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# Young people's trust in institutions, civic knowledge and their dispositions toward civic engagement

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## Abstract

Recent years have witnessed signs of increasing political instability in democratic countries as well as growing alienation from civic institutions and processes among citizens, especially among young people. Within the context of civic and citizenship education, it is important to review such phenomena and study their extent among young people as well as the factors that have the potential of promoting different forms of citizenship engagement. Using data from the International Civic and Citizenship Education Study (ICCS) 2016 and 2009, this article provides insights into the expectations of young people to actively engage as citizens in the future and what influences these expectations, with a primary focus on the role of civic knowledge and trust in civic institutions.

Results from ICCS 2009 and 2016 show that while large majorities among young people expected to vote in elections, only relatively few found it likely to be more actively involved in political action. Except for engagement in illegal protest, young people's expected participation in general appeared to be positively related to trust. However, associations with civic knowledge were more differentiated. Trust and civic knowledge tended to have negative correlations in countries with higher levels of perceived corruption, while a different association became apparent in democracies with more transparent institutions. Civic knowledge was consistently positively related to anticipated voting while it was negatively related to expected illegal protest. More knowledgeable students were also less inclined to consider active (conventional) forms of political participation in the future.

**Keywords** Civic and citizenship education, Youth participation, International large-scale assessments

## Conceptual background

Over the past decade there have been growing concerns about a worldwide “democratic recession” (Diamond, 2015, 2021), which have arisen due to a surge in authoritarian government practices as well as a considerable increase in populist movements. These developments have started to erode established party systems and, in some cases, even have challenged the stability of democratic systems (Boogards, 2017). Frequently,

the success of populist movements and political leaders has been linked to an increasing alienation of citizens from civic institutions and from traditional political parties, and it is also viewed as a response to growing globalisation and migration (Hobolt et al., 2016).

Growing political alienation of larger parts of the population in democratic societies (Schwartz, 2017; Stoker & Evans, 2014; Torcal & Montero, 2006) is often regarded as an explanatory factor behind the surge in populism (Gidron & Hall, 2017). Economic and social developments have more and more severed traditional bindings of people to society and its institutions, and they have led to higher numbers of individuals who feel “left behind” and marginalised. In addition, increasing attention on scandals and corruption as well as personalisation of politics may provide further explanations for populist orientations (Fieschi & Heywood, 2004). Negative emotions (such as feelings of anxiety and sadness) have also been identified as drivers of populist voting choices (Rico et al., 2017).

Over past decades there have been signs of decreasing political participation among young people (see Deželan & Moxon, 2022) as well as a growing sense alienation from the political process at this age group (see, for example, Henn & Weinstein, 2006). There is further evidence of the existence of contradictory and often conflicting political viewpoints among young people that could be interpreted as expressions of views that draw on populist rhetoric (Pollock et al., 2015). In addition, research results have suggested generational shifts with young people increasingly putting politics of choice before politics of loyalties (Norris, 2004), with preferences for political action related to new forms of engagement such as social media (Grasso, 2017).

It is important to consider political participation as part of the broader notion of civic engagement that reflects all “people’s connections with the life of their communities, not merely politics” (Putnam 1993, p. 665). In reflection of the changing landscape of political behaviour among citizens in the 1970s and 1980s, scholars started to distinguish between “conventional” (such as voting, active participation in parties, or standing for office) and “unconventional” or “social movement” activities (such as engaging in grassroots campaigns or protest activities) (Barnes & Kaase, 1979), with a further distinction made between legal and illegal unconventional forms of participation (Kaase, 1990). Furthermore, in recent years problem- or community-oriented forms of participation were identified as different from individualised and creative modes of participation (see Theocharis & Van Deth, 2018; van Deth, 2014; Weiss, 2020). The growth in engagement via digital media constitutes a further potential enhancement of civic participation especially among young people (Bachen et al., 2008; Kahne et al., 2012).

Verba, Schlozman and Brady (1995) distinguished three groups of factors that potentially influence political participation of individuals: (i) resources enabling individuals to participate (such as time for engagement or civic knowledge); (ii) psychological engagement (such as interest or sense of self-efficacy); and (iii) “recruitment networks,” (such as already present engagement in social movements, church, groups, and political parties), which help to bring individuals into contact with politics. Building on Coleman’s (1988) concept of social capital, Putnam (1993) put emphasis on the importance of three components (social trust, social norms, and social networks) that together form a “virtuous cycle” and provide a context for successful cooperation and participation in a society.

Following these conceptualisations, research presented in this article uses predictors that can be linked to the three types of factors (resources, psychological engagement, and recruitment networks) identified by Verba, Schlozman and Brady (1995) with

a specific focus on the role of the resource-related factor civic knowledge and trust in civic institutions as a variable reflecting psychological engagement. Furthermore, in reference to Putnam's (1993) emphasis on the relevance of social norms, beliefs about what constitutes good citizenship are considered through the inclusion of measures reflecting student perceptions of the importance of conventional, social-movement-related, and personally responsible types of citizenship behaviour (Hooghe & Oser, 2015; Treviño et al., 2021).

ICCS results have shown that both civic knowledge and trust in civic institutions tended to be associated with different types of students' expected engagement (Schulz et al., 2010; Schulz, Ainley, Fraillon, Losito, Agrusti, & Friedman, Schulz et al., 2018a; Schulz, Ainley, Fraillon, Losito, Agrusti, Friedman, & Damiani, 2024). While civic knowledge was identified as a positive predictor for expected electoral participation, it tended to be negatively correlated with active political participation. Furthermore, students with higher levels of civic knowledge appeared to be less inclined to trust civic institutions in those countries with higher indices of corruption, while in those countries with less perceived corruption the association between these two variables tended to be positive (see Lauglo, 2013). Results showed further that beliefs in the value of conventional citizenship were positively associated with expected conventional types of political participation in the future (Schulz et al., 2018a).

As students in lower-secondary education are generally not yet able to fully participate in society, the measurement of behavioural intentions regarding future engagement is an important component of ICCS. This is in line with the theory of planned behaviour (Ajzen, 2001; Ajzen & Fishbein, 2000) that posits a link between attitudes and behaviour through intentions. Since school-based engagement provides young people with opportunities to experience political activities within their direct environment that have been found positively influence later political engagement (see, for example, Keating & Janmaat, 2015), since 2016 ICCS has also measured students' willingness to engage at school, in addition to past or present school-based engagement.

This article reviews the extent and variation of students' expected participation in ICCS 2016, compares extent and changes in students' civic knowledge and trust in civic institutions across the two first cycles of ICCS, and explores the correlations of these two variables with each other and with different types of expected participation (legal and illegal activities to express opinions, electoral and active political participation, willingness to engage at school). Furthermore, it presents results from multivariate analyses to assess the association between different factors (resource-related, network-related, psychological engagement, and citizenship beliefs) and expected forms of engagement, with a focus on their relationship with civic knowledge and trust in civic institutions.

This article uses primarily data from ICCS 2016 to explore the following research questions:

1. *To which extent do students expected to engage in civic activities across participating countries in ICCS 2016 in different types of engagement?* It is expected that there are similar patterns of expectations across different types of engagement across countries.
2. *How are civic knowledge and trust interrelated and what is their relationship with different forms of expected engagement?* It is expected that trust and civic knowledge are related to expected participation and that patterns of relationship are associated with perceptions of corruption and vary across country contexts.

3. *Which effects do factors related to resource, recruitment networks, psychological engagement and citizenship beliefs have on students' expected participation in the future?* It is expected that trust in civic institutions is positively associated with conventional forms of engagement but negatively with illegal activities. Civic knowledge is expected to be positively related to most forms of expected participation.

## Data, measures and methods

### Data

In 2016, ICCS gathered data from more than 94,000 Grade 8 students in 3,800 schools in 24 countries (Schulz et al., 2018a). These student data were augmented by data from more than 37,000 teachers in those schools. Our analyses focus on the 21 countries in ICCS 2016 that satisfied the participation requirements established by the IEA to reduce the risk of non-participation bias. ICCS 2016 employed two-stage cluster sampling procedures within countries. During the first stage, schools were sampled from a sampling frame with a probability proportional to their size. During the second stage, students were randomly sampled within schools (see technical details in Schulz, Carstens, Losito, & Fraillon, 2018b). For comparisons of civic knowledge and trust in institutions in countries participating in the first two implementations of ICCS, the study also makes use of data from the study's first cycle in 2009 (see Schulz, Ainley, Fraillon, Losito, & Kerr, 2010). This article further relies on data from the corruption perceptions index (CPI; Transparency International, 2018) to highlight how perceived levels of corruption affect the relationship between trust and civic knowledge within countries.

### Measures

Responses to the student questionnaire were used to measure many of the constructs underpinning the scales and items analysed in this study. IRT (Item Response Theory) scaling was applied to derive five scales related to different types of expected engagement (see Schulz et al., 2018b). For the metric of all ICCS questionnaire scales, 50 reflected the mean and 10 the standard deviation of all equally weighted countries that participated in ICCS in the cycle where each scale was established (two scales, expected electoral and active political participation, were equated to the first ICCS cycle in 2009).

The research focuses on five different indicators of expected engagement, each of them reflecting a specific type of participation and measured using students' responses to three or more Likert-type items:

- *Expected participation in legal activities to express opinions* was measured with a question that asked students about their expectations (the response categories were "I would certainly do this," "I would probably do this," "I would probably not do this," and "I would certainly not do this") of doing the following activities to express an opinion: (a) talking to others about one's views on political or social issues (ICCS 2016 average percentage of students expected to do this definitely or probably: 65%); (b) contacting an elected representative (40%); (c) taking part in a peaceful march or rally (51%); (d) collecting signatures for a petition (50%); (e) contributing to an online discussion forum about social or political issues (45%); (f) organizing an online group to take a stance on a controversial political or social issue (37%); and (g) participating in an online campaign (46%). The seven items reflecting students'

expected participation in legal activities formed a scale that, on average across the participating countries, had high reliability ( $\alpha = 0.85$ )<sup>1</sup>.

- *Expected participation in illegal activities to express opinions* was measured with a question that asked students about their likelihood (the response categories were “I would certainly do this,” “I would probably do this,” “I would probably not do this,” and “I would certainly not do this”) in the following activities to express an opinion: (a) spray-painting protest slogans on walls (22%); (b) staging a protest by blocking traffic (19%); and (c) occupying public buildings as a sign of protest (18%). The three items reflecting students’ expectations to engage in illegal activities formed a scale that, on average across the participating countries, had high reliability ( $\alpha = 0.87$ ).
- *Expected electoral participation* was measured with a scale based on a question asking students to rate the probability (“I would certainly do this,” “I would probably do this,” “I would probably not do this,” and “I would certainly not do this”) of doing the following activities: (a) “vote in local elections” (85%); (b) “vote in national elections” (85%); and (c) “get information about candidates before voting in an election” (80%). The students’ responses to these items formed a highly reliable scale ( $\alpha = 0.83$ ) reflecting intended electoral participation that was equated to the scale established in ICCS 2009.
- *Expected active political participation* was measured with a scale based on a question asking students to rate the probability (“I would certainly do this,” “I would probably do this,” “I would probably not do this,” and “I would certainly not do this”) of doing the following activities: (a) “help a candidate or party during an election campaign” (44%); (b) “join a political party” (26%); (c) “join a trade union” (32%); (d) “stand as a candidate” (24%); and (e) “join an organization committed to a political or social cause” (34%). The scale proved to be highly reliable ( $\alpha = 0.85$ ) and was equated to the scale established in ICCS 2009.
- *Willingness to participate at school* was measured based on a question that asked students to rate the likelihood (“very likely,” “quite likely,” “not very likely,” or “not at all likely”) that they would personally participate in the following civic activities if they had the chance to do so: (a) vote in a school election for class or school parliament representatives (81%); (b) join a group of students campaigning for an issue they agreed with (65%); (c) become a candidate for class or school parliament representative (48%); (d) take part in discussions in a student assembly (54%); and (e) participate in writing articles for a school newspaper or website (43%). The five items reflecting students’ willingness to participate in school activities formed a scale that, on average across the participating countries, had high reliability ( $\alpha = 0.81$ ).

To explore the factors associated with expected civic engagement among lower-secondary students, the study relies on four different types of predictor variables that were used in multiple regression analyses of the five criterion variables: (1) resource-related variables, (2) recruitment-related variables, (3) variables related to psychological engagement, and (4) citizenship beliefs.

The following *resource-related variables* were assumed to condition young people’s disposition for expected participation:

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<sup>1</sup> Throughout this article, the average of national Cronbach’s alpha ( $\alpha$ ) coefficients is reported to indicate the internal consistency of questionnaire scales. Further details about scale reliabilities in participating countries can be found in the ICCS 2016 technical report (Schulz et al., 2018b).

- Students' *gender* (female = 1, male = 0) was included as a resource-related variable as it continues to condition participation in different types of activities and remains influential through gender stereotyping (e.g. in view of ongoing underrepresentation of females in political leadership roles in many countries, see Grasso & Smith, 2022).
- *Socio-economic background* was measured through a composite indicator from parental occupation, education and the number of books at home, where scale scores were nationally standardized to having averages of 0 and standard deviations of 1 in each country. People with higher levels of socio-economic background tend to have better access to participation in terms of education, financial possibilities and access to means of influence in society.
- *Parents' interest in political and social issues* was included as a categorical variable reflecting the highest level of interested across parents or guardians (0 = not interested at all, 1 = not very interested, 2 = quite interested, 3 = very interested). This variable is part of the students' home background and higher levels of interest among parents or guardians are likely to influence dispositions for engagement.
- *Civic knowledge* was a central variable in this research study as knowing and understanding civic society plays a crucial role for engagement. The variable was derived from a test of 87 items (Schulz et al., 2018b). In the analyses five plausible values were used, each of them transformed into a standardised metric with national averages of 0 and national standard deviations of 1.

*Recruitment-related variables* reflect students' past or current engagement in the community, at school or through social media and comprise the following indicators:

- *Students' civic participation in community organizations and groups* was derived as an IRT scale from student responses to seven items reflecting past or current participation in community activities, had acceptable reliability on average across countries ( $\alpha = 0.70$ ), and was nationally standardized scores with averages of 0 and standard deviations of 1.
- *Students' civic participation at school* was measured based on six items reflecting past or current participation in civic activities at school and has on (marginally) satisfactory reliability across participating countries ( $\alpha = 0.67$ ) with higher scales scores indicating higher levels of participation (IRT scale, nationally standardized scores with averages of 0 and standard deviations of 1).
- *Student's civic engagement with social media* was based on five items reflecting the frequency of students' engagement with different social media activities (IRT scale, nationally standardized scores with averages of 0 and standard deviations of 1).

The model included the following *variables related to psychological engagement*:

- *Students' sense of citizenship self-efficacy* has been highlighted as an important factor conditioning engagement (see Bandura, 1997). The indicator was derived as an IRT scale from student response to seven items reflecting students' confidence in undertaking different civic engagement activities, had satisfactory reliability on average across countries ( $\alpha = 0.84$ ) and was nationally standardized to having scores with averages of 0 and standard deviations of 1 within each country.

- *Students' interest in political and social issues* was included as a categorical variable (0 = not interested at all, 1 = not very interested, 2 = quite interested, 3 = very interested), which reflects one important element of dispositions for engagement.
- *Students' trust in civic institutions* was a central variable for this research study reflecting perceptions of social norms. The variable was derived based student responses about how much they trust ("completely" "quite a lot," "a little," or "not at all") six national institutions (national government, local government, national parliament, police, courts of justice, political parties). This IRT scale had high reliability across countries ( $\alpha = 0.85$ ) and was nationally standardized to having scores with averages of 0 and standard deviations of 1 within countries.

Students' *beliefs about citizenship* are reflective of perceived social norms regarding what good citizens should do and included the following dimensions:

- Students' *perceptions of the importance of conventional citizenship* was based on student ratings of the importance ("very important", "quite important", "not very important", or "not important at all") of the following citizenship behaviours: (a) "voting in every national election"; "joining a political party"; (b) "learning about the country's history"; (c) "following political issues in the newspaper, on the radio, on TV or on the internet"; (d) "showing respect for government representatives"; (e) "engaging in political discussions." The resulting IRT scale had acceptable reliability across countries ( $\alpha = 0.72$ ) and was nationally standardized to having scores with averages of 0 and standard deviations of 1.
- Students' *perceptions of the importance of social movement related citizenship* was based on student ratings of the importance ("very important", "quite important", "not very important", or "not important at all") of the following citizenship behaviours: (a) "participating in peaceful protests against laws believed to be unjust"; (b) "participating in activities to benefit people in the local community"; (c) "taking part in activities promoting human rights"; and (d) "taking part in activities to protect the environment." The resulting IRT scale had satisfactory reliabilities across countries ( $\alpha = 0.75$ ) and was nationally standardized to having scores with averages of 0 and standard deviations of 1.
- Students' *perceptions of the importance of personally responsible citizenship* was based on student ratings of the importance ("very important", "quite important", "not very important", or "not important at all") of the following citizenship behaviours: (a) "working hard"; (b) "always obeying the law"; (c) "ensuring the economic welfare of their families"; (d) "making personal efforts to protect natural resources (e.g. through saving water or recycling waste)"; (e) "respecting the rights of others to have their own opinions"; (f) "supporting people who are worse off than you"; and "engaging in activities to help people in less developed countries." The resulting IRT scale had satisfactory reliabilities across countries ( $\alpha = 0.78$ ) and was nationally standardized to having scores with averages of 0 and standard deviations of 1.

## Methods

The article compares results for students' trust in civic institutions, civic knowledge, and their expected participation in the future for ICCS 2016. In addition, it reviews the extent of different forms of students' expected participation, civic knowledge, and trust

in institutions both within and across countries as well as their bivariate associations with different forms of expected participation among lower-secondary students in their eighth year of schooling.

Using tailored macros within IBM SPSS Statistics (version 25) that allow working with data from complex sampling designs, multivariate regression analyses were employed to review factors associated with variation in students' expectations in the five different types of participation. Because there were only relatively low proportions of between-school variation in the dependent variables<sup>2</sup>, a single-level multiple regression approach was chosen when analysing the factors explaining their variation. As civic knowledge was measured with five plausible values, regression models were estimated separately for each plausible value and then combined so that the respective standard errors reflect both sampling and measurement variance. Significance tests were conducted for the calculation of population parameters (such as percentages, averages or regression coefficients) that were based on jack-knife repeated replication (JRR) to compute standard errors (see Schulz et al., 2018b).

All estimates of the percentages of explained variance were obtained by multiplying  $R^2$  by 100. The reporting tables include unstandardised regression coefficients which reflect net changes in the original metric of each dependent variable corresponding to one national standard deviation for predictors that are scales (e.g. civic knowledge), the estimated net difference between comparison groups in case of dichotomous indicators (e.g. female vs. male gender), or the net increase with one category in case of ordered polytomous variables (e.g. parental interest).

As some explanatory variables used in the regression models, particularly the three scales reflecting students' perceptions of the importance of good citizenship behaviour, were known to be correlated with each other, the analyses were preceded by a review of multicollinearity statistics. While indices<sup>3</sup> showed signs of moderate collinearity for the three scales reflecting citizenship norms in some countries, there were no indications of strong multicollinearity in the multiple regression models presented in this article.

## Results

### Extent and variation of student' expected participation

The national average scores on the scale reflecting expected participation in legal activities to express opinions ranged from 44 to 60 score points across the ICCS 2016 countries (Table 1). This considerable spread of scores possibly reflected differences in national characteristics or current events as well as diversity in civic culture. While four countries (Colombia, Dominican Republic, Mexico, and Peru) had relatively high average scores (54 or above), another five—Belgium (Flemish), Finland, the Netherlands, Norway, and Sweden—had relatively low average scores (47 or below).

The range of national average scale scores (from 47 to 59) for anticipated participation in illegal protest activities was almost as large as the range for the legal activities. Five

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<sup>2</sup> Intraclass coefficients calculated separately using unweighted multilevel modelling (using the SPSS MIXED procedure) for national samples provided an estimate of the percentage of variation between schools. For all five dependent variables these were on average across countries below 10% (expected legal activities: 3%; expected illegal activities: 6%; expected electoral participation: 7%; expected active political participation: 4%; and expected school participation: 4%).

<sup>3</sup> The indices used for reviewing potential multicollinearity in the model were computed using IBM SPSS Statistics (version 25) and included the *tolerance* index (criterion used: index < 0.4), the *variation inflation factor* (moderate collinearity: VIF = 2–5, strong collinearity: VIF > 5), and the *condition index* (criterion used: index > 15).



**Table 1** National average scale scores of students' expectations to participate in different forms of civic engagement

Country	Expected participation in legal activities	Expected participation in illegal activities	Expected electoral participation	Expected active political participation	Willingness to participate at school
Belgium (Flemish)	46 (0.3) ▼	47 (0.3) ▼	49 (0.3) ▼	46 (0.3) ▼	46 (0.3) ▼
Bulgaria	52 (0.2) △	54 (0.3) ▲	50 (0.3) ▼	50 (0.3) ▼	50 (0.3)
Chile	51 (0.2) △	54 (0.2) ▲	50 (0.2) ▼	50 (0.2) ▼	51 (0.2) △
Chinese Taipei	52 (0.2) △	47 (0.2) ▼	53 (0.2) △	50 (0.2) ▼	51 (0.2) △
Colombia	55 (0.2) ▲	53 (0.3) ▲	53 (0.2) △	53 (0.3) △	53 (0.2) ▲
Croatia	50 (0.2)	48 (0.2) ▼	51 (0.2)	50 (0.2)	52 (0.2) △
Denmark†	47 (0.2) ▼	46 (0.2) ▼	52 (0.2) △	51 (0.1)	47 (0.2) ▼
Dominican Republic (r)	60 (0.3) ▲	59 (0.3) ▲	53 (0.2) △	60 (0.3) ▲	57 (0.2) ▲
Estonia <sup>1</sup>	48 (0.2) ▼	48 (0.2) ▼	48 (0.2) ▼	48 (0.2) ▼	48 (0.3) ▼
Finland	46 (0.2) ▼	47 (0.2) ▼	51 (0.2) ▼	49 (0.2) ▼	47 (0.2) ▼
Italy	49 (0.2) ▼	48 (0.2) ▼	54 (0.2) △	51 (0.2)	52 (0.2) △
Latvia <sup>1</sup>	49 (0.2) ▼	48 (0.2) ▼	49 (0.2) ▼	50 (0.2) ▼	49 (0.2) ▼
Lithuania	52 (0.2) △	51 (0.3) △	52 (0.2) △	52 (0.2) △	51 (0.2) △
Malta	49 (0.2) ▼	50 (0.2)	50 (0.2) ▼	50 (0.2) ▼	50 (0.2) △
Mexico	54 (0.2) ▲	54 (0.2) ▲	52 (0.2) △	55 (0.2) ▲	54 (0.2) ▲
Netherlands†	44 (0.2) ▼	48 (0.2) ▼	47 (0.3) ▼	48 (0.2) ▼	44 (0.3) ▼
Norway (9) <sup>1</sup>	46 (0.2) ▼	48 (0.1) ▼	54 (0.1) ▲	49 (0.1) ▼	49 (0.2) ▼
Peru	56 (0.1) ▲	54 (0.2) ▲	55 (0.2) ▲	56 (0.2) ▲	55 (0.1) ▲
Russian Federation	51 (0.2) △	49 (0.3) ▼	51 (0.3) ▼	50 (0.3) ▼	51 (0.2) △
Slovenia	48 (0.2) ▼	50 (0.2)	50 (0.3) ▼	49 (0.2) ▼	49 (0.2) ▼
Sweden <sup>1</sup>	47 (0.2) ▼	47 (0.2) ▼	53 (0.2) △	50 (0.3) ▼	47 (0.2) ▼
Average ICCS 2016	50 (0.0)	50 (0.1)	51 (0.0)	51 (0.0)	50 (0.0)

National results for ICCS 2016 are:

- more than 3 score points above ICCS 2016 average ▲
- significantly above ICCS 2016 average △
- significantly below ICCS 2016 average ▼
- more than 3 score points below ICCS 2016 average ▼

(r) Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

† Met guidelines for sampling participation rates only after replacement schools were included.

<sup>1</sup> National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for at least 70% but less than 85% of students.

**Table 2** Correlation coefficients between expectations to participate in different forms of engagement (averages of coefficients within countries and correlations between national averages)

	Expected participation in legal activities	Expected participation in illegal activities	Expected electoral participation	Expected active political participation
<b>Average correlations within countries</b>				
Expected participation in illegal activities	0.34			
Expected electoral participation	0.35	-0.07		
Expected active political participation	0.51	0.27	0.37	
Willingness to participate at school	0.48	0.12	0.38	0.45
<b>Country-level correlations</b>				
Expected participation in illegal activities	0.86			
Expected electoral participation	0.48	0.24		
Expected active political participation	0.90	0.79	0.58	
Willingness to participate at school	0.95	0.78	0.60	0.85

countries (Bulgaria, Colombia, Dominican Republic, Mexico, and Peru) had the relatively highest average scores (54 or above), and those five countries with relatively low average scores (47 or below) were the same countries that also had the relatively lowest scores on the legal participation scale, that is, Belgium (Flemish), Finland, the Netherlands, Norway, and Sweden.

For both electoral and active political participation there was also considerable variation across countries, with the highest scores for electoral participation found in Norway

and Peru, the latter being a country where voting is compulsory, while the (relatively) lowest scores were observed in Estonia and the Netherlands. For expected active political participation, the highest level of expectations was reported in three Latin American countries (Dominican Republic, Mexico, and Peru) while the lowest scores were found in Belgium (Flemish) and the Netherlands.

For students' expectations to participate at school, the highest recorded scale scores (three score points or more above the ICCS 2016 international average) were recorded for Colombia, the Dominican Republic, Mexico, and the Russian Federation while the lowest scores (three or more points below the average) were observed in Belgium (Flemish), Denmark, Finland, the Netherlands, and Sweden.

Table 2 shows the average correlations between different forms of expected participation within countries as well as correlations at the level of countries (i.e. between aggregated scale scores). Within countries, there were on average weak to moderate<sup>4</sup> positive correlations between all forms of expected participation. However, there was a weak negative association between expected electoral participation and expected participation in illegal activities. At the country level, correlations were all positive and strongest between expected participation in legal activities and expected active political participation and civic engagement at school. The weakest country level correlation was recorded for expected electoral participation and expected engagement in illegal activities.

#### **Civic knowledge, trust in institutions and their association with expected participation**

Table 3 shows the national average test scores for civic knowledge as well as the questionnaire scale reflecting students' trust across countries with their respective standard errors. Icons provide an indication whether national averages were statistically significant ( $p < 0.05$ ) and/or 30 score points (for civic knowledge) or three score points (for trust in institutions) or more below or above the ICCS 2016 average. For countries that had comparable data in both cycles, the table also includes the results for ICCS 2009 as well as estimates of changes over time.

The last two columns display the within-country correlations between the two variables in ICCS 2016 and 2009. Overall, there were mostly weak to negative correlations between civic knowledge and trust in institutions, however, it can be observed that in both surveys there were variations and that in some countries (such as Denmark or Sweden) correlations tended to be positive, while in others (especially in some Latin American countries) the association was negative.

Figure 1 shows a scatterplot of the correlations between civic knowledge and trust in civic institutions from ICCS 2016 within countries, and the Corruptions Perceptions Index (Transparency International, 2018) from the corresponding year, which ranges between 0 and 100. The correlation between the two country-level variables is very high ( $r = 0.87$ ) and supports observations from earlier research (Lauglo, 2013) that in countries with higher levels of perceived corruption correlations between civic knowledge tend to be negative, while in those with lower levels of perceived corruption this association appears to be positive.

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<sup>4</sup> Throughout this article, following Cohen's (1988) approach, weak correlations are assumed to be those between 0.1 and 0.2 (or -0.1 and -0.2), moderate correlations those between 0.2 and 0.5 (or -0.2 and -0.5), and strong correlations those above 0.5 (or below -0.5).

**Table 3** National average scales scores indicating students' trust in civic institutions and civic knowledge and correlations between the two variables in 2016 and 2009

Country	Trust in civic institutions			Civic knowledge			Correlations between trust and civic knowledge	
	2016	2009	Differences (2016 - 2009)	2016	2009	Differences (2016 - 2009)	2016	2009
Belgium (Flemish)	53 (0.2) $\Delta$	49 (0.2)	<b>3.8</b> (0.4)	537 (4.1) $\Delta$	514 (4.7)	<b>23</b> (6.2)	0.04	0.01
Bulgaria	50 (0.3) $\nabla$	48 (0.3)	<b>1.4</b> (0.5)	485 (5.3) $\nabla$	466 (5.0)	<b>19</b> (7.3)	-0.23	-0.29
Chile	47 (0.3) $\nabla$	50 (0.3)	<b>-2.9</b> (0.5)	482 (3.1) $\nabla$	483 (3.5)	-1 (4.7)	-0.11	-0.14
Chinese Taipei	51 (0.2)	48 (0.2)	<b>3.6</b> (0.4)	581 (3.0) $\blacktriangle$	559 (2.4)	<b>22</b> (3.9)	-0.07	-0.02
Colombia	48 (0.3) $\nabla$	50 (0.3)	<b>-1.4</b> (0.5)	482 (3.4) $\nabla$	462 (2.9)	<b>20</b> (4.5)	-0.21	-0.17
Croatia	48 (0.3) $\nabla$	-	-	531 (2.5) $\Delta$	-	-	-0.14	-
Denmark <sup>†</sup>	53 (0.2) $\Delta$	52 (0.2)	0.7 (0.4)	586 (3.0) $\blacktriangle$	576 (3.6)	<b>10</b> (4.7)	0.15	0.25
Dominican Republic (r)	55 (0.3) $\blacktriangle$	54 (0.4)	<b>1.3</b> (0.6)	381 (3.0) $\nabla$	380 (2.4)	1 (3.9)	-0.27	-0.23
Estonia <sup>‡</sup>	51 (0.2) $\nabla$	48 (0.2)	<b>2.6</b> (0.4)	546 (3.1) $\Delta$	525 (4.5)	<b>21</b> (5.5)	0.07	0.06
Finland	54 (0.2) $\blacktriangle$	53 (0.2)	<b>1.1</b> (0.4)	577 (2.3) $\blacktriangle$	576 (2.4)	0 (3.3)	0.11	0.16
Italy	51 (0.2)	52 (0.2)	<b>-1.1</b> (0.4)	524 (2.4) $\Delta$	531 (3.3)	-6 (4.1)	-0.04	-0.09
Latvia <sup>‡</sup>	49 (0.2) $\nabla$	45 (0.2)	<b>4.3</b> (0.4)	492 (3.1) $\nabla$	482 (4.0)	<b>11</b> (5.1)	-0.01	-0.14
Lithuania	53 (0.2) $\Delta$	48 (0.2)	<b>4.5</b> (0.4)	518 (3.0)	505 (2.8)	<b>13</b> (4.2)	-0.12	-0.21
Malta	52 (0.2) $\Delta$	52 (0.3)	0.5 (0.5)	491 (2.7) $\nabla$	490 (4.5)	2 (5.2)	-0.03	0.07
Mexico	50 (0.2) $\nabla$	49 (0.2)	<b>1.1</b> (0.4)	467 (2.5) $\nabla$	452 (2.8)	<b>15</b> (3.8)	-0.22	-0.22
Netherlands <sup>†</sup>	53 (0.3) $\Delta$	-	-	523 (4.5)	-	-	0.09	-
Norway (9) <sup>†</sup>	55 (0.2) $\blacktriangle$	52 (0.2)	<b>2.9</b> (0.4)	564 (2.2) $\blacktriangle$	538 (4.0)	<b>25</b> (4.6)	0.14	0.14
Peru	48 (0.2) $\nabla$	-	-	438 (3.5) $\nabla$	-	-	-0.28	-
Russian Federation	53 (0.3) $\Delta$	52 (0.2)	0.6 (0.4)	545 (4.3) $\Delta$	506 (3.8)	<b>38</b> (5.7)	-0.06	-0.08
Slovenia	49 (0.3) $\nabla$	48 (0.3)	<b>1.0</b> (0.5)	532 (2.5) $\Delta$	516 (2.7)	<b>16</b> (3.6)	0.10	0.08
Sweden <sup>‡</sup>	54 (0.3) $\Delta$	52 (0.3)	<b>1.6</b> (0.5)	579 (2.8) $\blacktriangle$	537 (3.1)	<b>42</b> (4.2)	0.12	0.15
Average ICCS 2016	51 (0.1)	-	-	517 (0.7)	-	-	-0.05	-
Average common countries	52 (0.1)	50 (0.1)	<b>1.4</b> (0.1)	521 (0.8)	505 (0.8)	<b>15</b> (1.1)	-0.04	-0.04

National ICCS 2016 results are:

more than 3 or 30 score points above average  $\blacktriangle$

significantly above average  $\Delta$

significantly below average  $\nabla$

more than 3 or 30 score points below average  $\blacktriangledown$

(†) Standard errors appear in parentheses. Statistically significant changes ( $p < 0.05$ ) between 2009 and 2016 are displayed in bold.

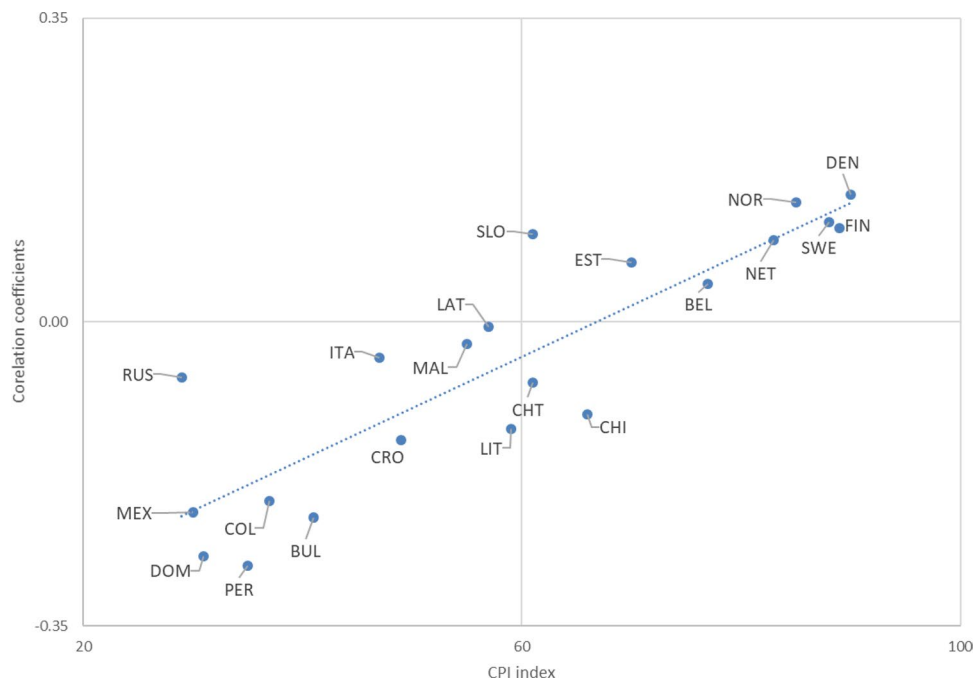
(9) Country deviated from international defined population and surveyed adjacent upper grade.

<sup>†</sup> Met guidelines for sampling participation rates only after replacement schools were included.

<sup>‡</sup> National Defined Population covers 90% to 95% of National Target Population

- No comparable data available.

An "(r)" indicates that data are available for at least 70% but less than 85% of students.



**Fig. 1** Scatterplot of CPI and correlations between trust in institutions and civic knowledge in 2016

These findings suggest that perceptions of higher levels of corruption and lack of transparency tend to erode trust in civic institutions, and that young people who are more knowledgeable tend to be more critical of these institutions than those who are less knowledgeable. In societies where institutions are viewed as less corrupt and more transparent, however, higher levels of knowledge among young people tends to lead to higher levels of trust in civic institutions.

Table 4 shows the correlations of the five scales indicating students' expected civic participation with trust in institutions and civic knowledge respectively, based on data from ICCS 2016. While expected participation in legal activities, electoral participation, active political participation, and civic engagement at school tended to be positively correlated with students' trust in institutions, this was not the case for expectations of participating in illegal activities. However, in three Latin American countries (Dominican Republic, Mexico, and Peru) there were moderate positive correlations indicating that the expectations of getting involved in illegal protest were higher among students with higher levels of trust. In some countries (such as Denmark, Estonia, Finland, and Slovenia) there were weak negative correlations, a result in line with the expectation that students with more trust in civic institutions were less likely to consider illegal protest activities.

There were consistently negative correlations between expected participation in illegal protest activities and civic knowledge across countries, while for civic knowledge and expected electoral participation associations were positive. For expected participation in legal activities to express opinions there were mostly no associations with civic knowledge. The correlations with civic knowledge tended to be negative for expected active political participation, however, more substantial negative correlations were found in some countries, namely in Bulgaria, Colombia, the Dominican Republic, Lithuania,

**Table 4** Average correlations of expected engagement with trust in institutions and civic knowledge in 2016

Country	Correlations of trust in institutions for expected engagement in:					Correlations of civic knowledge for expected engagement in:				
	Legal activities	Illegal activities	Electoral participation	Active political participation	Participation at school	Legal activities	Illegal activities	Electoral participation	Active political participation	Participation at school
Belgium (Flemish)	0.18	-0.06	<b>0.24</b>	0.13	0.16	-0.01	<b>-0.32</b>	<b>0.35</b>	-0.12	0.04
Bulgaria	<b>0.22</b>	0.02	<b>0.23</b>	<b>0.32</b>	<b>0.25</b>	0.01	<b>-0.24</b>	<b>0.25</b>	<b>-0.30</b>	0.08
Chile	<b>0.26</b>	0.03	<b>0.31</b>	<b>0.36</b>	<b>0.25</b>	0.02	<b>-0.26</b>	<b>0.30</b>	-0.18	0.05
Chinese Taipei	0.17	0.01	0.20	<b>0.25</b>	0.20	-0.01	<b>-0.41</b>	<b>0.31</b>	-0.17	0.11
Colombia	<b>0.34</b>	0.13	<b>0.24</b>	<b>0.38</b>	<b>0.29</b>	0.01	<b>-0.30</b>	<b>0.23</b>	<b>-0.25</b>	-0.05
Croatia	<b>0.26</b>	-0.09	0.17	<b>0.23</b>	<b>0.21</b>	0.02	<b>-0.25</b>	<b>0.34</b>	-0.06	0.13
Denmark <sup>†</sup>	0.15	-0.15	<b>0.30</b>	0.17	0.16	0.08	<b>-0.34</b>	<b>0.44</b>	0.05	0.07
Dominican Republic (r)	<b>0.39</b>	<b>0.30</b>	<b>0.24</b>	<b>0.41</b>	<b>0.29</b>	-0.12	<b>-0.35</b>	0.12	<b>-0.20</b>	0.00
Estonia <sup>‡</sup>	0.14	-0.16	<b>0.29</b>	0.19	0.16	0.10	-0.20	<b>0.34</b>	-0.04	0.19
Finland	0.10	<b>-0.20</b>	<b>0.30</b>	0.15	0.15	0.13	<b>-0.32</b>	<b>0.42</b>	0.04	0.15
Italy	<b>0.21</b>	-0.11	<b>0.21</b>	<b>0.24</b>	0.19	0.08	<b>-0.26</b>	<b>0.37</b>	0.00	0.18
Latvia <sup>‡</sup>	0.15	-0.05	<b>0.23</b>	<b>0.22</b>	0.18	0.05	<b>-0.29</b>	<b>0.33</b>	-0.12	0.10
Lithuania	<b>0.30</b>	0.02	<b>0.24</b>	<b>0.29</b>	<b>0.23</b>	0.02	<b>-0.34</b>	<b>0.30</b>	<b>-0.21</b>	0.08
Malta	<b>0.24</b>	0.04	<b>0.27</b>	<b>0.25</b>	<b>0.29</b>	-0.02	<b>-0.35</b>	<b>0.27</b>	-0.14	0.09
Mexico	<b>0.33</b>	<b>0.21</b>	<b>0.30</b>	<b>0.42</b>	<b>0.29</b>	-0.07	<b>-0.32</b>	<b>0.22</b>	<b>-0.26</b>	0.00
Netherlands <sup>†</sup>	0.18	-0.01	<b>0.26</b>	0.20	0.16	0.10	<b>-0.26</b>	<b>0.47</b>	0.05	0.13
Norway (9) <sup>‡</sup>	0.17	-0.10	<b>0.31</b>	0.17	<b>0.20</b>	0.07	<b>-0.30</b>	<b>0.44</b>	-0.01	0.10
Peru	<b>0.32</b>	<b>0.23</b>	0.13	<b>0.38</b>	<b>0.22</b>	-0.03	<b>-0.41</b>	<b>0.35</b>	<b>-0.26</b>	0.05
Russian Federation	<b>0.30</b>	0.01	<b>0.37</b>	<b>0.31</b>	<b>0.32</b>	-0.02	<b>-0.26</b>	0.17	-0.12	0.01
Slovenia	0.19	-0.16	0.19	0.18	0.19	0.04	<b>-0.24</b>	<b>0.36</b>	-0.04	0.20
Sweden <sup>‡</sup>	0.17	-0.10	<b>0.29</b>	0.18	0.19	0.18	<b>-0.31</b>	<b>0.40</b>	0.07	0.12
Average ICCS 2016	<b>0.23</b>	-0.01	<b>0.25</b>	<b>0.26</b>	<b>0.22</b>	0.03	<b>-0.30</b>	<b>0.32</b>	-0.11	0.09

() Standard errors appear in parentheses. Correlations below -0.2 or above 0.2 are displayed in **bold**.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

<sup>†</sup> Met guidelines for sampling participation rates only after replacement schools were included.

<sup>‡</sup> National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for at least 70% but less than 85% of students.

Mexico, and Peru. In Denmark, Finland, and Sweden there were (albeit insubstantial) positive correlations between the two variables. For expected civic engagement at school, there were mostly weak positive correlations with civic knowledge.

### Multiple regression model results for types of expected political participation

Given the complexity of displaying comparisons of country level results for five multiple regression models across 21 countries, the more detailed country-level regression results are displayed in the appendix Tables 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16. Table 5 displays the average regression coefficients with indications of their statistical significance ( $p < 0.05$ ) for the average parameters (in bold) and markers regarding the consistency of significant associations across countries. Green arrows pointing upward indicate that in at least 11 countries there were significant positive coefficients, while red arrows pointing downward indicate that in at least 11 countries significant negative coefficients were observed. The yellow bar signals associations that were mostly non-significant or inconsistent across countries.

The results for *resource-related variables* show that female gender was a negative predictor for expected illegal activities (with an average net effect of -1.7 score points) and for expected active political participation (-0.9 score points). This variable tended to have a positive relationship with school participation (1.1 score points) but tended not to be associated with the other two forms of expected participation. Socio-economic background had no consistent associations with any of the types of expected participation. Parental interest was a positive predictor of expected electoral participation in all countries (on average 1.0 score points) but had less consistent or no significant associations with the other forms of engagement.

Civic knowledge appeared to be unrelated to expected legal activities and expected school engagement. However, it had strong negative net effects on expected illegal participation across participating countries (on average -2.6 score points), and was a consistently strong positive predictor of expected electoral participation (2.3 score points).

**Table 5** Average ICCS 2016 regression coefficients for different forms of students' expected participation

Predictor variables	Expected participation in legal activities	Expected participation in illegal activities	Expected electoral participation	Expected active political participation	Willingness to participate at school
<b>Resource-related</b>					
Gender (female)	-0.3 (0.1)	-1.7 (0.1)	-0.1 (0.1)	-0.9 (0.1)	1.1 (0.1)
Socio-economic home background	-0.3 (0.0)	-0.2 (0.0)	0.3 (0.0)	-0.2 (0.0)	-0.1 (0.0)
Parental civic interest	0.3 (0.1)	0.1 (0.1)	1.0 (0.1)	0.4 (0.1)	0.0 (0.1)
Civic knowledge	-0.1 (0.0)	-2.6 (0.1)	2.3 (0.0)	-1.1 (0.0)	0.0 (0.0)
<b>Recruitment-related</b>					
Community participation	0.7 (0.0)	0.2 (0.0)	0.0 (0.0)	0.5 (0.0)	0.4 (0.0)
Civic participation at school	0.3 (0.0)	-0.2 (0.0)	0.5 (0.0)	0.4 (0.0)	2.1 (0.0)
Civic social media engagement	1.1 (0.0)	0.4 (0.0)	0.1 (0.0)	0.4 (0.0)	0.3 (0.0)
<b>Psychological engagement</b>					
Citizenship self-efficacy	3.2 (0.0)	1.6 (0.0)	1.1 (0.0)	2.2 (0.0)	3.4 (0.0)
Students' civic interest	0.7 (0.1)	-0.5 (0.1)	1.0 (0.0)	0.9 (0.1)	0.4 (0.1)
Trust in civic institutions	0.7 (0.0)	-0.5 (0.0)	1.2 (0.0)	1.1 (0.0)	0.7 (0.0)
<b>Citizenship beliefs</b>					
Conventional	0.9 (0.0)	0.3 (0.1)	1.6 (0.0)	1.7 (0.1)	0.8 (0.0)
Social Movement-related	1.2 (0.0)	0.8 (0.0)	0.2 (0.0)	0.2 (0.0)	0.5 (0.0)
Personally responsible	-0.4 (0.0)	-1.2 (0.0)	0.3 (0.0)	-0.6 (0.0)	0.2 (0.0)

\* Statistically significant ( $p < 0.05$ ) ICCS 2016 average coefficients in bold.

Regression coefficients were:

In most countries significantly ( $p < 0.05$ ) positive

Not significant ( $p > 0.05$ ) or inconsistent across countries

In most countries significantly negative ( $p < 0.05$ )

**Table 6** Percentage of variance in expected participation explained by the multiple regression models

Country	Explained variance (in %) for:				
	Expected participation in legal activities	Expected participation in illegal activities	Expected electoral participation	Expected active political participation	Willingness to participate at school
Belgium (Flemish)	<b>30</b> (2.0)	<b>16</b> (2.0)	<b>29</b> (2.0)	<b>20</b> (2.0)	<b>36</b> (2.0)
Bulgaria	<b>36</b> (3.0)	<b>16</b> (1.0)	<b>27</b> (2.0)	<b>29</b> (2.0)	<b>39</b> (2.0)
Chile	<b>38</b> (2.0)	<b>14</b> (1.0)	<b>35</b> (1.0)	<b>31</b> (1.0)	<b>38</b> (1.0)
Chinese Taipei	<b>21</b> (2.0)	<b>21</b> (1.0)	<b>30</b> (1.0)	<b>25</b> (1.0)	<b>31</b> (2.0)
Colombia	<b>39</b> (2.0)	<b>13</b> (1.0)	<b>26</b> (2.0)	<b>28</b> (1.0)	<b>39</b> (2.0)
Croatia	<b>28</b> (2.0)	<b>15</b> (2.0)	<b>29</b> (2.0)	<b>22</b> (2.0)	<b>35</b> (2.0)
Denmark <sup>†</sup>	<b>28</b> (2.0)	<b>17</b> (1.0)	<b>42</b> (1.0)	<b>20</b> (1.0)	<b>39</b> (2.0)
Dominican Republic (r)	<b>41</b> (2.0)	<b>23</b> (2.0)	<b>24</b> (2.0)	<b>34</b> (2.0)	<b>29</b> (2.0)
Estonia <sup>‡</sup>	<b>31</b> (2.0)	<b>13</b> (1.0)	<b>33</b> (2.0)	<b>23</b> (2.0)	<b>46</b> (1.0)
Finland	<b>35</b> (2.0)	<b>22</b> (2.0)	<b>40</b> (2.0)	<b>24</b> (2.0)	<b>45</b> (2.0)
Italy	<b>35</b> (2.0)	<b>11</b> (1.0)	<b>29</b> (2.0)	<b>23</b> (2.0)	<b>36</b> (2.0)
Latvia <sup>‡</sup>	<b>27</b> (2.0)	<b>14</b> (2.0)	<b>32</b> (2.0)	<b>24</b> (2.0)	<b>37</b> (2.0)
Lithuania	<b>33</b> (2.0)	<b>15</b> (1.0)	<b>31</b> (2.0)	<b>27</b> (2.0)	<b>41</b> (2.0)
Malta	<b>39</b> (2.0)	<b>21</b> (1.0)	<b>32</b> (2.0)	<b>34</b> (2.0)	<b>41</b> (1.0)
Mexico	<b>33</b> (1.0)	<b>17</b> (1.0)	<b>30</b> (1.0)	<b>35</b> (1.0)	<b>34</b> (1.0)
Netherlands <sup>†</sup>	<b>30</b> (2.0)	<b>15</b> (2.0)	<b>41</b> (2.0)	<b>24</b> (2.0)	<b>35</b> (2.0)
Norway (9) <sup>‡</sup>	<b>36</b> (1.0)	<b>15</b> (1.0)	<b>35</b> (1.0)	<b>24</b> (1.0)	<b>41</b> (1.0)
Peru	<b>37</b> (2.0)	<b>21</b> (1.0)	<b>27</b> (2.0)	<b>30</b> (1.0)	<b>31</b> (2.0)
Russian Federation	<b>40</b> (2.0)	<b>14</b> (1.0)	<b>34</b> (2.0)	<b>32</b> (3.0)	<b>43</b> (2.0)
Slovenia	<b>31</b> (2.0)	<b>13</b> (1.0)	<b>26</b> (2.0)	<b>17</b> (1.0)	<b>38</b> (2.0)
Sweden <sup>‡</sup>	<b>36</b> (2.0)	<b>18</b> (2.0)	<b>36</b> (2.0)	<b>23</b> (2.0)	<b>39</b> (2.0)
ICCS 2016 average	<b>34</b> (0.4)	<b>16</b> (0.3)	<b>32</b> (0.4)	<b>26</b> (0.4)	<b>38</b> (0.4)

\* Statistically significant ( $p < 0.05$ ) coefficients in **bold**.

( ) Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

<sup>†</sup> Met guidelines for sampling participation rates only after replacement schools were included.

<sup>‡</sup> National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for less than 70% of students.

It also tended to have a negative relationship with expected active political participation (-1.1 score points), something that had been observed in earlier research studies. However, there was noticeable variation in the strength of this negative effect, which was insignificant or relatively weak in countries such as the Netherlands, Denmark, and Sweden (see Table 13).

Among the *recruitment-related factors*, past or current participation in the community was a consistent albeit weak positive predictor for expected legal activities, active political and school participation. Not surprisingly, experience with civic participation at school had a strong net effect on willingness to engage at school in the future in all countries (on average 2.1 score points), and it also tended to have weak positive net associations with expected electoral (0.5 score points) and active political participation (0.4 score points). Civic engagement with social media had consistently positive net associations with expected participation in legal activities (on average 1.1 score points) and had mostly weak positive net effects on expected active political participation (0.4 score points).

Among the *psychological engagement factors*, sense of citizenship self-efficacy had positive net effects on all forms of expected engagement across countries; these were strongest for legal activities (on average 3.2 score points), active political (2.2 score points) and school participation (3.4 score points). Students' personal interest in political and social issues was a relatively weak, but mostly significant positive, predictor for expected legal activities (on average 0.7 score points), electoral (1.1 score points) and active political participation (0.9 score points). However, in most countries it was a relatively weak, but statistically significant negative predictor of expected illegal participation (on average -0.5 score points).

Trust in civic institutions had consistently stronger positive effects on expected conventional forms of participation (electoral and active political participation, on average 1.2 and 1.1 score points, respectively) and tended to be also positively associated (0.7 score points) with expected legal activities and civic engagement at school. As expected, there were modest but negative net effects of this variable in most countries on expected illegal participation in most countries (on average  $-0.5$  score points).

*Citizenship beliefs* also showed associations with expected electoral and active political participation among lower-secondary students surveyed in ICCS 2016. Not surprisingly, conventional beliefs about citizenship had strong net associations with conventional forms of expected electoral and active political participation across countries (on average 1.6 and 1.7 score points, respectively).

There were also consistent, albeit relatively weaker, positive net effects on expected legal participation (0.9 score points) and school engagement (0.7 score points). Social-movement-related citizenship beliefs were most strongly associated with expected participation in legal activities (on average 1.2 scores points), to expected participation in illegal protest activities (0.8 score points), and, to a weaker but still relatively consistent extent, with willingness to engage at school (0.5 score points). Beliefs in the importance of personally responsible citizenship had negative net associations with expected participation in illegal activities in almost all countries (on average  $-1.2$  score points), while they also had mostly significant but weaker negative net effects on expected legal activity ( $-0.4$  score points) and active political participation ( $-0.6$  score points).

The regression model explained varying proportions of variance across countries and for different types of expected participation (Table 6). For student's *expected participation in legal activities to express opinions* on average 34% of the variation was explained, however, this proportion varied from 21% (Chinese Taipei) to 41% in the (Dominican Republic) across participating countries. For *expected illegal protest activities*, the model explained only 16% on average, with proportions ranging from 11% in Italy to 22% in the Dominican Republic and Finland. 32% of the variation in *expected electoral participation* was explained by the model, again with substantial variation across countries ranging from 24% in the Dominican Republic to 42% in Denmark. The model explained on average 21% of the variation in student scores reflecting *expected active political participation*, with the lowest proportion of 13% observed in Slovenia and the highest of 30% in Mexico. The model explained the relatively highest proportion of variance for *willingness to participate at school* with 38%, ranging from 31% in Chinese Taipei and Peru to 46% in Estonia.

## Discussion

In relation to the *Research Question 1*, results regarding the extent and variation of students' expected participation in legal and illegal activities show that while large proportions of surveyed students indicated a disposition to undertake legal activities, only minorities among young people across countries were willing to consider illegal forms of protest. However, there were substantial differences across countries regarding these different forms of activity. The results reveal common patterns across countries in terms of the extent of expected participation: in countries where levels of expectations for legal activities were relatively high, they also tended to be relatively high for illegal activities.

While majorities of students across countries expected to participate electorally as adults, relatively few students considered it likely that they would become actively involved in conventional forms of participation such as joining a party or standing as a candidate. Again, in countries with relatively high expectations for electoral types of conventional participation, there were also relatively high levels for active types of participation.

When considering the *Research Question 2*, the results confirm the importance of both students' trust and civic knowledge as variables that are related to young people's expected political participation. Overall, for both variables there were substantial variations across countries as well as increases between 2009 and 2016. Correlations between these two variables tended to be negative, however, this was not a consistent finding in all countries. As already shown in previous research (Lauglo, 2013), the country-level correlations between the two variables as measured with ICCS data were associated with the general perceptions of perceived corruption. In countries with high levels of perceived corruption, there was a negative correlation, while in those with lower levels of perceived corruption more knowledgeable students tended to express more trust in their civic institutions.

In countries, where higher levels of corruption are perceived, the negative associations between trust and civic knowledge may be due to a process of erosion of the credibility and legitimacy of civic institutions. In these circumstances, students who are more knowledgeable about how the political system performs would be less likely to express trust in its institutions. However, in countries with lower levels of perceived corruption, the system is likely to be viewed as more functional, and more knowledge among young people may lead to higher levels of trust in its institutions.

Trust tended to be positively associated with expected participation in legal activities, electoral and active political participation but was negatively associated with expected illegal forms of participation in most participating countries. This was evident both in simple correlations between trust in institutions and expected political participation and in the net effects of trust on expected engagement derived from multivariate modelling. A negative association could be interpreted as indicating that where trust is low breaking legal boundaries in political action may be associated with discontent with the political system.

However, it should be noted that in some countries from the Latin American region trust in institutions and expected illegal participation tended to be positively associated. This counterintuitive result should be interpreted in the context of findings from research about positive associations between authoritarianism and unlawful protest in some Latin American countries (see Inguanzo, Mateli, & Zúñiga, 2022), and the also positive relationship between endorsement of authoritarian government practices and institutional trust among young people in Latin America (Schulz, 2019). Furthermore, there has also been research highlighting a process of *normalization* of political street protest in Latin American countries due to ongoing instability as well as strategies applied by political parties (Moseley & Moreno, 2010).

While civic knowledge was positively related to expected electoral participation, it was consistently negatively related to expectations of participating in illegal activities. The results of this study also show that more knowledgeable students were less likely to expect to be involved in active political participation. After controlling for other



variables, civic knowledge was still a negative predictor of dispositions to engage in active conventional engagement in almost all countries. This suggests that conventional active participation becomes less desirable when young people acquire more knowledge about all aspects of the political system, including the negative ones. In this context it is noteworthy that the highest negative associations between civic knowledge and expected active political participation were observed in countries that also had the highest levels of perceived corruption. Furthermore, this negative relationship may also be interpreted in relation to the generally lower levels of trust in political parties (Schulz et al., 2018a, p. 135), which continue to be the main channel of conventional active participation in democratic systems.

*Research question 3* asked about the influences of resource-related factors, recruitment networks, psychological engagement, and citizenship beliefs on students' expected participation in different types of engagement using a multivariate model. The results show that variables in each of these groups of factors were consistently associated with young people's expected engagement. However, the results show differences in the associations depending on the type of expected participation, as well as differences in terms of the consistency of relationships.

Among the *resource-related variables*, both socioeconomic background and parental interest were less consistently related to indicators of expected participation, while students' gender and civic knowledge tended to be negatively associated with expected illegal activities and expected active political participation. After controlling for other variables in the model, civic knowledge had positive associations across countries only for expected electoral participation, which suggests that more knowledgeable students tend to be conscious about the importance of voting in democratic societies.

Indicators of past or current participation that were used as *network-related factors* in the model, were not always consistently related to different types of expected participation. However, there were net effects of all three indicators (community, school, and social media participation) on expected active political participation, and the strongest effects were recorded for social media participation on legal activities (which was measured including some items related to online participation), and for civic participation at school and willingness to engage at the school in the future. While young people in the age group under study may still be limited in their possibilities to engage, the results show that early experiences with civic participation have a bearing on beliefs about future engagement.

The most consistent relationships with expected participation were found for indicators of *psychological engagement*. For all five types of engagement, students with higher levels of self-efficacy found participation more likely across all participating countries. In most ICCS 2016 countries, young people's interest in political and social issues was a positive predictor of expected participation in legal activities, elections, and active conventional forms of engagement, while it tended to have negative net associations with expected illegal protest. As expected, trust was a positive predictor of all forms of political participation except for students' expectations to become involved in illegal activities.

*Citizenship beliefs* of young people were also identified as having noteworthy associations with expected future civic participation. Beliefs in the importance of conventional citizenship were consistently associated with higher levels of participation in expected conventional forms of citizenship while social-movement-related citizenship beliefs

tended to be positively associated with expected participation in legal and illegal activities. As individual perceptions of what constitutes good citizenship are likely to reflect shared beliefs in social groups, these results lend some support to the notion about the role of social norms as drivers of civic engagement (Putnam, 1993).

## Conclusion

When considering the implications of the findings presented in this article, it is important to acknowledge that these data were derived from cross-sectional surveys, which imposes limitations on interpretations of these findings (see, for example, Rutkowski & Delandshere, 2016). It is important to keep in mind that it is not possible to draw conclusions about causality based on multiple regression analysis of cross-sectional data<sup>5</sup>. While the results do not support conclusive causal interpretations, they indicate interesting relationships between the factors included in the models and students' expected political participation that have important implications for policy and practice regarding civic and citizenship education.

The results generally confirm previous research findings about the importance of national contexts when analysing the influences of different factors on civic engagement. Cross-national differences such as those related to the relationship between trust and civic knowledge, as well as regarding their associations with different types of expected civic engagement, strongly suggest that comparative analyses of aspects related to civic and citizenship education should consider context factors such as the perceptions of the political system and its functionality. Therefore, caution is warranted when drawing conclusions from data obtained across a wide range of different political, social, economic, and educational contexts.

Measures of students' civic knowledge were consistently related their expectations of voting in the future as well as (less consistently) with other indicators of future engagement, and this finding highlights the importance of providing young people with insights into democratic processes and principles to promote a fundamental commitment of future citizens. ICCS data from the first three cycles (Schulz et al., 2010, 2018a, 2024) have revealed considerable gaps in how much young people know about civic issues both across and within countries. Therefore, further improving student learning in this area continues to be an important challenge for educational policy and practice in the future to promote young people's commitment to civic engagement.

The result that more knowledgeable students are less likely to consider illegal forms of action is in line with expectations that knowing about civic processes includes recognition of acceptable forms of participation. However, the finding that young people with higher levels of civic knowledge are less likely to consider active conventional participation in politics is quite concerning as it suggests that traditional channels of engagement (such as joining a party or standing as a candidate) are less likely to be considered by those that know most about their functioning, especially in societies where trust in civic institutions has been eroded by perceptions of dysfunctionality.

It is further important to highlight the positive relationship between students' expected engagement in many types of participation and their actual experiences with

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<sup>5</sup> To provide more than indicative notions of causal relationships, it would be necessary to have data based on a longitudinal research design. However, such data are not currently available from international comparative studies of education also due to the diverse nature of education systems.

civic participation at school as well as young people's feelings of citizenship self-efficacy. These findings support the long-standing notion of the importance of creating democratic environments at schools in which young people can experience democratic processes so that they develop positive dispositions toward engagement in later life (Bandura, 1997; Dewey, 1916; Keating & Janmaat, 2015; Pasek et al., 2008).

Latest results from the third cycle of ICCS in 2022 illustrated that while most young people were provided with opportunities to practice democracy through activities like class representative or school elections, there were still notable differences across and within participating countries (Schulz, Ainley, Fraillon, Losito, Agrusti, Friedman, & Damiani, 2024). These findings suggest that there is room for improvement regarding the further development of democratic learning environments in schools across many education systems, which may also be supported by strengthening their respective national guidelines as part of future educational policies.

## Appendix: country-level regression coefficients

**Table 7** Multiple regression coefficients for students' expected participation on legal activities to express opinions (resources and recruitment factors)

Country	Resource-related variables				Recruitment-related variables		
	Gender (female)	Indicator of socioeconomic background	Parental interest in political and social issues	Civic knowledge	Participation in community groups or organisations	Participation in civic activities at school	Civic engagement with social media
Belgium (Flemish)	0.0 (0.3)	-0.2 (0.2)	0.2 (0.3)	-0.1 (0.2)	<b>0.8</b> (0.2)	<b>0.5</b> (0.2)	<b>0.9</b> (0.2)
Bulgaria	-0.3 (0.3)	<b>-0.4</b> (0.2)	<b>0.6</b> (0.2)	0.0 (0.3)	<b>0.8</b> (0.3)	0.1 (0.2)	<b>0.9</b> (0.2)
Chile	<b>0.6</b> (0.3)	-0.3 (0.2)	<b>0.6</b> (0.2)	-0.1 (0.2)	<b>0.8</b> (0.2)	<b>0.8</b> (0.2)	<b>1.0</b> (0.2)
Chinese Taipei	<b>-1.6</b> (0.2)	<b>-0.4</b> (0.2)	0.2 (0.2)	0.0 (0.2)	<b>0.6</b> (0.1)	<b>0.6</b> (0.2)	<b>1.2</b> (0.2)
Colombia	0.1 (0.3)	-0.2 (0.1)	0.1 (0.2)	<b>0.5</b> (0.2)	<b>0.7</b> (0.2)	<b>0.5</b> (0.2)	<b>1.0</b> (0.1)
Croatia	<b>-0.9</b> (0.3)	<b>-0.5</b> (0.2)	0.4 (0.3)	<b>-0.5</b> (0.2)	0.3 (0.2)	<b>0.5</b> (0.2)	<b>1.2</b> (0.2)
Denmark <sup>†</sup>	<b>0.9</b> (0.2)	-0.1 (0.1)	<b>0.5</b> (0.2)	0.0 (0.2)	<b>0.7</b> (0.1)	0.2 (0.1)	<b>1.1</b> (0.1)
Dominican Republic (r)	0.2 (0.3)	-0.2 (0.1)	0.0 (0.2)	<b>-0.7</b> (0.2)	<b>0.5</b> (0.2)	<b>0.6</b> (0.2)	<b>0.9</b> (0.2)
Estonia <sup>‡</sup>	<b>-0.8</b> (0.3)	<b>-0.4</b> (0.2)	0.1 (0.3)	-0.2 (0.2)	<b>0.8</b> (0.2)	0.1 (0.2)	<b>1.0</b> (0.2)
Finland	<b>-0.5</b> (0.3)	-0.2 (0.1)	0.0 (0.2)	-0.2 (0.2)	<b>0.4</b> (0.2)	-0.1 (0.2)	<b>1.3</b> (0.2)
Italy	0.0 (0.3)	-0.1 (0.1)	<b>0.5</b> (0.2)	-0.2 (0.2)	<b>0.9</b> (0.1)	0.1 (0.1)	<b>1.2</b> (0.2)
Latvia <sup>‡</sup>	<b>-1.1</b> (0.3)	<b>-0.6</b> (0.2)	0.3 (0.3)	0.1 (0.2)	<b>0.7</b> (0.2)	<b>0.9</b> (0.2)	<b>0.7</b> (0.2)
Lithuania	<b>-0.8</b> (0.3)	<b>-0.5</b> (0.2)	0.3 (0.2)	0.4 (0.2)	<b>0.6</b> (0.2)	0.0 (0.2)	<b>1.1</b> (0.1)
Malta	<b>-0.7</b> (0.3)	<b>-0.3</b> (0.2)	0.2 (0.2)	-0.2 (0.2)	<b>0.9</b> (0.2)	0.2 (0.2)	<b>1.2</b> (0.2)
Mexico	-0.1 (0.2)	<b>-0.4</b> (0.2)	<b>0.7</b> (0.2)	-0.1 (0.2)	<b>0.5</b> (0.2)	0.3 (0.2)	<b>1.1</b> (0.1)
Netherlands <sup>†</sup>	-0.2 (0.3)	0.2 (0.2)	0.5 (0.4)	0.4 (0.2)	<b>0.9</b> (0.2)	<b>0.4</b> (0.2)	<b>0.8</b> (0.2)
Norway (9) <sup>‡</sup>	<b>0.8</b> (0.3)	-0.1 (0.1)	<b>1.0</b> (0.2)	-0.3 (0.2)	<b>1.1</b> (0.1)	0.1 (0.2)	<b>1.5</b> (0.1)
Peru	-0.1 (0.2)	-0.2 (0.1)	0.2 (0.2)	-0.3 (0.2)	<b>0.5</b> (0.1)	<b>0.4</b> (0.1)	<b>0.7</b> (0.1)
Russian Federation	<b>-0.8</b> (0.3)	<b>-0.4</b> (0.2)	0.3 (0.2)	0.1 (0.2)	<b>0.5</b> (0.2)	0.2 (0.2)	<b>1.0</b> (0.2)
Slovenia	-0.4 (0.3)	<b>-0.4</b> (0.2)	-0.3 (0.3)	-0.2 (0.2)	<b>0.9</b> (0.2)	<b>-0.6</b> (0.2)	<b>1.3</b> (0.2)
Sweden <sup>‡</sup>	0.4 (0.3)	0.0 (0.2)	0.4 (0.3)	0.3 (0.2)	<b>1.0</b> (0.2)	0.4 (0.2)	<b>1.2</b> (0.2)
ICCS 2016 average	<b>-0.3</b> (0.1)	<b>-0.3</b> (0.0)	<b>0.3</b> (0.1)	-0.1 (0.0)	<b>0.7</b> (0.0)	<b>0.3</b> (0.0)	<b>1.1</b> (0.0)

\* Statistically significant ( $p < 0.05$ ) coefficients in bold.

(†) Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

<sup>†</sup> Met guidelines for sampling participation rates only after replacement schools were included.

<sup>‡</sup> National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for less than 70% of students.

**Table 8** Multiple regression coefficients for students' expected participation on legal activities to express opinions (psychological factors and value perceptions)

Country	Variables related to psychological engagement			Citizenship values		
	Citizenship self-efficacy	Interest in political and social issues	Trust in civic institutions	Importance of conventional citizenship	Importance of social movement related citizenship	Importance of responsible citizenship
Belgium (Flemish)	<b>2.7</b> (0.2)	<b>1.4</b> (0.4)	<b>0.6</b> (0.2)	<b>0.8</b> (0.3)	<b>1.3</b> (0.2)	<b>-0.7</b> (0.2)
Bulgaria	<b>3.4</b> (0.3)	<b>0.9</b> (0.2)	0.4 (0.3)	<b>1.2</b> (0.3)	<b>1.0</b> (0.2)	0.0 (0.3)
Chile	<b>4.3</b> (0.2)	<b>1.1</b> (0.3)	<b>1.0</b> (0.2)	<b>0.9</b> (0.2)	<b>1.8</b> (0.3)	-0.4 (0.3)
Chinese Taipei	<b>2.0</b> (0.2)	<b>0.9</b> (0.3)	<b>0.6</b> (0.2)	<b>0.5</b> (0.3)	<b>1.9</b> (0.2)	<b>-0.8</b> (0.2)
Colombia	<b>3.5</b> (0.2)	<b>0.6</b> (0.1)	<b>1.4</b> (0.2)	<b>1.1</b> (0.2)	<b>0.8</b> (0.2)	0.0 (0.2)
Croatia	<b>2.7</b> (0.3)	0.4 (0.3)	<b>1.2</b> (0.3)	<b>0.9</b> (0.3)	<b>1.4</b> (0.2)	<b>-0.6</b> (0.3)
Denmark†	<b>2.0</b> (0.2)	<b>0.8</b> (0.2)	<b>0.3</b> (0.2)	<b>0.3</b> (0.2)	<b>1.6</b> (0.2)	<b>-0.5</b> (0.1)
Dominican Republic (r)	<b>3.9</b> (0.2)	0.4 (0.2)	<b>1.6</b> (0.2)	<b>1.5</b> (0.2)	<b>0.5</b> (0.2)	<b>0.5</b> (0.3)
Estonia <sup>1</sup>	<b>2.6</b> (0.2)	<b>0.6</b> (0.3)	<b>0.4</b> (0.2)	<b>1.1</b> (0.3)	<b>1.3</b> (0.2)	-0.3 (0.2)
Finland	<b>3.2</b> (0.3)	<b>0.9</b> (0.3)	0.0 (0.2)	0.4 (0.2)	<b>1.9</b> (0.2)	<b>-0.6</b> (0.2)
Italy	<b>2.9</b> (0.2)	0.3 (0.2)	<b>0.8</b> (0.2)	<b>0.9</b> (0.2)	<b>1.1</b> (0.2)	<b>-0.4</b> (0.2)
Latvia <sup>1</sup>	<b>3.0</b> (0.2)	<b>0.8</b> (0.3)	<b>0.6</b> (0.2)	<b>0.6</b> (0.2)	<b>1.1</b> (0.2)	-0.4 (0.2)
Lithuania	<b>2.8</b> (0.2)	0.2 (0.2)	<b>1.3</b> (0.2)	<b>0.8</b> (0.2)	<b>1.2</b> (0.2)	-0.3 (0.2)
Malta	<b>4.5</b> (0.2)	<b>0.6</b> (0.2)	<b>0.6</b> (0.2)	<b>1.2</b> (0.3)	<b>0.9</b> (0.2)	<b>-1.1</b> (0.2)
Mexico	<b>3.5</b> (0.2)	0.2 (0.2)	<b>1.0</b> (0.2)	<b>1.4</b> (0.2)	<b>0.5</b> (0.2)	-0.2 (0.2)
Netherlands†	<b>3.0</b> (0.3)	<b>0.7</b> (0.3)	<b>0.6</b> (0.2)	<b>1.3</b> (0.3)	<b>0.9</b> (0.2)	<b>-0.8</b> (0.3)
Norway (9) <sup>1</sup>	<b>3.7</b> (0.2)	<b>1.2</b> (0.2)	0.3 (0.2)	<b>0.7</b> (0.2)	<b>1.0</b> (0.2)	<b>-0.4</b> (0.2)
Peru	<b>3.1</b> (0.2)	<b>0.6</b> (0.2)	<b>1.0</b> (0.2)	<b>0.8</b> (0.2)	<b>0.9</b> (0.2)	<b>0.5</b> (0.1)
Russian Federation	<b>3.6</b> (0.2)	<b>0.9</b> (0.2)	<b>0.9</b> (0.2)	<b>0.7</b> (0.2)	<b>1.2</b> (0.2)	-0.2 (0.2)
Slovenia	<b>3.1</b> (0.2)	<b>1.2</b> (0.3)	<b>0.9</b> (0.2)	<b>0.9</b> (0.2)	<b>1.3</b> (0.2)	<b>-0.5</b> (0.2)
Sweden <sup>1</sup>	<b>2.8</b> (0.3)	<b>1.3</b> (0.3)	0.4 (0.2)	<b>0.7</b> (0.3)	<b>1.3</b> (0.2)	<b>-0.7</b> (0.2)
<b>ICCS 2016 average</b>	<b>3.2</b> (0.0)	<b>0.7</b> (0.1)	<b>0.7</b> (0.0)	<b>0.9</b> (0.0)	<b>1.2</b> (0.0)	<b>-0.4</b> (0.0)

\* Statistically significant ( $p < 0.05$ ) coefficients in **bold**.

() Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

† Met guidelines for sampling participation rates only after replacement schools were included.

<sup>1</sup> National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for less than 70% of students.

**Table 9** Multiple regression coefficients for students' expected participation on illegal activities to express opinions (resources and recruitment factors)

Country	Resource-related variables				Recruitment-related variables		
	Gender (female)	Indicator of socioeconomic background	Parental interest in political and social issues	Civic knowledge	Participation in community groups or organisations	Participation in civic activities at school	Civic engagement with social media
Belgium (Flemish)	<b>-2.3</b> (0.4)	-0.2 (0.3)	0.3 (0.3)	<b>-2.5</b> (0.3)	0.1 (0.2)	0.1 (0.2)	0.3 (0.2)
Bulgaria	<b>-1.8</b> (0.4)	<b>-0.7</b> (0.3)	0.2 (0.3)	<b>-2.6</b> (0.3)	<b>0.6</b> (0.2)	<b>-0.4</b> (0.2)	0.2 (0.2)
Chile	-0.3 (0.3)	<b>-0.5</b> (0.2)	0.3 (0.2)	<b>-2.8</b> (0.2)	0.3 (0.2)	<b>0.6</b> (0.2)	-0.1 (0.2)
Chinese Taipei	<b>-1.5</b> (0.3)	-0.2 (0.2)	0.2 (0.2)	<b>-3.3</b> (0.2)	0.2 (0.2)	0.0 (0.2)	0.2 (0.2)
Colombia	<b>-1.2</b> (0.3)	-0.3 (0.2)	-0.2 (0.3)	<b>-2.7</b> (0.3)	0.5 (0.3)	-0.2 (0.3)	0.3 (0.2)
Croatia	<b>-3.0</b> (0.5)	0.1 (0.2)	0.2 (0.3)	<b>-2.5</b> (0.3)	-0.3 (0.2)	-0.2 (0.2)	0.2 (0.2)
Denmark <sup>†</sup>	<b>-1.5</b> (0.3)	-0.1 (0.1)	0.3 (0.3)	<b>-2.4</b> (0.1)	0.2 (0.2)	-0.2 (0.2)	<b>0.4</b> (0.2)
Dominican Republic (r)	<b>-1.5</b> (0.4)	-0.3 (0.2)	0.0 (0.2)	<b>-3.3</b> (0.3)	0.3 (0.3)	0.1 (0.2)	0.3 (0.2)
Estonia <sup>1</sup>	<b>-1.9</b> (0.4)	-0.2 (0.2)	0.0 (0.3)	<b>-1.8</b> (0.2)	0.3 (0.2)	-0.3 (0.2)	0.3 (0.2)
Finland	<b>-2.4</b> (0.4)	-0.3 (0.2)	-0.4 (0.3)	<b>-2.2</b> (0.2)	0.3 (0.2)	-0.3 (0.2)	<b>0.8</b> (0.2)
Italy	<b>-0.7</b> (0.3)	-0.2 (0.2)	0.2 (0.3)	<b>-2.5</b> (0.2)	0.0 (0.2)	0.1 (0.2)	0.4 (0.2)
Latvia <sup>1</sup>	<b>-2.5</b> (0.5)	-0.3 (0.2)	0.0 (0.3)	<b>-2.2</b> (0.3)	0.3 (0.2)	<b>-0.8</b> (0.3)	<b>0.7</b> (0.2)
Lithuania	<b>-2.6</b> (0.4)	-0.3 (0.2)	0.0 (0.4)	<b>-3.1</b> (0.2)	0.2 (0.2)	-0.4 (0.2)	0.2 (0.2)
Malta	<b>-1.0</b> (0.3)	-0.3 (0.2)	<b>0.4</b> (0.2)	<b>-3.4</b> (0.2)	<b>0.6</b> (0.2)	-0.2 (0.2)	<b>0.5</b> (0.2)
Mexico	<b>-1.6</b> (0.3)	-0.2 (0.2)	0.1 (0.2)	<b>-2.7</b> (0.2)	0.2 (0.2)	-0.2 (0.2)	<b>0.4</b> (0.2)
Netherlands <sup>†</sup>	<b>-2.3</b> (0.3)	0.1 (0.2)	0.5 (0.3)	<b>-1.8</b> (0.3)	0.2 (0.2)	-0.2 (0.2)	<b>0.4</b> (0.2)
Norway (9) <sup>1</sup>	<b>-0.8</b> (0.3)	-0.1 (0.1)	0.1 (0.2)	<b>-2.5</b> (0.2)	0.2 (0.1)	0.0 (0.1)	<b>0.4</b> (0.1)
Peru	<b>-1.9</b> (0.3)	<b>-0.4</b> (0.2)	0.2 (0.2)	<b>-4.1</b> (0.2)	0.2 (0.2)	-0.1 (0.2)	0.3 (0.2)
Russian Federation	<b>-1.3</b> (0.4)	-0.4 (0.2)	<b>0.5</b> (0.2)	<b>-2.3</b> (0.2)	0.3 (0.2)	<b>-0.7</b> (0.2)	0.3 (0.2)
Slovenia	<b>-2.4</b> (0.5)	-0.4 (0.2)	0.0 (0.3)	<b>-1.7</b> (0.2)	0.3 (0.2)	-0.4 (0.2)	<b>0.7</b> (0.2)
Sweden <sup>1</sup>	<b>-2.0</b> (0.4)	0.0 (0.2)	0.2 (0.3)	<b>-2.5</b> (0.3)	0.3 (0.2)	-0.2 (0.2)	<b>0.5</b> (0.2)
<b>ICCS 2016 average</b>	<b>-1.7</b> (0.1)	<b>-0.2</b> (0.0)	<b>0.1</b> (0.1)	<b>-2.6</b> (0.1)	<b>0.2</b> (0.0)	<b>-0.2</b> (0.0)	<b>0.4</b> (0.0)

\* Statistically significant ( $p < 0.05$ ) coefficients in bold.

( ) Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

<sup>†</sup> Met guidelines for sampling participation rates only after replacement schools were included.

<sup>1</sup> National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for less than 70% of students.

**Table 10** Multiple regression coefficients for students' expected participation on illegal activities to express opinions (psychological factors and value perceptions)

Country	Variables related to psychological engagement			Citizenship values		
	Citizenship self-efficacy	Interest in political and social issues	Trust in civic institutions	Importance of conventional citizenship	Importance of social movement related citizenship	Importance of responsible citizenship
Belgium (Flemish)	<b>0.9</b> (0.2)	<b>-0.7</b> (0.3)	<b>-0.5</b> (0.2)	0.3 (0.3)	<b>1.0</b> (0.2)	<b>-1.4</b> (0.2)
Bulgaria	<b>2.6</b> (0.3)	-0.4 (0.3)	<b>-1.3</b> (0.3)	0.5 (0.3)	<b>1.2</b> (0.2)	<b>-0.8</b> (0.2)
Chile	<b>2.1</b> (0.2)	-0.3 (0.3)	<b>-0.6</b> (0.2)	-0.3 (0.3)	<b>2.3</b> (0.2)	<b>-1.6</b> (0.2)
Chinese Taipei	<b>1.3</b> (0.2)	0.1 (0.3)	-0.2 (0.2)	0.0 (0.2)	0.3 (0.2)	<b>-1.5</b> (0.2)
Colombia	<b>1.7</b> (0.2)	<b>-0.6</b> (0.2)	0.0 (0.2)	0.6 (0.4)	0.3 (0.3)	<b>-0.6</b> (0.2)
Croatia	<b>1.1</b> (0.2)	-0.5 (0.3)	<b>-1.1</b> (0.3)	0.5 (0.3)	<b>0.9</b> (0.3)	<b>-2.0</b> (0.2)
Denmark <sup>†</sup>	<b>1.1</b> (0.2)	<b>-0.8</b> (0.2)	<b>-0.7</b> (0.1)	-0.1 (0.2)	<b>1.0</b> (0.2)	<b>-1.3</b> (0.2)
Dominican Republic (r)	<b>1.7</b> (0.2)	-0.2 (0.2)	<b>0.8</b> (0.3)	<b>1.5</b> (0.2)	<b>0.5</b> (0.2)	-0.3 (0.3)
Estonia <sup>1</sup>	<b>1.5</b> (0.2)	<b>-0.6</b> (0.3)	<b>-1.3</b> (0.2)	0.5 (0.2)	<b>1.2</b> (0.3)	<b>-0.8</b> (0.2)
Finland	<b>1.5</b> (0.3)	<b>-1.0</b> (0.3)	<b>-1.2</b> (0.2)	0.0 (0.2)	<b>0.9</b> (0.2)	<b>-1.5</b> (0.2)
Italy	<b>1.2</b> (0.2)	<b>-0.6</b> (0.3)	<b>-1.1</b> (0.2)	-0.3 (0.2)	<b>0.7</b> (0.2)	<b>-1.1</b> (0.2)
Latvia <sup>1</sup>	<b>1.5</b> (0.2)	<b>-0.6</b> (0.3)	<b>-0.6</b> (0.2)	0.0 (0.2)	<b>0.7</b> (0.3)	<b>-0.9</b> (0.3)
Lithuania	<b>1.5</b> (0.2)	<b>-0.9</b> (0.3)	<b>-0.5</b> (0.2)	0.3 (0.3)	<b>0.4</b> (0.2)	<b>-0.7</b> (0.3)
Malta	<b>2.3</b> (0.2)	<b>-0.7</b> (0.2)	<b>-0.5</b> (0.2)	<b>0.9</b> (0.2)	<b>0.7</b> (0.3)	<b>-1.7</b> (0.3)
Mexico	<b>2.0</b> (0.2)	-0.4 (0.3)	<b>0.7</b> (0.2)	<b>0.8</b> (0.2)	0.2 (0.2)	<b>-1.0</b> (0.2)
Netherlands <sup>†</sup>	<b>1.6</b> (0.2)	<b>-0.7</b> (0.3)	-0.2 (0.2)	<b>0.7</b> (0.2)	<b>0.9</b> (0.2)	<b>-1.5</b> (0.2)
Norway (9) <sup>1</sup>	<b>1.8</b> (0.2)	<b>-0.7</b> (0.2)	<b>-0.8</b> (0.1)	0.4 (0.2)	<b>0.5</b> (0.2)	<b>-1.1</b> (0.2)
Peru	<b>1.5</b> (0.2)	-0.4 (0.2)	<b>0.5</b> (0.2)	<b>0.4</b> (0.2)	0.1 (0.2)	<b>-0.4</b> (0.2)
Russian Federation	<b>2.1</b> (0.3)	<b>-0.6</b> (0.2)	-0.3 (0.3)	0.2 (0.3)	<b>1.0</b> (0.2)	<b>-1.4</b> (0.3)
Slovenia	<b>1.3</b> (0.2)	-0.2 (0.3)	<b>-1.3</b> (0.2)	0.1 (0.3)	<b>0.8</b> (0.3)	<b>-1.5</b> (0.3)
Sweden <sup>1</sup>	<b>1.5</b> (0.2)	<b>-0.5</b> (0.2)	<b>-0.9</b> (0.2)	0.4 (0.3)	<b>1.0</b> (0.2)	<b>-1.9</b> (0.2)
<b>ICCS 2016 average</b>	<b>1.6</b> (0.0)	<b>-0.5</b> (0.1)	<b>-0.5</b> (0.0)	<b>0.3</b> (0.1)	<b>0.8</b> (0.0)	<b>-1.2</b> (0.0)

\* Statistically significant ( $p < 0.05$ ) coefficients in **bold**.

() Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

<sup>†</sup> Met guidelines for sampling participation rates only after replacement schools were included.

<sup>1</sup> National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for less than 70% of students.

**Table 11** Multiple regression coefficients for students' expected electoral participation (resources and recruitment factors)

Country	Resource-related variables				Recruitment-related variables		
	Gender (female)	Indicator of socioeconomic background	Parental interest in political and social issues	Civic knowledge	Participation in community groups or organisations	Participation in civic activities at school	Civic engagement with social media
Belgium (Flemish)	-1.1 (0.3)	0.2 (0.2)	<b>0.8</b> (0.3)	<b>2.7</b> (0.2)	0.1 (0.2)	<b>0.4</b> (0.2)	0.3 (0.2)
Bulgaria	0.2 (0.4)	-0.2 (0.3)	<b>1.7</b> (0.3)	<b>2.8</b> (0.3)	0.1 (0.3)	0.1 (0.3)	-0.1 (0.2)
Chile	0.4 (0.3)	0.2 (0.1)	<b>1.1</b> (0.2)	<b>2.9</b> (0.1)	0.0 (0.2)	<b>0.8</b> (0.2)	0.1 (0.1)
Chinese Taipei	-0.3 (0.3)	0.2 (0.1)	<b>0.5</b> (0.2)	<b>2.2</b> (0.1)	0.1 (0.1)	<b>0.2</b> (0.1)	<b>0.3</b> (0.1)
Colombia	0.0 (0.3)	-0.1 (0.1)	<b>0.8</b> (0.2)	<b>2.3</b> (0.2)	0.2 (0.2)	0.2 (0.2)	0.0 (0.1)
Croatia	-0.5 (0.3)	<b>0.4</b> (0.2)	<b>1.2</b> (0.3)	<b>2.4</b> (0.2)	-0.2 (0.2)	0.2 (0.2)	<b>0.5</b> (0.2)
Denmark†	<b>0.9</b> (0.2)	<b>0.3</b> (0.1)	<b>1.0</b> (0.2)	<b>2.3</b> (0.1)	0.2 (0.1)	<b>0.5</b> (0.1)	0.1 (0.1)
Dominican Republic (r)	0.1 (0.3)	0.0 (0.2)	<b>0.7</b> (0.2)	<b>1.6</b> (0.2)	0.0 (0.2)	<b>0.7</b> (0.2)	0.2 (0.2)
Estonia <sup>‡</sup>	-0.2 (0.4)	0.2 (0.2)	<b>1.1</b> (0.2)	<b>1.9</b> (0.2)	0.2 (0.2)	0.2 (0.2)	0.1 (0.2)
Finland	-0.2 (0.3)	<b>0.5</b> (0.1)	<b>1.4</b> (0.2)	<b>2.2</b> (0.2)	0.0 (0.1)	<b>0.5</b> (0.1)	0.2 (0.1)
Italy	-0.2 (0.2)	0.1 (0.1)	<b>1.5</b> (0.3)	<b>2.5</b> (0.2)	0.1 (0.1)	<b>0.3</b> (0.1)	-0.1 (0.1)
Latvia <sup>‡</sup>	0.1 (0.4)	<b>0.9</b> (0.2)	<b>1.1</b> (0.3)	<b>2.1</b> (0.2)	-0.1 (0.2)	<b>1.3</b> (0.2)	<b>-0.4</b> (0.2)
Lithuania	0.3 (0.3)	0.0 (0.2)	<b>1.4</b> (0.3)	<b>2.5</b> (0.2)	-0.1 (0.2)	<b>0.4</b> (0.2)	0.2 (0.2)
Malta	0.3 (0.3)	<b>0.5</b> (0.2)	<b>0.9</b> (0.2)	<b>1.8</b> (0.2)	<b>0.4</b> (0.1)	0.2 (0.2)	0.0 (0.2)
Mexico	0.4 (0.3)	-0.1 (0.1)	<b>0.6</b> (0.2)	<b>2.3</b> (0.2)	0.0 (0.1)	<b>0.3</b> (0.2)	0.1 (0.2)
Netherlands†	<b>-1.0</b> (0.3)	<b>0.6</b> (0.2)	<b>1.8</b> (0.3)	<b>3.3</b> (0.2)	0.3 (0.2)	<b>0.9</b> (0.2)	<b>0.4</b> (0.2)
Norway (9) <sup>‡</sup>	0.3 (0.2)	<b>0.7</b> (0.1)	<b>0.9</b> (0.2)	<b>2.9</b> (0.1)	0.1 (0.1)	<b>0.5</b> (0.1)	<b>0.4</b> (0.1)
Peru	-0.2 (0.2)	-0.1 (0.1)	<b>0.4</b> (0.2)	<b>2.6</b> (0.2)	-0.2 (0.1)	<b>0.4</b> (0.1)	0.0 (0.1)
Russian Federation	-0.1 (0.3)	<b>0.5</b> (0.2)	0.2 (0.2)	<b>1.6</b> (0.2)	0.2 (0.2)	<b>0.8</b> (0.2)	0.2 (0.2)
Slovenia	<b>-1.5</b> (0.4)	<b>0.7</b> (0.2)	<b>1.1</b> (0.3)	<b>2.5</b> (0.2)	0.0 (0.2)	<b>0.6</b> (0.2)	0.2 (0.2)
Sweden <sup>‡</sup>	0.3 (0.3)	<b>0.4</b> (0.1)	<b>1.2</b> (0.3)	<b>1.9</b> (0.2)	<b>-0.3</b> (0.1)	<b>0.8</b> (0.2)	0.1 (0.2)
ICCS 2016 average	-0.1 (0.1)	<b>0.3</b> (0.0)	<b>1.0</b> (0.1)	<b>2.3</b> (0.0)	0.0 (0.0)	<b>0.5</b> (0.0)	<b>0.1</b> (0.0)

\* Statistically significant (p<0.05) coefficients in bold.

( ) Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

† Met guidelines for sampling participation rates only after replacement schools were included.

‡ National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for less than 70% of students.

**Table 12** Multiple regression coefficients for students' expected electoral participation (psychological factors and value perceptions)

Country	Variables related to psychological engagement			Citizenship values		
	Citizenship self-efficacy	Interest in political and social issues	Trust in civic institutions	Importance of conventional citizenship	Importance of social movement related citizenship	Importance of responsible citizenship
Belgium (Flemish)	<b>0.8</b> (0.3)	<b>1.2</b> (0.3)	<b>1.0</b> (0.2)	<b>1.4</b> (0.3)	0.2 (0.2)	<b>0.6</b> (0.2)
Bulgaria	<b>1.2</b> (0.3)	<b>1.2</b> (0.3)	<b>1.6</b> (0.2)	<b>1.8</b> (0.3)	0.1 (0.3)	0.4 (0.3)
Chile	<b>1.5</b> (0.2)	<b>0.8</b> (0.2)	<b>2.0</b> (0.2)	<b>2.4</b> (0.2)	0.0 (0.2)	0.3 (0.2)
Chinese Taipei	<b>0.5</b> (0.2)	<b>0.9</b> (0.2)	<b>0.6</b> (0.1)	<b>1.9</b> (0.2)	<b>0.6</b> (0.2)	<b>0.4</b> (0.2)
Colombia	<b>1.1</b> (0.2)	<b>0.7</b> (0.2)	<b>1.3</b> (0.2)	<b>1.5</b> (0.2)	<b>0.6</b> (0.2)	0.2 (0.2)
Croatia	<b>0.8</b> (0.2)	<b>0.7</b> (0.2)	<b>0.8</b> (0.2)	<b>1.5</b> (0.3)	0.4 (0.2)	0.3 (0.2)
Denmark†	<b>0.9</b> (0.2)	<b>1.7</b> (0.2)	<b>1.1</b> (0.1)	<b>1.3</b> (0.1)	0.0 (0.1)	<b>0.4</b> (0.1)
Dominican Republic (r)	<b>1.5</b> (0.2)	0.2 (0.2)	<b>1.1</b> (0.2)	<b>1.9</b> (0.2)	0.4 (0.2)	0.1 (0.2)
Estonia <sup>1</sup>	<b>1.1</b> (0.2)	<b>1.1</b> (0.3)	<b>1.4</b> (0.2)	<b>2.1</b> (0.2)	0.3 (0.2)	-0.1 (0.2)
Finland	<b>1.0</b> (0.1)	<b>1.0</b> (0.3)	<b>1.0</b> (0.2)	<b>1.6</b> (0.2)	0.0 (0.2)	<b>0.6</b> (0.2)
Italy	<b>0.9</b> (0.2)	<b>0.5</b> (0.2)	<b>0.9</b> (0.1)	<b>1.5</b> (0.2)	0.2 (0.1)	0.3 (0.2)
Latvia <sup>1</sup>	<b>1.1</b> (0.2)	<b>1.4</b> (0.3)	<b>1.2</b> (0.2)	<b>1.9</b> (0.2)	0.1 (0.2)	0.1 (0.2)
Lithuania	<b>0.9</b> (0.2)	<b>0.8</b> (0.3)	<b>1.3</b> (0.2)	<b>1.8</b> (0.2)	0.2 (0.2)	<b>0.5</b> (0.2)
Malta	<b>1.5</b> (0.2)	<b>1.3</b> (0.2)	<b>1.0</b> (0.2)	<b>1.9</b> (0.2)	0.1 (0.2)	<b>0.5</b> (0.2)
Mexico	<b>1.1</b> (0.2)	<b>0.8</b> (0.2)	<b>1.6</b> (0.2)	<b>2.3</b> (0.2)	0.0 (0.2)	<b>0.3</b> (0.2)
Netherlands†	<b>1.1</b> (0.2)	0.6 (0.3)	<b>1.2</b> (0.2)	<b>1.4</b> (0.2)	-0.3 (0.2)	0.1 (0.2)
Norway (9) <sup>1</sup>	<b>1.0</b> (0.2)	<b>0.9</b> (0.2)	<b>1.4</b> (0.1)	<b>0.4</b> (0.2)	0.1 (0.2)	<b>0.7</b> (0.1)
Peru	<b>1.1</b> (0.1)	<b>0.6</b> (0.2)	<b>0.7</b> (0.2)	<b>1.0</b> (0.1)	<b>0.4</b> (0.2)	<b>0.8</b> (0.1)
Russian Federation	<b>1.1</b> (0.3)	<b>1.1</b> (0.2)	<b>1.6</b> (0.2)	<b>2.2</b> (0.2)	0.4 (0.2)	0.0 (0.2)
Slovenia	<b>1.1</b> (0.2)	<b>0.9</b> (0.3)	<b>0.8</b> (0.2)	<b>1.4</b> (0.2)	0.2 (0.2)	0.2 (0.3)
Sweden <sup>1</sup>	<b>1.2</b> (0.2)	<b>1.7</b> (0.2)	<b>1.2</b> (0.2)	<b>0.6</b> (0.3)	0.2 (0.2)	<b>0.4</b> (0.2)
<b>ICCS 2016 average</b>	<b>1.1</b> (0.0)	<b>1.0</b> (0.0)	<b>1.2</b> (0.0)	<b>1.6</b> (0.0)	<b>0.2</b> (0.0)	<b>0.3</b> (0.0)

\* Statistically significant ( $p < 0.05$ ) coefficients in **bold**.

() Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

† Met guidelines for sampling participation rates only after replacement schools were included.

<sup>1</sup> National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for less than 70% of students.



**Table 13** Multiple regression coefficients for students' expected active political participation (resources and recruitment factors)

Country	Resource-related variables				Recruitment-related variables		
	Gender (female)	Indicator of socioeconomic background	Parental interest in political and social issues	Civic knowledge	Participation in community groups or organisations	Participation in civic activities at school	Civic engagement with social media
Belgium (Flemish)	<b>-1.0</b> (0.3)	-0.1 (0.2)	<b>0.7</b> (0.3)	<b>-1.1</b> (0.2)	<b>0.4</b> (0.2)	<b>0.5</b> (0.2)	<b>0.4</b> (0.2)
Bulgaria	<b>-1.2</b> (0.4)	-0.5 (0.3)	<b>0.8</b> (0.3)	<b>-2.6</b> (0.3)	<b>0.7</b> (0.3)	0.2 (0.3)	-0.3 (0.2)
Chile	<b>-0.7</b> (0.3)	<b>-0.6</b> (0.2)	<b>0.5</b> (0.2)	<b>-1.7</b> (0.2)	<b>0.5</b> (0.2)	<b>0.8</b> (0.2)	<b>0.5</b> (0.2)
Chinese Taipei	<b>-1.4</b> (0.2)	-0.2 (0.1)	0.0 (0.2)	<b>-1.0</b> (0.2)	<b>0.4</b> (0.1)	<b>0.4</b> (0.1)	0.3 (0.1)
Colombia	<b>-0.7</b> (0.3)	<b>-0.5</b> (0.2)	0.3 (0.2)	<b>-1.5</b> (0.2)	<b>0.5</b> (0.2)	0.2 (0.2)	0.3 (0.2)
Croatia	<b>-1.4</b> (0.3)	-0.2 (0.2)	<b>1.0</b> (0.3)	<b>-1.1</b> (0.2)	0.2 (0.2)	<b>0.5</b> (0.2)	<b>0.6</b> (0.2)
Denmark†	-0.1 (0.2)	0.0 (0.1)	0.2 (0.2)	<b>-0.2</b> (0.1)	<b>0.6</b> (0.1)	0.1 (0.1)	<b>0.6</b> (0.2)
Dominican Republic (r)	<b>-0.9</b> (0.4)	<b>-0.4</b> (0.2)	<b>0.7</b> (0.2)	<b>-1.1</b> (0.3)	<b>0.7</b> (0.3)	<b>0.4</b> (0.2)	<b>0.4</b> (0.2)
Estonia <sup>‡</sup>	<b>-1.5</b> (0.3)	-0.3 (0.2)	0.1 (0.2)	<b>-1.0</b> (0.2)	<b>0.7</b> (0.2)	<b>0.5</b> (0.2)	0.2 (0.2)
Finland	<b>-0.8</b> (0.2)	0.1 (0.1)	0.2 (0.3)	<b>-0.5</b> (0.2)	<b>0.4</b> (0.1)	0.2 (0.2)	<b>0.4</b> (0.2)
Italy	<b>-1.2</b> (0.3)	0.2 (0.1)	0.4 (0.2)	<b>-0.6</b> (0.2)	<b>0.5</b> (0.2)	<b>0.4</b> (0.2)	<b>0.5</b> (0.2)
Latvia <sup>‡</sup>	<b>-1.6</b> (0.4)	-0.1 (0.2)	0.6 (0.3)	<b>-1.5</b> (0.2)	<b>0.5</b> (0.2)	<b>0.8</b> (0.2)	-0.1 (0.2)
Lithuania	<b>-1.2</b> (0.4)	0.0 (0.2)	<b>0.7</b> (0.3)	<b>-1.9</b> (0.2)	<b>0.7</b> (0.2)	0.0 (0.2)	<b>0.5</b> (0.2)
Malta	<b>-1.5</b> (0.3)	0.1 (0.2)	0.3 (0.2)	<b>-1.7</b> (0.2)	<b>0.8</b> (0.2)	0.4 (0.2)	<b>0.6</b> (0.2)
Mexico	-0.3 (0.3)	<b>-0.5</b> (0.1)	0.1 (0.2)	<b>-1.5</b> (0.2)	<b>0.5</b> (0.2)	<b>0.4</b> (0.2)	0.3 (0.2)
Netherlands†	-0.6 (0.3)	0.2 (0.2)	<b>0.8</b> (0.3)	-0.1 (0.2)	<b>0.8</b> (0.2)	0.3 (0.2)	<b>0.4</b> (0.2)
Norway (9) <sup>‡</sup>	-0.1 (0.3)	0.2 (0.1)	<b>0.8</b> (0.2)	<b>-0.9</b> (0.2)	<b>0.8</b> (0.1)	<b>0.3</b> (0.1)	<b>0.8</b> (0.2)
Peru	-0.3 (0.3)	<b>-0.8</b> (0.1)	0.2 (0.2)	<b>-1.9</b> (0.2)	<b>0.4</b> (0.2)	<b>0.5</b> (0.2)	<b>0.4</b> (0.1)
Russian Federation	<b>-1.6</b> (0.4)	<b>-0.5</b> (0.1)	0.0 (0.3)	<b>-0.6</b> (0.2)	0.3 (0.2)	<b>0.7</b> (0.3)	<b>0.4</b> (0.2)
Slovenia	<b>-1.3</b> (0.3)	0.0 (0.2)	0.3 (0.3)	<b>-0.9</b> (0.2)	<b>0.7</b> (0.2)	<b>0.5</b> (0.2)	<b>0.4</b> (0.2)
Sweden <sup>‡</sup>	-0.3 (0.3)	-0.3 (0.2)	<b>0.6</b> (0.2)	<b>-0.4</b> (0.2)	<b>0.4</b> (0.2)	0.4 (0.2)	<b>0.6</b> (0.2)
ICCS 2016 average	<b>-0.9</b> (0.1)	<b>-0.2</b> (0.0)	<b>0.4</b> (0.1)	<b>-1.1</b> (0.0)	<b>0.5</b> (0.0)	<b>0.4</b> (0.0)	<b>0.4</b> (0.0)

\* Statistically significant ( $p < 0.05$ ) coefficients in **bold**.

(†) Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

‡ Met guidelines for sampling participation rates only after replacement schools were included.

<sup>‡</sup> National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for less than 70% of students.

**Table 14** Multiple regression coefficients for students' expected active political participation (psychological factors and value perceptions)

Country	Variables related to psychological engagement			Citizenship values		
	Citizenship self-efficacy	Interest in political and social issues	Trust in civic institutions	Importance of conventional citizenship	Importance of social movement related citizenship	Importance of responsible citizenship
Belgium (Flemish)	<b>1.8</b> (0.2)	<b>1.3</b> (0.4)	0.3 (0.3)	<b>1.2</b> (0.2)	<b>0.6</b> (0.2)	<b>-0.7</b> (0.2)
Bulgaria	<b>2.7</b> (0.3)	<b>1.0</b> (0.3)	<b>1.2</b> (0.3)	<b>1.9</b> (0.3)	-0.2 (0.2)	-0.4 (0.3)
Chile	<b>2.7</b> (0.2)	<b>0.9</b> (0.3)	<b>2.1</b> (0.2)	<b>2.4</b> (0.3)	0.1 (0.2)	<b>-0.7</b> (0.3)
Chinese Taipei	<b>2.2</b> (0.2)	<b>1.0</b> (0.2)	<b>1.1</b> (0.2)	<b>1.5</b> (0.2)	<b>0.7</b> (0.2)	<b>-1.3</b> (0.2)
Colombia	<b>2.0</b> (0.2)	<b>0.7</b> (0.2)	<b>2.0</b> (0.2)	<b>1.8</b> (0.3)	-0.1 (0.2)	<b>-0.5</b> (0.2)
Croatia	<b>1.9</b> (0.2)	<b>1.1</b> (0.3)	<b>1.0</b> (0.2)	<b>2.1</b> (0.2)	0.1 (0.2)	<b>-0.7</b> (0.2)
Denmark†	<b>1.4</b> (0.2)	<b>1.1</b> (0.2)	<b>0.5</b> (0.1)	<b>1.1</b> (0.1)	<b>0.5</b> (0.1)	<b>-0.6</b> (0.1)
Dominican Republic (r)	<b>2.1</b> (0.2)	0.3 (0.2)	<b>1.8</b> (0.2)	<b>2.0</b> (0.2)	-0.1 (0.2)	<b>0.5</b> (0.2)
Estonia <sup>1</sup>	<b>1.8</b> (0.2)	<b>0.7</b> (0.3)	<b>0.9</b> (0.2)	<b>1.8</b> (0.2)	<b>0.4</b> (0.2)	<b>-0.4</b> (0.2)
Finland	<b>1.9</b> (0.2)	<b>0.7</b> (0.3)	<b>0.5</b> (0.2)	<b>1.3</b> (0.2)	<b>0.7</b> (0.2)	<b>-0.8</b> (0.2)
Italy	<b>1.9</b> (0.2)	<b>0.7</b> (0.3)	<b>1.3</b> (0.2)	<b>1.7</b> (0.2)	<b>0.4</b> (0.2)	<b>-0.6</b> (0.2)
Latvia <sup>1</sup>	<b>2.5</b> (0.2)	<b>1.0</b> (0.3)	<b>1.2</b> (0.2)	<b>1.3</b> (0.2)	0.1 (0.2)	-0.4 (0.2)
Lithuania	<b>2.1</b> (0.2)	<b>0.8</b> (0.3)	<b>1.2</b> (0.2)	<b>1.3</b> (0.3)	0.5 (0.3)	-0.4 (0.3)
Malta	<b>3.1</b> (0.2)	<b>1.4</b> (0.2)	<b>0.8</b> (0.2)	<b>2.2</b> (0.3)	0.2 (0.3)	<b>-1.2</b> (0.2)
Mexico	<b>2.5</b> (0.2)	<b>0.6</b> (0.2)	<b>2.1</b> (0.2)	<b>2.7</b> (0.2)	-0.3 (0.2)	<b>-0.5</b> (0.2)
Netherlands†	<b>2.0</b> (0.2)	<b>1.3</b> (0.3)	<b>0.8</b> (0.2)	<b>1.5</b> (0.2)	0.3 (0.2)	<b>-0.9</b> (0.2)
Norway (9) <sup>1</sup>	<b>2.1</b> (0.2)	<b>1.1</b> (0.2)	<b>0.5</b> (0.1)	<b>1.4</b> (0.2)	<b>0.3</b> (0.2)	<b>-0.6</b> (0.2)
Peru	<b>2.1</b> (0.2)	<b>0.6</b> (0.2)	<b>1.6</b> (0.2)	<b>1.6</b> (0.2)	0.0 (0.2)	-0.1 (0.2)
Russian Federation	<b>3.5</b> (0.4)	<b>0.8</b> (0.2)	<b>1.2</b> (0.2)	<b>2.1</b> (0.2)	0.3 (0.3)	<b>-1.0</b> (0.2)
Slovenia	<b>1.6</b> (0.2)	<b>0.9</b> (0.3)	<b>0.9</b> (0.2)	<b>1.4</b> (0.2)	0.3 (0.2)	-0.4 (0.2)
Sweden <sup>1</sup>	<b>1.9</b> (0.2)	<b>1.4</b> (0.3)	<b>0.7</b> (0.2)	<b>1.3</b> (0.3)	0.4 (0.3)	<b>-0.7</b> (0.2)
<b>ICCS 2016 average</b>	<b>2.2</b> (0.0)	<b>0.9</b> (0.1)	<b>1.1</b> (0.0)	<b>1.7</b> (0.1)	<b>0.2</b> (0.0)	<b>-0.6</b> (0.0)

\* Statistically significant (p<0.05) coefficients in **bold**.

() Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

† Met guidelines for sampling participation rates only after replacement schools were included.

<sup>1</sup> National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for less than 70% of students.

**Table 15** Multiple regression coefficients for students' willingness to participate at school (resources and recruitment factors)

Country	Resource-related variables				Recruitment-related variables		
	Gender (female)	Indicator of socioeconomic background	Parental interest in political and social issues	Civic knowledge	Participation in community groups or organisations	Participation in civic activities at school	Civic engagement with social media
Belgium (Flemish)	<b>1.0</b> (0.4)	0.0 (0.2)	0.1 (0.3)	-0.2 (0.2)	0.2 (0.2)	<b>2.4</b> (0.2)	<b>0.5</b> (0.2)
Bulgaria	<b>1.3</b> (0.4)	-0.3 (0.2)	0.1 (0.3)	0.3 (0.3)	<b>1.0</b> (0.2)	<b>2.0</b> (0.2)	0.3 (0.2)
Chile	<b>1.0</b> (0.3)	0.0 (0.2)	0.2 (0.2)	0.0 (0.2)	<b>0.5</b> (0.2)	<b>2.3</b> (0.2)	0.3 (0.2)
Chinese Taipei	<b>0.6</b> (0.2)	<b>0.3</b> (0.1)	-0.4 (0.2)	<b>0.5</b> (0.2)	<b>0.3</b> (0.1)	<b>1.8</b> (0.1)	<b>0.7</b> (0.1)
Colombia	<b>0.7</b> (0.3)	-0.1 (0.1)	0.0 (0.1)	-0.3 (0.2)	<b>0.3</b> (0.1)	<b>1.4</b> (0.2)	<b>0.3</b> (0.1)
Croatia	<b>0.7</b> (0.3)	-0.2 (0.2)	0.3 (0.3)	0.1 (0.2)	0.2 (0.2)	<b>2.0</b> (0.2)	0.1 (0.2)
Denmark†	<b>0.7</b> (0.3)	<b>-0.3</b> (0.1)	-0.3 (0.2)	<b>-0.6</b> (0.2)	<b>0.5</b> (0.1)	<b>2.6</b> (0.2)	0.2 (0.1)
Dominican Republic (r)	<b>0.9</b> (0.3)	0.0 (0.2)	0.0 (0.2)	0.3 (0.3)	<b>0.8</b> (0.2)	<b>0.6</b> (0.2)	0.3 (0.2)
Estonia <sup>‡</sup>	<b>1.6</b> (0.3)	<b>-0.4</b> (0.2)	-0.3 (0.3)	0.1 (0.2)	<b>0.6</b> (0.2)	<b>2.9</b> (0.2)	0.0 (0.2)
Finland	<b>1.9</b> (0.3)	-0.1 (0.1)	-0.2 (0.3)	<b>-0.4</b> (0.2)	<b>0.3</b> (0.2)	<b>3.1</b> (0.2)	0.2 (0.2)
Italy	<b>1.8</b> (0.3)	0.0 (0.1)	0.3 (0.2)	<b>0.6</b> (0.2)	<b>0.6</b> (0.2)	<b>1.3</b> (0.2)	<b>0.4</b> (0.2)
Latvia <sup>‡</sup>	<b>2.1</b> (0.3)	-0.1 (0.2)	-0.3 (0.3)	-0.2 (0.2)	0.2 (0.2)	<b>2.7</b> (0.2)	0.3 (0.2)
Lithuania	<b>2.0</b> (0.3)	-0.2 (0.2)	0.0 (0.2)	0.0 (0.2)	<b>0.5</b> (0.2)	<b>2.2</b> (0.3)	<b>0.4</b> (0.2)
Malta	-0.5 (0.3)	-0.1 (0.2)	-0.3 (0.2)	-0.2 (0.2)	<b>0.4</b> (0.2)	<b>2.6</b> (0.2)	0.0 (0.2)
Mexico	0.2 (0.2)	-0.2 (0.1)	-0.2 (0.2)	0.3 (0.2)	0.3 (0.2)	<b>1.5</b> (0.2)	<b>0.3</b> (0.2)
Netherlands†	<b>1.3</b> (0.5)	0.3 (0.2)	-0.1 (0.3)	0.1 (0.3)	<b>0.7</b> (0.2)	<b>2.6</b> (0.2)	<b>0.4</b> (0.2)
Norway (9) <sup>‡</sup>	<b>1.2</b> (0.3)	<b>-0.3</b> (0.1)	<b>0.4</b> (0.2)	<b>-0.6</b> (0.2)	<b>0.6</b> (0.1)	<b>2.5</b> (0.2)	<b>0.4</b> (0.1)
Peru	<b>0.7</b> (0.3)	-0.1 (0.1)	0.1 (0.2)	0.2 (0.2)	0.0 (0.1)	<b>1.4</b> (0.1)	<b>0.4</b> (0.1)
Russian Federation	<b>2.9</b> (0.3)	-0.2 (0.2)	0.1 (0.3)	0.0 (0.2)	0.3 (0.2)	<b>2.5</b> (0.2)	0.2 (0.1)
Slovenia	<b>0.8</b> (0.3)	-0.1 (0.2)	-0.4 (0.2)	0.3 (0.2)	<b>0.8</b> (0.2)	<b>2.2</b> (0.2)	<b>0.4</b> (0.2)
Sweden <sup>‡</sup>	0.6 (0.3)	<b>-0.6</b> (0.2)	-0.2 (0.2)	<b>-0.6</b> (0.2)	<b>0.4</b> (0.2)	<b>2.9</b> (0.2)	-0.1 (0.2)
ICCS 2016 average	<b>1.1</b> (0.1)	<b>-0.1</b> (0.0)	0.0 (0.1)	0.0 (0.0)	<b>0.4</b> (0.0)	<b>2.1</b> (0.0)	<b>0.3</b> (0.0)

\* Statistically significant ( $p < 0.05$ ) coefficients in **bold**.

( ) Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

† Met guidelines for sampling participation rates only after replacement schools were included.

‡ National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for less than 70% of students.

**Table 16** Multiple regression coefficients for students' willingness to participate at school (psychological factors and value perceptions)

Country	Variables related to psychological engagement			Citizenship values		
	Citizenship self-efficacy	Interest in political and social issues	Trust in civic institutions	Importance of conventional citizenship	Importance of social movement related citizenship	Importance of responsible citizenship
Belgium (Flemish)	<b>3.5</b> (0.3)	<b>0.9</b> (0.3)	0.3 (0.2)	<b>0.6</b> (0.2)	<b>0.5</b> (0.2)	0.1 (0.2)
Bulgaria	<b>3.5</b> (0.3)	0.3 (0.2)	<b>1.0</b> (0.3)	<b>0.8</b> (0.3)	0.4 (0.3)	<b>0.9</b> (0.3)
Chile	<b>4.3</b> (0.2)	0.3 (0.3)	<b>0.8</b> (0.2)	<b>1.0</b> (0.3)	0.2 (0.2)	<b>0.9</b> (0.3)
Chinese Taipei	<b>2.3</b> (0.2)	0.2 (0.2)	<b>0.5</b> (0.1)	<b>0.8</b> (0.2)	<b>0.6</b> (0.2)	<b>0.3</b> (0.2)
Colombia	<b>3.8</b> (0.2)	<b>0.6</b> (0.2)	<b>0.8</b> (0.2)	<b>1.2</b> (0.2)	<b>0.5</b> (0.1)	<b>0.4</b> (0.2)
Croatia	<b>3.5</b> (0.2)	<b>0.6</b> (0.2)	<b>0.9</b> (0.2)	<b>0.5</b> (0.2)	<b>0.6</b> (0.2)	-0.1 (0.2)
Denmark†	<b>2.9</b> (0.2)	<b>0.7</b> (0.2)	<b>0.5</b> (0.1)	0.2 (0.1)	<b>0.6</b> (0.1)	-0.1 (0.2)
Dominican Republic (r)	<b>3.0</b> (0.3)	0.0 (0.2)	<b>1.1</b> (0.3)	<b>1.2</b> (0.2)	<b>0.7</b> (0.3)	<b>0.5</b> (0.2)
Estonia <sup>1</sup>	<b>3.3</b> (0.2)	0.3 (0.3)	<b>0.4</b> (0.2)	<b>1.4</b> (0.3)	0.1 (0.2)	0.0 (0.2)
Finland	<b>3.7</b> (0.2)	-0.2 (0.3)	<b>0.4</b> (0.2)	<b>0.7</b> (0.2)	<b>0.4</b> (0.2)	-0.1 (0.2)
Italy	<b>3.6</b> (0.2)	-0.3 (0.2)	<b>0.8</b> (0.2)	<b>0.8</b> (0.2)	<b>0.6</b> (0.2)	-0.1 (0.2)
Latvia <sup>1</sup>	<b>3.6</b> (0.2)	0.2 (0.2)	<b>0.7</b> (0.2)	<b>0.8</b> (0.3)	0.4 (0.2)	0.1 (0.2)
Lithuania	<b>3.0</b> (0.3)	0.3 (0.2)	<b>0.8</b> (0.2)	<b>1.0</b> (0.2)	<b>0.6</b> (0.2)	0.0 (0.2)
Malta	<b>4.3</b> (0.2)	-0.1 (0.2)	<b>1.1</b> (0.2)	<b>0.7</b> (0.2)	<b>0.6</b> (0.2)	0.4 (0.2)
Mexico	<b>3.5</b> (0.2)	<b>0.6</b> (0.2)	<b>0.9</b> (0.2)	<b>0.9</b> (0.2)	0.3 (0.2)	<b>0.6</b> (0.2)
Netherlands†	<b>3.4</b> (0.3)	<b>0.8</b> (0.4)	<b>0.5</b> (0.2)	<b>0.9</b> (0.2)	0.3 (0.3)	-0.4 (0.3)
Norway (9) <sup>1</sup>	<b>3.2</b> (0.1)	<b>0.6</b> (0.2)	<b>0.4</b> (0.1)	<b>0.5</b> (0.2)	<b>0.5</b> (0.1)	0.2 (0.2)
Peru	<b>2.8</b> (0.1)	0.2 (0.2)	<b>0.4</b> (0.2)	<b>1.2</b> (0.2)	<b>0.5</b> (0.2)	<b>0.3</b> (0.2)
Russian Federation	<b>3.6</b> (0.3)	0.3 (0.3)	<b>1.0</b> (0.2)	<b>1.3</b> (0.3)	0.4 (0.3)	0.2 (0.2)
Slovenia	<b>3.4</b> (0.2)	0.5 (0.3)	<b>0.8</b> (0.2)	<b>0.7</b> (0.2)	0.3 (0.2)	0.3 (0.2)
Sweden <sup>1</sup>	<b>3.5</b> (0.2)	<b>1.0</b> (0.3)	<b>0.6</b> (0.2)	0.0 (0.2)	<b>0.9</b> (0.2)	0.0 (0.2)
<b>ICCS 2016 average</b>	<b>3.4</b> (0.0)	<b>0.4</b> (0.1)	<b>0.7</b> (0.0)	<b>0.8</b> (0.0)	<b>0.5</b> (0.0)	<b>0.2</b> (0.0)

\* Statistically significant ( $p < 0.05$ ) coefficients in **bold**.

() Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

† Met guidelines for sampling participation rates only after replacement schools were included.

<sup>1</sup> National Defined Population covers 90% to 95% of National Target Population

An "(r)" indicates that data are available for less than 70% of students.

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### Author contributions

The author (Wolfram Schulz) conducted all related tasks for this article.

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### Data availability

This research used public data files of ICCS from 21 participating countries used in this article, available in the IEA Data Repository.

### Declarations

#### Ethics approval and consent to participate

Not applicable.

#### Consent for publication

The author (Wolfram Schulz) provides consent for publication of this paper in the journal.

#### Competing interests

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