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# What Shapes Students' European Identity?: Comparative Evidence From 16 EU Countries

**Ireta Čekse[1], Reinis Alksnis[2], Ilze Ivanova[3]**

[1]Senior researcher and Assistant professor, University of Latvia

[2]Researcher and doctoral candidate, University of Latvia, Department of Mathematics and the Education Research Institute

[3]Professor, Emeritus at the University of Latvia's Faculty of Education Sciences and Psychology

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**Author's Email :**
ireta.cekse@lu.lv;
reinis.alksnis@lu.lv;
ilze.ivanova@lu.lv

**Author's Orcid :**
0000-0002-0679-6535,
0000-0002-5512-5463,
0009-0000-2404-9229

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## Abstract

The development of European identity among young people has become increasingly important in the context of social diversity, political change, and ongoing discussions about the future of European integration. Schools play a key role in shaping civic attitudes and fostering a sense of belonging to wider political communities. This study examines the factors associated with the formation of European identity among Grade 8 students in European Union member states. The analysis is based on data from the International Civic and Citizenship Education Study (ICCS) 2022 and includes 52,726 students from 16 EU countries. Descriptive statistics and model-based analyses approach using Bayesian Additive Regression Trees (BART) were used to explore how civic knowledge, socioeconomic background, migration status, and school learning environments relate to students' European identity. The findings show that European identity is a multidimensional construct linked to higher levels of civic knowledge, a more open classroom discussion climate, and more frequent engagement in civic and political discussions. Socioeconomic background and migration-related factors were also associated with European identity, although these relationships differed across countries. The results highlight the importance of educational environments and civic learning opportunities in supporting adolescents' sense of European belonging.

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## Introduction

Over the last decade, European identity has been purposefully shaped through education and culture, fostering individual, national, and regional belonging and values (European Commission, 2017; European Communities, 1973). The European Union (EU) constitutes a political and economic alliance of 27 member countries, dedicated to promoting

cooperation and unity among diverse nations. Research shows that factors such as education, socioeconomic status, and ideology are associated with a stronger European identity (Fernández et al., 2026). Understanding the factors shaping European identity among students is essential for cultivating a cohesive and sustainable European community.

Identity has cognitive, evaluative, and emotional components (Herrmann & Brewer, 2004), as well as the capacity to sustain a narrative (Giddens, 1991). In the social sciences, scholars such as Stets and Burke (2000) and Andriot and Owens (2012) conceptualize identity across several dimensions, including personal, social, collective, cultural, and gender identity. In the context of European identity, civic knowledge—understood as knowledge of political and social institutions—plays a pivotal role in shaping the attitudes and identities of young citizens. As future leaders and active participants in society, students' understanding of civic concepts can significantly influence their identity and their engagement within the European community (Hoskins, Janmaat, & Villalba, 2012).

Since 2009, the International Civic and Citizenship Education Study (IEA ICCS; cycles 2009, 2016, 2022) has provided comprehensive data on how students understand the concept of citizenship and how prepared they are to participate in democratic societies in a changing global context (Schulz et al., 2024; Damiani et al., 2024; Losito et al., 2018; Kerr et al., 2010). As a large-scale international study, ICCS offers broad comparative insights into citizenship education across European countries. However, international reports provide limited understanding of the interrelationships between students' attitudes, background characteristics, values, and beliefs in the context of European identity. Therefore, a gap remains in understanding how these factors interact specifically within EU member states (Eurydice, 2017).

Moreover, recent decades have brought significant challenges to European identity, including economic and political instability, as well as concerns about the erosion of democratic norms, even in democratically elected systems (Lührmann et al., 2021). These developments highlight the need to better understand the factors shaping students' European identity. Therefore, the aim of this study is to determine the key factors associated with the formation of European identity among students across **16 EU countries.** This research seeks to identify the various influences shaping students' sense of belonging to Europe and to provide a comparative analysis across multiple member states.

Our study aims to examine what shapes students' European identity across EU countries, leading to the following research questions:

**Q1:** Are background factors—home language, school location, migration status, and socioeconomic status (SES)—associated with students' European identity?

**Q2:** How is students' level of civic knowledge related to their European identity?

**Q3:** What is the role of school-based and out-of-school civic activities in developing students' European identity?

**Q4:** How do countries differ in terms of the factors that influence European identity?

## Materials and Methods

### Data Source and Sample

This study uses data from the **International Civic and Citizenship Education Study (ICCS) 2022**, conducted by the International Association for the Evaluation of Educational Achievement (IEA). ICCS is a large-scale international assessment that investigates how young people are prepared to assume their roles as citizens in democratic societies. The study collects information about students' civic knowledge, attitudes, and engagement, as well as the contexts in which civic learning takes place.

The target population of ICCS 2022 consists of **Grade 8 students**, typically aged between 13 and 14 years. Data were collected using standardized instruments, including a **civic knowledge test,** an **international student questionnaire,** and a **European regional questionnaire** administered in participating European countries. Data collection was carried out using both **paper-based and computer-based formats** through the IEA StudyExpert platform.

For the purposes of this study, data from **16 European Union member states participating in ICCS**

**2022** were analysed. The final analytical sample comprised **52,726 students.** The ICCS sampling design follows a two-stage stratified procedure, in which schools are sampled first and students are selected within schools. To account for the complex sampling design, all analyses incorporated **student sampling weights and jackknife replication procedures** to obtain appropriate estimates and standard errors.

The ICCS 2022 dataset is publicly available through the IEA Study Data Repository (https://www.iea.nl/data). The study follows international data protection and ethical standards, including the requirements of the General Data Protection Regulation (EU) 2016/679.

### Dependent Variable

The main outcome variable in this study is students' European identity, measured using the ICCS 2022 scale E_EUIDENT. This scale reflects students' sense of belonging to Europe and is constructed from responses to the following items:

- "I see myself as European"
- "I am proud to live in Europe"
- "I feel part of Europe"
- "I see myself first as a citizen of Europe and then as a citizen of the world".

Higher values on the scale indicate a stronger identification with Europe.

### Independent Variables

Several explanatory variables representing students' background characteristics, school context, and civic engagement were included in the analysis.

### School context

School location was measured using the variable **C_URBAN,** which distinguishes between schools located in urban areas (cities with at least 100,000 inhabitants) and non-urban areas.

### Classroom environment

Classroom climate was captured using the **S_OPDISC scale,** which measures students' perceptions of **open classroom discussions.** The scale is based on items assessing whether teachers encourage students to express opinions, discuss political issues, consider multiple perspectives, and engage in discussions about current events.

### Out-of-school civic engagement

Two additional scales were used to measure students' civic engagement outside school:

- **S_POLDISC** – frequency of discussions with parents and friends about political or social issues
- **S_COMPART** – participation in community groups or organizations (e.g., youth organizations, voluntary groups, environmental campaigns)

Higher values on these scales indicate greater engagement in civic or community activities.

### Control Variables

To account for relevant background differences among students, several control variables were included in the models:

- **Civic knowledge** (ICCS civic knowledge scale)
- **Socioeconomic status (SES)**
- **Migration status**
- **Language spoken at home**
- **Gender**
- **School characteristics**

Including these covariates allowed the analysis to examine associations between the explanatory variables and European identity while adjusting for students' background characteristics.

## Analytical Strategy

The analysis proceeded in several stages.

### Descriptive Analysis

First, **descriptive statistics** were calculated to examine the distribution of the main variables and to compare average levels of European identity and civic knowledge across participating countries. These descriptive analyses provide an overview of cross-national patterns among students.

### Model-Based Analysis

To further examine how students' experiences and characteristics relate to their European identity, the study employed a **model-based analytical approach** using **Bayesian Additive Regression Trees (BART).** BART is a flexible machine-learning method that

can capture complex and potentially non-linear relationships between variables without requiring strong parametric assumptions.

For each explanatory variable of interest (e.g., school urbanicity, open classroom discussion, political discussion, and community participation), the model estimated predicted values of the outcome variable while controlling for the selected covariates. The BART model predicts the expected value of European identity based on the observed characteristics of students.

To examine how differences in specific experiences may be associated with European identity, predicted outcomes were generated under alternative conditions (for example, higher versus lower levels of classroom openness), while holding other covariates constant. The average differences between these predicted values were then used to summarize the **model-based associations** between explanatory variables and European identity.

Because the analysis relies on observational cross-sectional data, the estimated differences should be interpreted as associations rather than causal effects. Additionally, when comparing countries, it should be noted that the estimates reflect country-specific effects.

### *Subgroup Analysis*

To explore potential heterogeneity in these associations, additional analyses examined how the estimated relationships varied across:

- **levels of socioeconomic status**
- **levels of civic knowledge**
- **gender**

This allowed the study to assess whether the associations between educational experiences and European identity differ among student subgroups or across national contexts.

### *Software*

All analyses, including descriptive statistics, visualizations, and model estimation, were conducted using the R statistical programming environment.

## Results

To explore the factors associated with students' European identity, descriptive statistics were first calculated to provide an overview of the selected variables and to enable comparisons across countries. Subsequently, Bayesian Additive Regression Trees (BART) were used to examine the effects of student-, school-, and classroom-level characteristics on European identity.

### Descriptive statistics

Table 1 presents the mean values of students' European identity (E_EUIDENT) and civic knowledge across the 16 participating EU countries and shows the ranking of countries by average civic knowledge and the year each country joined the European Union.

**Table 1: Mean values of students' European identity (E_EUIDENT) and civic knowledge across the 17 participating European Union countries.**

| Country | E_EUIDENT, Mean (SE) | Civic Knowledge, Mean (SE) | E_EUIDENT Rank | Civic Knowledge Rank | Joined EU |
|---|---|---|---|---|---|
| Croatia | 57.77 (0.25) * | 531.35 (2.63) | 1 | 5 | 2013 |
| Spain | 57.47 (0.28) | 510.40 (3.34) | 2 | 7 | 1986 |
| France | 56.50 (0.32) | 509.84 (3.66) | 3 | 8 | 1958 (Founder) |
| Estonia | 56.42 (0.29) | 544.83 (5.14) | 4 | 4 | 2004 |
| Sweden | 56.36 (0.25) | 564.73 (3.71) | 5 | 1 | 1995 |
| Slovenia | 55.78 (0.20) | 504.17 (2.34) | 6 | 10 | 2004 |
| Denmark | 55.36 (0.30) | 558.68 (3.61) | 7 | 2 | 1973 |
| Italy | 54.29 (0.25) | 523.23 (3.67) | 8 | 6 | 1958 (Founder) |
| Malta | 54.17 (0.28) | 489.55 (7.39) | 9 | 13 | 2004 |
| Lithuania | 54.10 (0.26) | 508.94 (3.99) | 10 | 9 | 2004 |

| Country | E_EUIDENT, Mean (SE) | Civic Knowledge, Mean (SE) | E_EUIDENT Rank | Civic Knowledge Rank | Joined EU |
|---|---|---|---|---|---|
| Romania | 53.74 (0.31) | 472.58 (8.90) | 11 | 14 | 2007 |
| Slovakia | 52.44 (0.24) | 501.93 (3.46) | 12 | 11 | 2004 |
| Bulgaria | 51.57 (0.30) | 456.06 (4.70) | 13 | 16 | 2007 |
| Latvia | 51.14 (0.30) | 489.85 (2.93) | 14 | 12 | 2004 |
| Poland | 51.00 (0.21) | 554.22 (2.52) | 15 | 3 | 2004 |
| Cyprus | 49.69 (0.24) | 460.29 (2.47) | 16 | 15 | 2004 |
| **Standard errors are reported in parentheses ().* | | | | | |

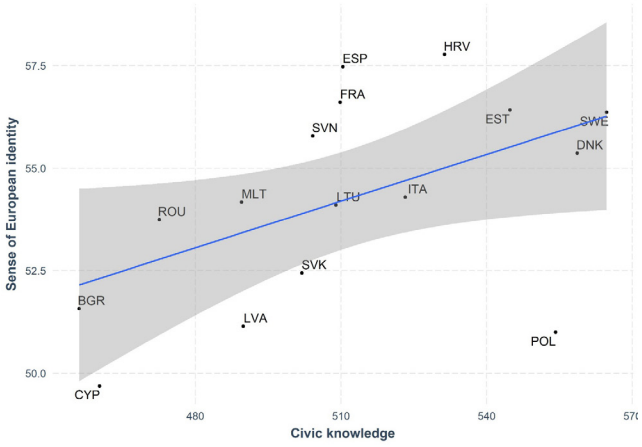


**Fig.1: Association between civic knowledge and students' European identity across countries**

The correlation analysis between average civic knowledge and average European identity by country revealed a positive correlation between the two variables (see Figure 1). The correlation analysis revealed a **moderate positive relationship** between civic knowledge and European identity (r = 0.51, p = .04). This suggests that higher civic knowledge is associated with stronger European identity. The simple linear regression model showed the coefficient b = 0.0379 (SE = 0.0171). Hence, the findings suggest that, on average, in countries where the mean level of civic knowledge is 10 points higher, the mean sense of European identity is 0.3 points higher on the E_EUIDENT scale.

Table 2 shows the estimated percentages of students enrolled in urban and non-urban schools, the number of cities with at least 100,000 inhabitants, the percentage of the population living in such cities, and the countries' ranks on the E_EUIDENT scale where countries are ordered by the proportion of students attending urban schools.

Results show (Table 2) that the majority of the IEA ICCS 2022 participating country's schools is concentrated in non-urban areas (between 89%-52%). Except Bulgaria, where results showed that almost equal number of schools located in non-urban (52%) and urban (48%) area. Also results show that in all of the chosen EU countries majority of country population lives in non-urban area although the term non-urban here may not agree with the common everyday term, since only cities with more than 100 000 habitants are classified as urban according to IEA.

Next in Table 3 below is shown the estimated percentages of students who speak language of test at home and percentage of students who use mainly some other language at home as well as the rank of countries according to the average E_EUIDENT scale.

.In most countries the percentage of students speaking the same language at home as the one that was used for the test is somewhat high. For instance, in Poland it reaches 98.83%, in Croatia 98.19%, in Estonia 95.09%, in Romania 95.00%, and in Lithuania 94.90%. This suggests that in these countries, the test was administered almost entirely in the dominant native language. Conversely, in Malta, the test language accounts for only 49.47%, while "other language" accounts for 50.53%, indicating a near-balanced language distribution. In Cyprus (74.89% / 25.11%), Italy (75.46% / 24.54%), and Spain (75.55% / 24.45%), the proportion of "other language" is also relatively high.

Next, the percentages within each immigration status are shown in Table 4.

Analyzing results by immigration status we noticed that countries with a higher percentage

**Table 2: Estimated percentage of students studying in urban (more than 100 000 inhabitants) and non-urban schools across 16 EU countries, together with the number of large cities, the share of the population living in such urban areas, and the rank of the average E_EUIDENT scale.**

| Country | Percentage of students who study in urban schools | Percentage of students who study in non-urban schools | Cities with more than 100 000 people | Percentage of people living in urban area (100 000 +) | E_EUIDENT rank |
|---|---|---|---|---|---|
| Bulgaria | 48 (0.03) * | 52 (0.03) | 8 | 40 | 13 |
| Lithuania | 42 (0.02) | 58 (0.02) | 4 | 44 | 10 |
| Estonia | 36 (0.04) | 64 (0.04) | 2 | 46 | 4 |
| Spain | 36 (0.04) | 64 (0.04) | 65 | 41 | 2 |
| Latvia | 30 (0.02) | 70 (0.02) | 1 | 33 | 14 |
| Sweden | 29 (0.04) | 71 (0.04) | 9 | 33 | 5 |
| Cyprus | 25 (<0.01) | 75 (0.01) | 2 | 31 | 16 |
| Romania | 25 (0.03) | 75 (0.03) | 18 | 26 | 11 |
| Poland | 25 (0.03) | 75 (0.03) | 37 | 28 | 15 |
| Croatia | 24 (0.02) | 76 (0.02) | 3 | 25 | 1 |
| Italy | 18 (0.03) | 82 (0.03) | 44 | 22 | 8 |
| Denmark | 14 (0.02) | 86 (0.02) | 7 | 30 | 7 |
| France | 13 (0.03) | 87 (0.03) | 40 | 15 | 3 |
| Slovakia | 13 (0.03) | 87 (0.03) | 2 | 13 | 12 |
| Slovenia | 11 (0.03) | 89 (0.03) | 2 | 19 | 6 |
| Malta | 0 (0.00) | 100 (0.00) | 0 | 0 | 9 |
| **Standard errors are reported in parentheses ().* | | | | | |

of students with at least one parent born in the country tend to have had a lower average European identity. The proportion of this group ranges from 77.38% in Sweden to 99.26% in Bulgaria. A relatively high proportion of this group was also found in Poland (99.17%), Romania (98.96%), and Denmark (98.88%).

The proportion of students who were born in the country but whose parents were both born abroad varies more markedly across countries. The lowest rates were observed in Poland, Bulgaria, and Romania (less than 1%), while the highest were in Slovenia (16.44%), Sweden (12.10%), Spain (10.76%), and France (10.39%). The proportion of this group is also relatively high in Malta (8.68%) and Italy (8.97%).

Conversely, the proportion of students who were born abroad and whose parents were also born abroad is lowest in Croatia, Bulgaria, Romania, and Poland (less than 1%). In contrast, the highest rates are observed in Cyprus (12.22%), Sweden (10.52%), Malta (9.19%) and Spain (5.85%). Also France (4.47%) and Slovenia (4.40%) have a relatively high share in this group. Moreover a comparison of these indicators with the E_EUIDENT reveals that countries with a higher average European identity do not conform to a single, specific immigration profile group.

## Effects of school urbanicity

We analyzed effect sizes of school urbanicity on students' sense of European identity and the probabilities of positive effects (Tabel 5). The Table 5 reports the model-based difference in the expected outcome if a student were to study in an urban school rather than a non-urban school, together with the posterior probability that this effect is positive.

**Table 3: Estimated percentage of students who speak the test language at home and those who speak other language at home across the participating EU countries.**

| Country | Language of test | Other language | E_EUIDENT Rank |
|---|---|---|---|
| Poland | 98.83 (0.17) * | 1.17 (0.17) | 15 |
| Croatia | 98.19 (0.31) | 1.81 (0.31) | 1 |
| Estonia | 95.09 (0.61) | 4.91 (0.61) | 4 |
| Romania | 95.00 (1.01) | 5.00 (1.01) | 11 |
| Lithuania | 94.90 (0.68) | 5.10 (0.68) | 10 |
| Denmark | 92.87 (0.80) | 7.13 (0.80) | 7 |
| Slovenia | 90.14 (0.82) | 9.86 (0.82) | 6 |
| Slovakia | 89.33 (1.25) | 10.67 (1.25) | 12 |
| Bulgaria | 88.41 (1.52) | 11.59 (1.52) | 13 |
| Latvia | 83.85 (1.85) | 16.15 (1.85) | 14 |
| France | 83.77 (1.44) | 16.23 (1.44) | 3 |
| Sweden | 79.21 (1.83) | 20.79 (1.83) | 5 |
| Spain | 75.55 (2.05) | 24.45 (2.05) | 2 |
| Italy | 75.46 (1.41) | 24.54 (1.41) | 8 |
| Cyprus | 74.89 (0.85) | 25.11 (0.85) | 16 |
| Malta | 49.47 (4.85) | 50.53 (4.85) | 9 |
| **Standard errors are reported in parentheses ().* | | | |

**Table 4: Distribution of students by immigration status and countries' ranking in terms of European identity (%).**

| Country | At least one parent born in country | Students born in country but parent(s) born abroad | Students and parent(s) born abroad | E_EUIDENT rank | Immigrants per 1000 inhabitants (Rank) |
|---|---|---|---|---|---|
| Bulgaria | 99.26 | 0.29 | 0.45 | 13 | 6.1 (15) |
| Poland | 99.17 | 0.28 | 0.55 | 15 | 7.4 (12) |
| Romania | 98.96 | 0.51 | 0.54 | 11 | 15.4 (9) |
| Lithuania | 97.80 | 1.50 | 0.70 | 10 | 30.9 (4) |
| Slovakia | 97.72 | 1.34 | 0.93 | 12 | 1.0 (16) |
| Latvia | 95.29 | 3.16 | 1.55 | 14 | 20.6 (5) |
| Estonia | 94.25 | 4.59 | 1.16 | 4 | 36.6 (2) |
| Croatia | 93.69 | 5.65 | 0.65 | 1 | 15.0 (10) |
| Denmark | 89.88 | 5.92 | 4.19 | 7 | 20.5 (6) |
| Italy | 87.55 | 8.97 | 3.48 | 8 | 7.0 (13) |
| Malta | 87.13 | 3.68 | 9.19 | 9 | 65.8 (1) |
| France | 85.14 | 10.39 | 4.47 | 3 | 6.3 (14) |
| Spain | 83.39 | 10.76 | 5.85 | 2 | 26.4 (4) |

| Country | At least one parent born in country | Students born in country but parent(s) born abroad | Students and parent(s) born abroad | E_EUIDENT rank | Immigrants per 1000 inhabitants (Rank) |
|---|---|---|---|---|---|
| Slovenia | 79.16 | 16.44 | 4.40 | 6 | 16.9 (8) |
| Cyprus | 78.79 | 9.00 | 12.22 | 16 | 34.0 (3) |
| Sweden | 77.38 | 12.10 | 10.52 | 5 | 9.8 (11) |

**Table 5. Estimated urbanicity effect on the European identity scale across participating EU countries.**

| Rank | Country | Effect size | Probability of positive effect |
|---|---|---|---|
| 1 | Romania | 0.48 | 0.84 |
| 2 | France | 0.47 | 0.62 |
| 3 | Slovakia | 0.47 | 0.70 |
| 4 | Bulgaria | 0.26 | 0.64 |
| 5 | Cyprus | 0.21 | 0.59 |
| 6 | Slovenia | -0.05 | 0.45 |
| 7 | Croatia | -0.08 | 0.49 |
| 8 | Poland | -0.10 | 0.46 |
| 9 | Spain | -0.17 | 0.53 |
| 10 | Italy | -0.48 | 0.42 |
| 11 | Lithuania | -0.85 | 0.18 |
| 12 | Estonia | -0.90 | 0.16 |
| 13 | Sweden | -0.94 | 0.14 |
| 14 | Denmark | -1.03 | 0.13 |
| 15 | Latvia | -1.49 | 0.07 |
| 16 | Malta | - | - |

The countries in the Table 5 are ranked in decreasing order of effect size. For example, results show that Romania has the highest positive effect of school urbanicity on students' sense of European identity. The interpretation of the figure 0.48 is that, controlling for all variables listed above, a student studying in a urban school is estimated to score 0.48 units higher on the E_EUIDENT scale than the same student would score if studying in a non-urban school. In contrast, the coefficient of – 1.49 for Latvia indicates that, controlling for the variables listed above, a student is estimated to score 1.49 units higher when studying in a non-urban school than when studying in an urban school.

Our analysis shows that the effect of school urbanicity on European identity varies with students' socioeconomic background (SES) and gender. In Figure 2 the estimated effects are shown conditional on SES and students' gender. In many countries the curves are relatively flat, indicating that the urbanicity effect changes little across SES levels. This pattern is particularly evident in Slovakia, Slovenia, Croatia, Latvia and Poland. In several countries the effect is constantly negative across SES levels, most clearly in Latvia, Lithuania and Sweden, while in others it is consistently positive or close to zero, such as in Romania and Slovakia. Some countries show systematic SES-related variation. For example, in Bulgaria the effect is negative at lower SES levels but becomes increasingly positive as SES increases, whereas in Denmark the opposite pattern emerges, the effect is positive at low SES levels, but becomes

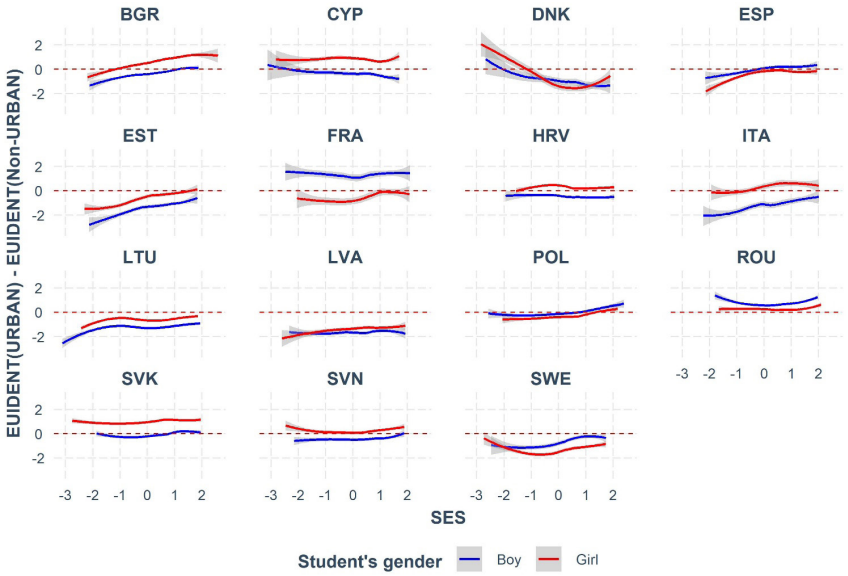


**Fig. 2: Predicted differences in European identity between urban and non-urban students across socioeconomic status, by gender and country**

negative at higher SES levels. Estonia and Italy display gradual SES-related changes, with the effect becoming less negative as SES increases. Gender differences are generally small, with curves for boys and girls often overlapping or running close to each other. However, in several countries such as Bulgaria, Estonia, Slovakia and Italy the estimated effects tends to be more positive for girls while the opposite is the case in France.

Additionally we analyzed the effect conditional on students' civic knowledge level and gender (Figure 3). In many countries the estimated effects remain relatively stable across levels of civic knowledge range. This is particularly evident in Latvia, Estonia, Croatia, Slovenia, Poland and Sweden, where the curves are largely flat and the effects remain consistently negative, near zero, or negligible. In several countries the effect varies with civic knowledge. For example, in Bulgaria the effect is slightly negative at lower levels of civic knowledge but becomes positive once knowledge exceeds roughly the middle of the scale. In Spain and Italy the effect increases with civic knowledge, starting negative at lower levels and approaching zero or becoming slightly positive at higher levels. Denmark shows a different pattern where gender differences appear at low levels of civic knowledge, with positive effect for girls and a negative effect for boys, but the curves converge to a stable negative effect as knowledge increases. In France the effect is positive for boys across all knowledge levels, whereas for girls it is negative at lower knowledge levels and approaches zero at higher levels. Overall gender differences are generally small in most countries, with curves often overlapping or remaining very close, although slightly more positive effects for girls can be observed in countries such as Bulgaria and Slovakia.

Taken together, these results suggest that the estimated effect of school urbanicity on students' European identity is fairly stable across both socioeconomic status and civic knowledge levels. In many countries the predicted differences between the two potential scenarios-studying in an urban versus a non-urban school-remain close to zero and change little across these dimensions. Where variation does appear, it tends to reflect country-specific patterns rather than a common trend across countries. Differences between boys and girls are also generally limited, although in several countries the estimated urbanicity effect appears slightly more positive for girls than for boys.

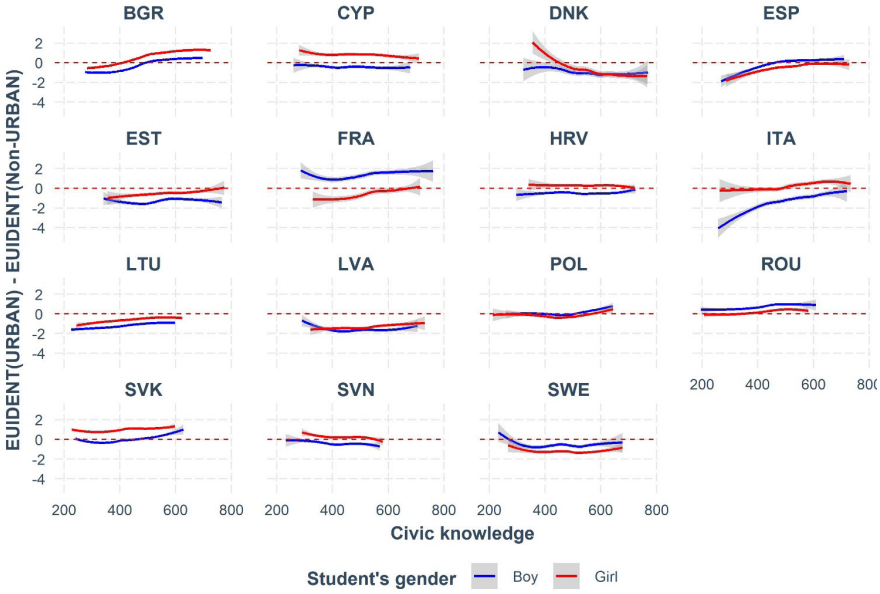


**Fig. 3: Predicted differences in European identity between urban and non-urban students across civic knowledge, by gender and country**

## Effects of open classroom discussions

To explore the impact of classroom climate we used the variable S_OPDISC, which for the purposes of analysis was dichotomized as being above or below the country average. In Table 6 we show the effects of open classroom discussions on students' sense of European identity. Countries are ranked according to the magnitude of the estimated effect. The table reports the estimated effect and the posterior probability that the effect is positive.

As can be seen in the Table 7, the effect of open classroom discussions is positive in all countries considered in this study. To get a more detailed view of the effect within each of the countries separately, we examine this effect through the dimension of socio-economic background, additionally including the gender of the students to see if this might be a relevant factor in any of these countries.

To understand differences in European identity between high and low open classroom discussion by socioeconomic status, gender, and country, similarly as above, we analyzed conditional effects (Figure 3).

**Table 6: Estimated effects of open classroom discussions on students' European identity across participating EU countries**

| Rank | Country | Effect size | Probability of positive effect |
|---|---|---|---|
| 1 | Croatia | 2.66 | 1.00 |
| 2 | Poland | 2.49 | 1.00 |
| 3 | Estonia | 2.41 | 1.00 |
| 4 | Italy | 2.28 | 1.00 |
| 5 | Slovakia | 2.12 | 0.99 |
| 6 | Lithuania | 2.10 | 1.00 |
| 7 | Latvia | 2.03 | 0.99 |
| 8 | Romania | 2.00 | 0.99 |
| 9 | Bulgaria | 1.77 | 0.97 |
| 10 | Slovenia | 1.72 | 1.00 |
| 11 | Sweden | 1.67 | 1.00 |
| 12 | Malta | 1.65 | 0.91 |
| 13 | Spain | 1.55 | 0.99 |
| 14 | Denmark | 1.20 | 0.98 |
| 15 | France | 1.04 | 0.89 |
| 16 | Cyprus | 0.91 | 0.96 |

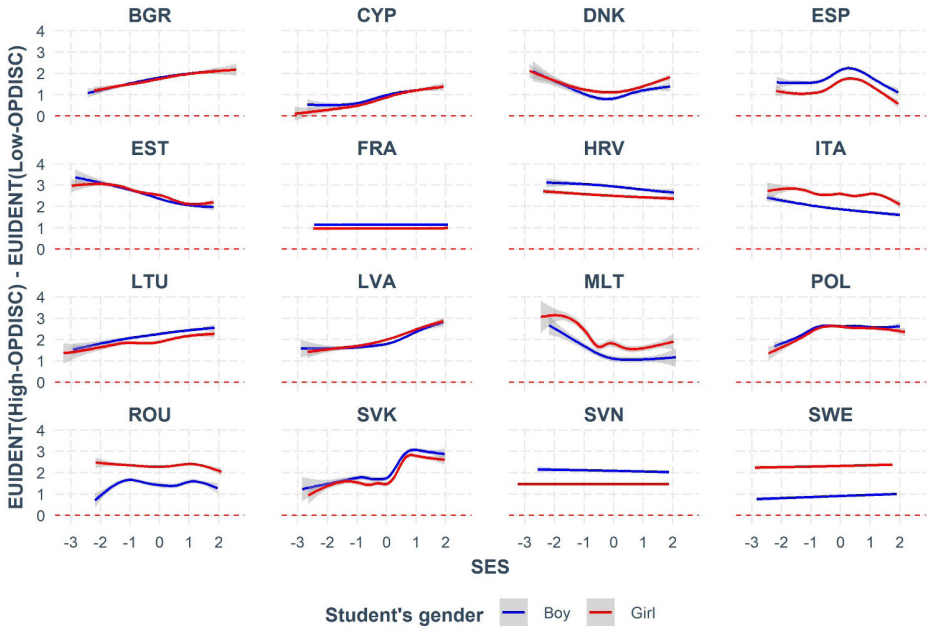


**Fig. 4: Predicted differences in European identity between high and low open classroom discussion across SES levels, by gender and country**

In all countries the estimated effect is positive across the SES range, indicating that students who report more open classroom discussions are predicted to have higher European identity than the same students would under lower levels of classroom openness. In several countries the curves are largely flat across SES levels, suggesting that the magnitude of this association changes little with socioeconomic background. This pattern is most evident in France, Slovenia and Sweden. In many other countries the effect increases with SES, as observed for example in Bulgaria, Cyprus, Lithuania and Latvia. In contrast, Estonia, Italy and Malta show decreasing patterns, with the largest effects appearing among students with lower SES levels. Denmark displays a curved pattern in which the effect is smallest around middle SES levels and larger at both lower and higher SES levels, while Spain and Slovakia show more irregular shapes, with the effect increasing and later stabilizing or declining. Gender differences are generally small, with the curves for boys and girls often overlapping. However, in several countries including Italy, Malta, Romania and Sweden the estimated effect is somewhat larger for girls, while in a few others such as Spain, Croatia and Slovenia it tends to be slightly higher for boys.

Similar analysis can be done with respect to students' civic knowledge level (Figure 5). In nearly all countries the estimated effect remains positive across the range of civic knowledge, indicating that students who report a more open classroom discussion climate are predicted to have higher European identity than the same students would under lower levels of classroom openness. In several countries-including Cyprus, Denmark, Estonia, Latvia and Sweden-the curves are almost flat, suggesting that the magnitude of this association changes little with students' level of civic knowledge. In other countries, the effect varies with civic knowledge. For example, Lithuania and Slovakia show clear increasing trends, while Croatia, Italy, Romania and Malta display decreasing patterns as civic knowledge increases. Poland exhibits a shallow curved pattern, with the effect slightly larger at lower and higher levels of civic knowledge. Gender differences are generally small, as the curves for boys and girls often overlap or run very close together. Some countries, however, show consistently higher

estimated effects for one gender, for example girls in Sweden, Romania and Malta, and boys in Spain, Croatia and Italy. Instances where the estimated effect approaches zero are rare and occur only at the extremes of the civic knowledge distribution in a few countries.

Overall, these results indicate that students who report a more open classroom discussion climate tend to have a higher predicted level of European identity than the same students would under lower levels of classroom openness. This positive association appears across all countries considered in the study. Magnitude of the estimated effect varies across countries and across levels of socioeconomic status and civic knowledge. Also the direction of the relationship somewhat varies across countries. In some countries the effect becomes stronger as SES or civic knowledge increases, whereas in others it weakens, indicating that the strength of the association depends on national context. Nevertheless, the overall pattern suggests that open classroom discussions are broadly linked with stronger European identity among students, and this relationship appears similar for boys and girls in most countries.

## Effects of out of the school activities

To explore the effects of extracurricular activities, two scales (S_POLDISC, S_COMPART) were selected. The variable S_POLDISC characterizes the frequency with which students discuss political and social issues with parents and friends. The variable S_COMPART provides information on students' participation in wider community groups and organizations. These variables have also been dichotomized according to whether the value for the student is above or below the country average.

The effects that discussion with parents and friends about social and political issues have on their sense of European identity is shown in Table 7. Countries are ranked according to the magnitude of the estimated effect. The Table 7 reports the estimated effect and the posterior probability that the effect is positive.

The results demonstrate that discussion with friends and parents has the greatest impact on the formation of a sense of European identity in Latvia, with an effect size of 65 percent larger than in Lithuania, which ranks second. In general, the effects appear to be relatively consistent across countries,

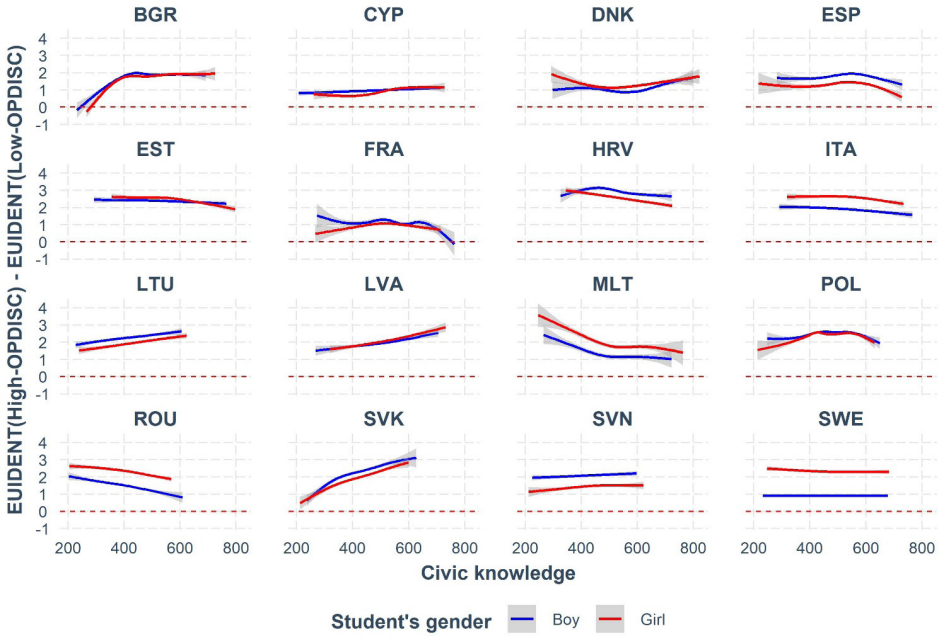


**Fig. 5: Predicted differences in European identity between high and low levels of open classroom discussion across civic knowledge, by gender and country**

**Table 7: Estimated effects of students' discussions with parents and friends about social and political issues on their sense of European identity across participating EU countries**

| Rank | Country | Effect size | Probability of positive effect |
|---|---|---|---|
| 1 | Latvia | 3.23 | 1.00 |
| 2 | Lithuania | 1.95 | 0.99 |
| 3 | Italy | 1.84 | 1.00 |
| 4 | Malta | 1.70 | 1.00 |
| 5 | Denmark | 1.70 | 1.00 |
| 6 | Poland | 1.66 | 1.00 |
| 7 | Croatia | 1.57 | 0.96 |
| 8 | Slovenia | 1.56 | 1.00 |
| 9 | Slovakia | 1.54 | 1.00 |
| 10 | France | 1.26 | 0.99 |
| 11 | Sweden | 1.17 | 0.94 |
| 12 | Cyprus | 1.14 | 0.89 |
| 13 | Estonia | 1.07 | 0.98 |
| 14 | Spain | 1.01 | 0.94 |
| 15 | Bulgaria | 0.88 | 0.89 |
| 16 | Romania | 0.17 | 0.51 |

with Latvia and Romania exhibiting notably higher and lower effects compared to the rest of the countries.

Next, we analyze the effect of discussions with parents and friends outside school about political and social issues on students' European identity. Results reveal no discernible differences between boys and girls at all SES levels in Bulgaria, Denmark, Latvia, and Slovakia. In Spain, Estonia, France and Sweden, the effect is positive for both girls and boys at all SES levels, with a larger effect size observed for boys at all SES levels. Conversely, the effect is more pronounced for girls at all SES levels in Croatia and Italy, with a lesser extent also in Lithuania. Small differences are observable in Malta, Poland and Slovenia. However, Romania stands out somewhat in this regard, where the effect size is positive for girls at all SES levels but negative for boys at all SES levels. Regarding the effect of SES level, it can be observed that the effect increases with increasing SES levels in Bulgaria, Cyprus, Lithuania, Latvia and Sweden. In Spain, France and Croatia, a somewhat negative trend is observable.

An examination of the impact of students' civic knowledge levels revealed that there were no discernible differences comparing genders in Bulgaria, Cyprus, Denmark and Slovakia. The effect

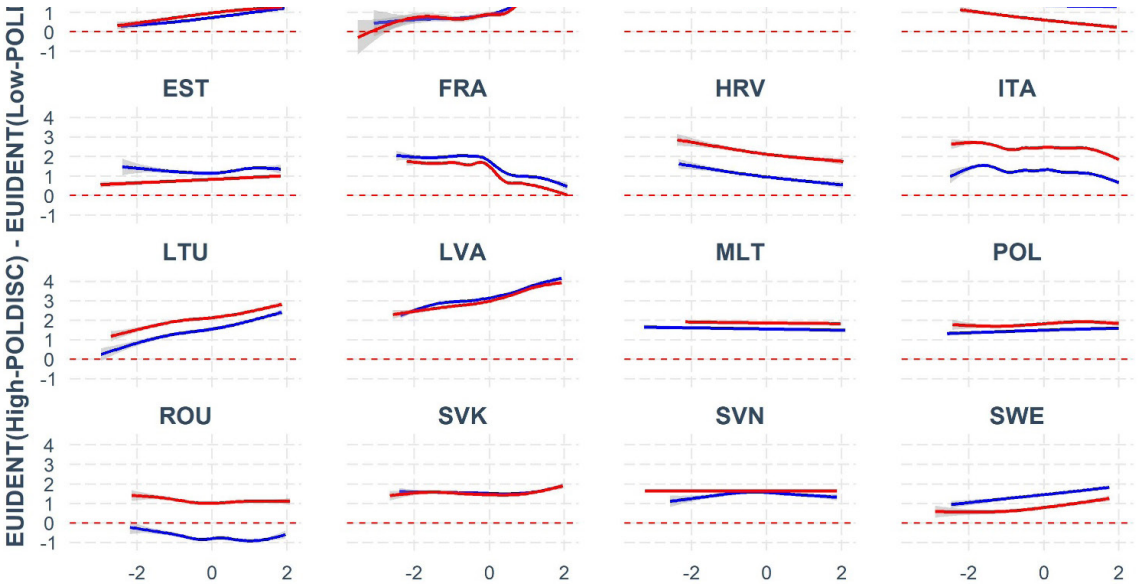


**Fig. 6: Predicted differences in European identity between high and low levels of political discussion across socioeconomic status, by gender and country**

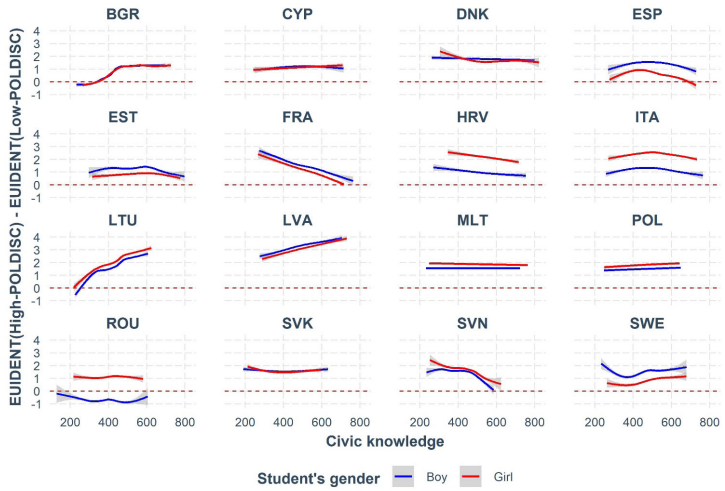


**Fig. 7: Predicted differences in European identity between high and low political discussion across civic knowledge, by gender and country**

is more pronounced at all levels of civic knowledge for female students in Croatia, Italy and Romania. In a similar vein, in Romania, the effect manifests as positive for girls across all levels of civic knowledge, while it is negative for boys. Furthermore, in Lithuania, Malta, Poland and Slovenia, the effect is also slightly larger for girls. In contrast, the effect is more pronounced for boys in Spain and Sweden, with a somewhat lesser extent also observed in Estonia, France and Latvia. A discernible positive trajectory was evident, with the effect intensifying in tandem with augmented levels of civic awareness. This phenomenon was observable in Lithuania and Latvia, with Bulgaria exhibiting a similar trend at lower levels of civic knowledge. Conversely, a negative trend was evident in the cases of France, Croatia and Slovenia. In other countries, the effect was contingent upon civic knowledge or exhibited a nonlinear trajectory. To illustrate this point, in Spain and Italy the effect is most pronounced for individuals with medium levels of civic knowledge, with a decline observed at both the higher and lower ends of the spectrum.

Next, we examined the relationship between students' involvement in broader community groups or organizations and their perceptions of European identity (Table 9), with countries ranked by the size of the estimated effect. The table presents both the estimated effect and the posterior probability that this effect is positive.

**Table 8: Estimated effects of students' involvement in broader community groups or organizations on their sense of European identity across participating EU countries**

| Rank | Country | Effect size | Probability of positive effect |
|---|---|---|---|
| 1 | Lithuania | 2.07 | 1.00 |
| 2 | Latvia | 1.81 | 1.00 |
| 3 | Estonia | 1.37 | 0.97 |
| 4 | Slovenia | 1.22 | 0.95 |
| 5 | Croatia | 1.01 | 0.85 |
| 6 | Cyprus | 0.95 | 0.85 |
| 7 | Spain | 0.89 | 0.99 |
| 8 | Bulgaria | 0.88 | 0.97 |
| 9 | Romania | 0.88 | 0.96 |
| 10 | Slovakia | 0.72 | 0.92 |
| 11 | Poland | 0.48 | 0.86 |
| 12 | Malta | 0.20 | 0.60 |
| 13 | Sweden | 0.12 | 0.59 |
| 14 | France | 0.08 | 0.49 |
| 15 | Denmark | -0.05 | 0.45 |
| 16 | Italy | -0.12 | 0.55 |

Table 8 shows the relationship between students' involvement in broader community groups or organizations and their perceptions of European identity. In most countries, the estimated effect is

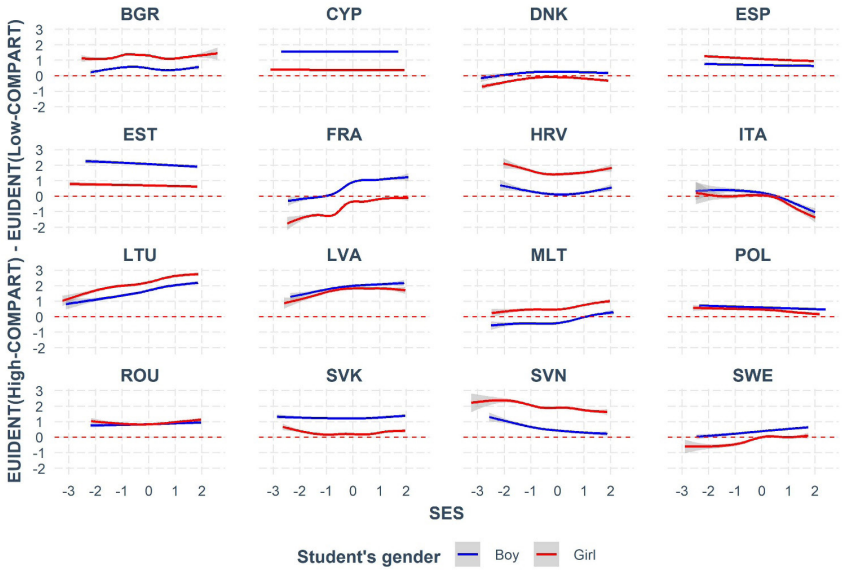


**Fig. 8. Predicted differences in European identity between high and low community participation across socioeconomic status, by gender and country**

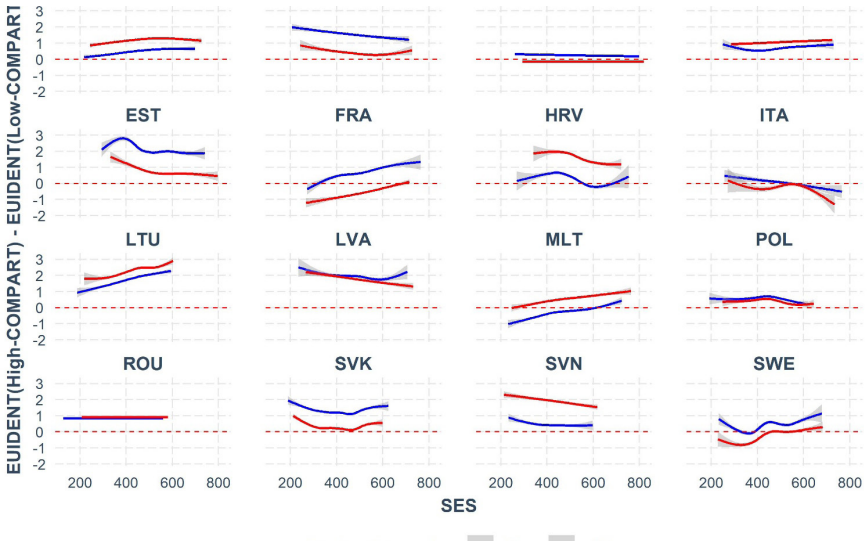


**Fig. 9: Predicted differences in European identity between high and low community participation across civic knowledge, by gender and country**

positive, with the probability of a positive effect exceeding 0.5. A different pattern can be observed in Malta, Sweden, France, Denmark, and Italy, where the effect is relatively small and the probability of a positive effect is equal to or below 0.6. By contrast, in the remaining countries, the probability is 0.85 or higher.

The findings of the study indicate that there is no substantial difference in the impact of gender on all SES levels in both Romania and Poland. It is worthy of note that the effect is considerably more pronounced for boys across all SES levels in Cyprus, Estonia, France and Slovakia. To a lesser extent, the effect is also more pronounced for boys in Denmark, Italy,

Latvia and Sweden. The effect is found to be more pronounced for girls across all SES levels in Bulgaria, Croatia, Malta and Slovenia, and, to a lesser extent, also in Lithuania and Spain. France, Lithuania, Latvia and Sweden demonstrate an upward trend, whilst Estonia, Italy and Slovenia exhibit a downward trend as SES level increases.

A thorough examination of the available data failed to reveal any substantial disparities in the knowledge levels of male and female students in Poland and Romania. The impact of the boys demographic was found to be more pronounced across all levels of knowledge in Cyprus, Estonia, France and Slovakia. This phenomenon was also evident, albeit to a lesser extent, in Denmark and Italy. The girls demonstrated a higher effect in Bulgaria, Croatia, Malta and Slovenia, and to a lesser extent in Spain. France, Lithuania and Malta exhibited a positive trend, whereas Estonia, Latvia and Slovenia displayed a negative trend. As evidenced by the findings of research conducted in other countries, nonlinear effects were demonstrated. For instance, in Slovakia, minimal effects were observed for both genders at medium levels of civic knowledge, while increases were noted for both higher and lower levels. Alternatively, the influence of civic knowledge on effect size may be non-existent, as evidenced by observations in Denmark and Romania.

## Discussion

The purpose of this study was to identify factors associated with the formation of European identity among Grade 8 students across sixteen European Union countries. By combining descriptive and model-based analyses using ICCS 2022 data, the study explored how civic knowledge, learning environments, and students' background characteristics relate to their sense of belonging to Europe. The findings provide several insights into the educational and social processes that may contribute to the development of European identity among adolescents.

First, the results suggest that civic knowledge is positively associated with students' European identity. Countries with higher average levels of civic knowledge tended to demonstrate higher average levels of European identity. This finding is consistent with previous ICCS reports and earlier research indicating that civic knowledge plays an important role in shaping students' civic attitudes and democratic orientations (Schulz et al., 2024; Damiani et al., 2024; Losito et al., 2018; Kerr et al., 2010). Civic knowledge acquired during schooling may contribute to students' understanding of political institutions, democratic values, and international cooperation, which in turn can support the development of supranational identities. However, the relationship between civic knowledge and European identity is not uniform across countries, suggesting that contextual factors also play an important role in shaping students' attitudes toward Europe.

Second, the findings highlight the importance of the school learning environment, particularly the role of open classroom discussion. Across all countries included in the study, students who reported more open classroom discussions about political and social issues were predicted to demonstrate stronger European identity. This consistent association suggests that classroom environments that encourage dialogue, critical thinking, and the expression of diverse viewpoints may contribute to students' identification with broader political communities. Previous research has similarly emphasized the importance of open classroom climates in fostering civic engagement and democratic attitudes among adolescents (Campbell, 2008; Maurissen et al., 2018; Šerek & Stollberg, 2018). The results of this study support the idea that civic learning environments do not only transmit knowledge but also provide opportunities for students to develop civic identities and a sense of belonging beyond the national level.

Third, the study found that civic engagement outside school, such as discussions with parents and friends about political issues and participation in community organizations, is also associated with European identity. Students who reported more frequent discussions about political or social issues tended to demonstrate higher levels of European identity in most countries. Similarly, participation in community organizations was positively associated with European identity in many national contexts, although the strength of this relationship varied. These findings align with previous studies suggesting that civic participation and social interaction contribute

to the development of civic attitudes and identities (Hoskins et al., 2012). Engagement in discussions and collective activities may expose students to broader perspectives and encourage reflection on political and social issues at both national and European levels.

In addition to educational experiences, the results indicate that broader demographic and social contexts may be related to European identity. The analysis suggests that countries with higher proportions of immigrant populations tend to demonstrate higher levels of European identity among students, while countries characterized by lower immigration and negative net migration tend to show comparatively lower levels of European identity. This pattern may reflect the role of social diversity in shaping perceptions of identity and belonging. In more diverse societies, supranational identities such as European identity may serve as an additional framework for collective belonging. However, this interpretation should be approached cautiously, as the relationship between migration and identity formation is complex and influenced by multiple political, cultural, and historical factors.

The results also reveal considerable variation across countries, suggesting that the formation of European identity is influenced by national contexts and historical trajectories. For example, although earlier EU membership might be expected to correspond with stronger European identification, the findings show that this relationship is not straightforward. Croatia, one of the most recent EU members, displays the highest level of European identity among the countries analysed, whereas some countries with longer EU membership histories show lower levels. Similarly, Poland demonstrates relatively high civic knowledge but comparatively lower levels of European identity. These patterns indicate that European identity cannot be explained solely by institutional factors such as EU membership duration or educational outcomes. Instead, it likely reflects a combination of educational experiences, political contexts, and broader societal narratives about Europe.

Overall, the findings suggest that European identity among adolescents is shaped by a combination of cognitive, educational, and social factors. Civic knowledge appears to provide an important foundation for understanding European institutions and democratic values, while classroom discussion environments create opportunities for students to engage with civic issues and develop broader political identities. At the same time, students' experiences outside school and the broader social context in which they live also contribute to shaping their perceptions of belonging to Europe.

Several limitations of this study should be acknowledged. First, the analysis is limited to the sixteen European Union countries participating in ICCS 2022, and therefore the findings cannot be generalized to all European countries. Second, the study focuses on Grade 8 students, whose attitudes and identities may still be developing. European identity may evolve further as individuals gain more civic knowledge, life experience, and political engagement over time. Third, the analysis relies on cross-sectional survey data, which limits the ability to draw causal conclusions about the relationships between educational experiences and European identity. Finally, data were collected during the COVID-19 pandemic, a period that may have influenced students' perceptions of society, politics, and international cooperation.

Future research could build on these findings by examining European identity development in longitudinal studies, allowing researchers to better understand how civic knowledge, educational experiences, and social contexts shape identity over time. Further studies focusing on individual countries or regions may also help identify context-specific mechanisms influencing students' identification with Europe. Additionally, expanding research to include different age groups could provide deeper insight into how European identity develops throughout adolescence and early adulthood.

In conclusion, the findings of this study indicate that European identity among adolescents is not simply an individual attitude but rather the result of a complex interplay between civic knowledge, educational environments, social engagement, and national contexts. Schools play a particularly important role as spaces where students encounter civic knowledge, engage in discussions about political issues, and develop attitudes toward democratic participation and supranational cooperation. Strengthening civic education and fostering open

classroom discussions may therefore contribute to the development of a stronger sense of European belonging among young people.

## Conclusion

This study investigated the factors associated with the development of European identity among Grade 8 students across sixteen European Union countries using data from the ICCS 2022 study. The results suggest that European identity among adolescents is related to a combination of educational experiences, civic knowledge, and broader social contexts.

The findings emphasize the importance of school environments in supporting the development of civic and supranational identities. In particular, classroom settings that encourage open discussion of political and social issues appear to provide meaningful opportunities for students to reflect on democratic values and develop a broader sense of belonging to Europe. Students' civic engagement outside school, including discussions about political issues and participation in community activities, also appears to contribute to this process.

At the same time, the study demonstrates that the strength of these relationships differs across countries, highlighting the importance of national contexts and social conditions in shaping how young people perceive their connection to Europe. These findings underline that European identity is not formed through a single pathway but emerges through the interaction of educational, social, and contextual influences.

Overall, this research contributes to the understanding of how civic learning environments and social experiences are associated with the formation of European identity among adolescents. Supporting inclusive civic education and fostering open dialogue in schools may therefore represent important pathways for strengthening democratic engagement and a shared sense of belonging within Europe.

During the preparation of this work the authors used AI for language revision (Chat GPT, DeepL)

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