backgrounds, share of students living with parents) and the share of other income are not significant anymore,
- only the share of national public student support in students' total monthly income still has a rather strong and close to significant effect, thus overriding the other effects.

# Implications of income concentration

- A high degree of income concentration is associated with different study framework conditions. Possible negative effects for low-income students:
- During studies:
  - need for intensive employment alongside studies at the expense of study time (Apolinarski & Gwosc', 2020)
    - prolongation of studies (Theune, 2015)
    - worse intermediate and final study grades (Wenz & Yu, 2010)
    - greater health risk (Shankland et al., 2019)
    - higher risk of interrupting/dropping out of HE (Hovdhaugen, 2015)
- After studies:
  - lower paid jobs (Wittenberg, 2005)
  - longer amortization period for studies/lower returns to education (Anger et al., 2010)

# Implications of results

- According to our findings, national public student support is the only source that – close to statistical significance – reduces the extent of high income concentration. → Public support seems to be even more important than thought!
- However, previous research has also shown that students who depend on this source have – compared to receivers of other major sources of income – significantly lower incomes and clearly more often (serious) financial difficulties (Gwosc', 2019).

 Social policy dilemma!

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