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Beyond the Curriculum: The Civic Engagement Gap among Sweden's Youth

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Abstract

An educational system has the important role to foster educational and occupational attainment, but also to create effective citizens. This study examines the case of students with lower civic engagement. Multilevel modeling is used in a nationally representative sample of 6870 13-14 year old Swedish students from ICCS (International Civic and Citizenship Education Study) data, over the years 2009, 2016, and 2022. In order to analyze if there is a differential effect of levels of socioeconomic status on students from a migratory background, as well as analyzing this relationship over time. The effect of potential civic compensatory factors is also examined in this paper. The results underscore a strong and persistent gap in civic engagement for students with a migratory background. Conversely, a strong and persistent positive SES gradient for native students. Further, a negative differential effect of SES is noted for migratory students as it relates to institutional trust. We find evidence of partial compensation of civic school participation for expected electoral participation. This paper expands the knowledge of the civic engagement gap and inequalities in civic education in Sweden by presenting unique insights from the latest iteration of ICCS data. Furthermore, the findings aim to inform Swedish educational policymakers to foster inclusive participation for all students.

Keywords: ICCS, IEA, Civic Engagement, Education, Openness of Classroom, Citizenship Self-Efficacy, School Participation, Institutional Trust, Electoral Participation, Civic Knowledge, Exclusion.

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1 Introduction

An ideal educational system develops a diverse body of students into active and informed citizens. Yet, it does not always operate in its intended egalitarian manner. Over the past decade, researchers have reached a concerning consensus: there is a persistent gap in civic engagement for students of a migratory background in Sweden (Barber, Torney-Purta, Wilkenfeld, & Ross, 2015; Abdelzadeh, Zetterberg, & Ekman, 2015; Brezicha & Leroux, 2023). We build on these papers by providing unique insights into how SES gradients manifest themselves for the civic outcomes of immigrant students compared to native students. Our findings reveal stark differences in SES gradients, notably in a negative gradient for students with a migratory background as it relates to institutional trust. We also contribute to the paper by Campbell (2008) by using his concepts of the Compensation Hypothesis. With it, we found evidence of partial compensation for civic school participation as it relates to expected electoral participation for students with lower SES. These results are found using a comprehensive 13-year ICCS (International Civic and Citizenship Education Study) dataset (2009-2022), including the newest iteration, making this one of the first papers to apply this data. Therefore, contributes new insights to the body of literature on youth civic engagement and the importance of education. Similarly, our findings can be used by Swedish educational policymakers to make informed decisions for future policies.

This paper analyses the nature of the relationship between rising inequalities and civic engagement in the Swedish context. Our research objective is constructed in three parts. Firstly, we will be analyzing if there is a differential effect of socioeconomic status on students from a migratory background as it relates to civic engagement. Secondly, we will analyze whether there are certain contextual civic factors that can compensate for the lower levels of civic engagement experienced by students from migratory backgrounds and lower levels of socioeconomic status. Lastly, provided a differential effect, we will analyze how this relationship has developed over time. These results are all within the context of the ICCS findings in Sweden from the years 2009, 2016, and 2022. ICCS is the largest survey dedicated specifically to youth civic engagement, and it released the results for the 2022 survey in November 2024. The benefits of this are twofold: we will be able to incorporate the most recent portrayal of youth civic engagement in our analysis while also being among the first to utilize the 2022 iteration within our analysis.

To find answers and more details on this pressing issue, we have molded our research design with the standard of ICCS research papers, using multilevel modeling (Raudenbush & Bryk, 2022). An important benefit of the ICCS dataset is that a holistic overview of a student's demographics, beliefs, values, and opinions can be extrapolated. This is done to achieve a comprehensive view of the factors impacting civic engagement on the individual level (within-school variation) and the school level (across-school variation). This allows us to minimize confounding factors by analyzing each level of variation separately. With comprehensive controls, year fixed effects, school fixed effects (within-variation), and sample weights on both levels of analysis, we aim to isolate the variation of our chosen independent variables and their relationship with civic engagement. The underlying assumption is that factors that may impact a student's civic engagement remain sufficiently consistent to analyze the effect of variables of interest. In total, this methodological strategy presents a robust framework for grasping this complex and multidimensional relationship between a student's demographics, surroundings, beliefs, attitudes, and their actual civic engagement. More details on our methodology, including specifications, intuition, and implementation, will be further discussed

in Section 5.

Before presenting the results of the differential effect of socioeconomic status on students from a migratory background, it is imperative to highlight the main effect of each variable of interest. Although the effect of across and within-variation analyses differed somewhat, migratory background was clear to predict lower levels of civic engagement. When controlling for school fixed effects and analyzing the student within the classroom, we found it to negatively predict civic engagement, most notably for institutional trust. While the individual effect was large, when allowing for school heterogeneity, the magnitude increased and was higher for both Civic Knowledge and Expected electoral participation. Yet, the takeaway was clear: non-native students are worse off when it comes to civic engagement. Contrarily, we found that higher socioeconomic status strongly predicts higher levels of civic engagement. School-level SES in the across-variation analysis was found to be a strong predictor of civic engagement. And often stronger in magnitude than the individual-level SES predictor from the within-variation analysis. This strengthened the findings of Damiani et al (2024), who underscore the importance of factors impacting civic engagement outside of the school environment. Similarly, it strengthens the findings of Abdelzadeh, Zetterberg, & Ekman (2015) that present the findings that exposure to higher quality institutions is related to higher institutional trust.

The positive SES gradient remained for migratory students only as it relates to civic knowledge, showing a uniform effect between native and non-native students. We found some evidence for a positive differential effect of SES on migratory students ' expected electoral participation. A statistically significant result of a very small magnitude. Analysing the differential effect on the mean of non-native students as well as the overall distance between their native peers, we find little external relevance to these findings. However, institutional trust presented an interesting negative differential effect for migratory students, with the results being most stark when looking at the impact of school-level SES. The contrast between a slightly positive SES gradient for Expected Electoral Participation and a negative SES gradient for Institutional Trust presents an interesting insight into the dynamics shaping civic engagement in Sweden. As will be discussed further in section 7, we hypothesize that this shines a light on the issue of exclusion for non-native students in Sweden. Students who feel excluded feel less trust in institutions and are thus less likely to participate in electoral events (Abdelzadeh, Zetterberg, and Ekman, 2015; Brezicha and Leroux, 2023).

Our second research question analyzed the impact of civic contextual factors occurring in school which may shape and have an impact on students' civic engagement. Our research found that openness of classroom, civic participation in school and citizenship self-efficacy all predict higher levels of civic engagement. Important as it strengthens findings from other ICCS-based research (Campbell, 2008; Manganelli, 2014; Godfrey & Grayman, 2014). More interesting however is how these factors interacted with the socioeconomic status as well as the migratory background of the student. We found some results suggesting partial compensation, mainly for individual level civic school participation on expected electoral participation. Moreover, some results indicated that higher levels of perceived openness in classrooms to be associated with lower institutional trust for migratory students. Although this was found with modest significance (p-value = 0.072), meaning cautious interpretation. Yet, this interestingly relates with relevant literature, specifically Campbell (2008) and a proposed acceleration effect for students with a stronger foundation in political efficacy and democratic knowledge, usually found in higher SES households. Lastly, we also found individual

citizenship self-efficacy to disproportionately benefit native students as it relates to civic knowledge, partially compensating but mostly widening the gap.

Our third research question explores how the civic engagement gap between native and migrant students has developed over time. Most importantly, we find that native students have exhibited higher levels of civic engagement throughout the duration of our data set. Dividing our baseline regression model into sections for 2009, 2016, and 2022, we find that the across-school SES gradient on migratory students for institutional trust has become increasingly negative over time. We attempt to contextualise this trend using Groglopo, Ahmadi, & Munobwa (2023), who analyzed the development of attitudes towards immigration in Sweden from 2005 to 2022. While this research offers an interesting comparison, we determine that most of the trends observed in Swedish student civic engagement are attributable to country-wide effects such as the pandemic.

The ICCS database has been used by many authors with the focus predominantly being on analyzing youths' civic engagement with differing explanatory variables and scopes of analysis. A common trend is to narrow the scope of analysis to one country to achieve a coherent grasp of the trends in that specific context (Mangianelli et al 2014, Damiani et al, 2024). Other than the summary report by the Swedish National Agency for Education, we have not identified a study conducted specifically for the Swedish context using the ICCS-dataset. This paper contributes to this body of literature but it also specifically elaborates on the findings of the Swedish National Agency for Education's report. Which calls for further and more thorough research on this topic. Consequently, we provide unique evidence, relevant for the body of ICCS-based literature as well as domestic policymakers and initiators. Some studies have of course covered the Swedish context in tandem with other contexts, but with this paper we will be the first to analyze if there is a differential effect of socioeconomic status on migratory students in Sweden using this dataset. As well as analyzing if civic contextual factors can compensate for lower levels of civic engagement.

Campbell (2008) carried out an analysis using CIVED-data (Predecessor of ICCS), seeking to examine whether the openness of classroom discussion can compensate for lower levels of civic engagement experienced by students from a lower socioeconomic status. This, being a paper of much inspiration which we will elaborate on quite extensively. Specifically, by adding more civic contextual factors of possible compensation, namely, citizenship self-efficacy and civic school participation. Similarly, we will broaden the hypothesis by extending it to another demographic: the migratory background of the student. A reasonable choice, seeing as the civic engagement is clear based on migratory background, too. Most variables were not evidenced to compensate for lower levels of civic engagement. Yet, evidence was found for partial compensation of civic participation in school for lower SES students. Thus contributing to the foundations of the Compensation Hypothesis outlined in Campbell (2008).

With a comprehensive dataset and robust methodological framework, this paper aims to be a guide for educational policymakers as well as initiators seeking to make an impact to ameliorate this pressing issue in Sweden. Civic engagement of the youth is crucial for their personal development and society's wellbeing (Damiani et al, 2024). The vast gap and inequality present in Sweden are alarming. It needs to be discussed and better understood for change to occur; this paper is a step in that direction.

2 Background

2.1 Swedish Context: Migration influx and Policy

Like many other European countries in recent times, Sweden has received a large influx of migration, most pronouncedly in 2015. In this year alone, Sweden received 163 000 refugees, with approximately 70 000 being minors under the age of 18 years (Bunar and Nilsson, 2017). Tighter broader controls and stricter admission policies saw the volume plummet the following year, although still being impactful, with approximately 30 000 refugees of which 10 000 children. Migration was of course not a new trend in 2015 as Sweden already has a multicultural society with approximately 1.78 million of the population being born abroad with approximately 536 000 more being second-generation immigrants whose both parents were born abroad, according to Statistics Sweden. As of July 2013, undocumented migrant children, as well as asylum-seeking students, and refugee students (with granted permanent residence) are all entitled to education, presenting Sweden with an overarching multicultural composition in its educational system (Bunar and Nilsson, 2017). Yet this has not been wholly smooth as challenges such as school segregation and a widening gap in academic and civic outcomes are present between non-native and native students. Some measures have been taken to combat this, one which took place in January of 2017 was a long-term investment in supporting municipalities to provide newly arrived students with education of high quality. The investment stretched from 2017 to 2025 with a large budget of 2,138 MSEK targeting areas such as language learning and study counsellors to aid in the necessary educational development (Bunar and Nilsson, 2017).

2.2 Swedish Context: Civic Engagement Policy

Civic Education in Sweden is varied and includes governmental policies as well as collaboration with agencies such as The National Board of Institutional Care (SIS) and The Swedish Agency for Youth and Civil Society (MUCF). Familiarizing students with democratic processes and values are embedded in the school curriculum through initiatives such as school councils and encouraging active student participation (Swedish National Agency for Education, 2025). Civic education itself is also a formal subject for students in grade 4-9 (10-15 year olds), thus teaching young students in Sweden about civic values and attitudes. The benefit of which can be seen with Sweden scoring among the highest in the ICCS's civic knowledge exam in each iteration. The issue however being that Sweden is one of the most unequal countries, having the biggest difference in results based on socioeconomic background along with Bulgaria and Slovakia (Swedish Agency for Education, 2024).

As of February 2024, a new initiative has been introduced to combat these disparities between groups, specifically between socioeconomic groups as well as between native and non-native students. The Swedish Agency for Education along with The Living History Forum introduced "The Democracy Ladder" (demokratistegen) to combat the growing disparities. It is a seven-step, online based initiative introduced to target issues such as racism, exclusion and foster trust and equality. Although, this is an optional initiative meaning it's up to individual schools to incorporate these changes.

2.3 Introduction to ICCS

Surveying 82,000 students and 40,000 teachers across 3,200 schools, the International Civic and Citizenship Education Study (ICCS) performed by the International Association for the Evaluation of Educational Achievement (IEA) is the world's largest international survey dedicated to assessing civic knowledge and attitude amongst adolescents (Afana et al., 2024). Developed from a previous IEA survey, the Civic Education Study (CIVED), the ICCS was initially implemented in 2009 with subsequent iterations in 2016 and 2022. The ICCS 2009 iteration expanded the scope of the CIVED as it placed "greater emphasis on participatory aspects of citizenship and expanded the measurement of reasoning and applying in the acquisition of civic knowledge and understanding" (Schulz et al., 2024). This shift in emphasis limits the possibilities for comparing the CIVED and ICCS across time, leading us to focus exclusively on the ICCS iterations. Sweden has participated in the ICCS in all iterations: 2009, 2016, and 2022.

2.4 Design and Implementation

The ICCS defines its target student population as "all students in Grade 8 (students approximately 14 years of age), provided that the average age of students in this grade was 13.5 years or above at the time of the assessment" (Afana et al., 2024). The threshold is specified at eighth grade as it represents the lower threshold for compulsory educational attainment internationally, thus ensuring that a broad majority of the sample is being assessed post receiving their countries mandated civic education. The teacher/principal population is defined as teachers and principals who were actively engaged in teaching the surveyed students during the year the test was administered. To enhance external validity, schools were chosen using a probability proportional to size framework, surveying larger schools at a higher rate to help ensure that the sample accurately represents the distribution of students within each country. Once the schools were selected, complete classes within the school were randomly selected alongside individual teachers to complete the ICCS survey. The study employs six instruments to assess civic education:

The international student test (ISA) – items measuring students' civic knowledge and ability to analyze and reason on topics related to civic and citizenship education (Afana et al., 2024).

The international student questionnaire (ISG) – items measuring student background variables, school contexts, and student perceptions and beliefs (Afana et al., 2024).

The teacher questionnaire (ITG) – information about teacher background variables and teachers' perceptions of factors related to the context of civic and citizenship education in their respective schools (Afana et al., 2024).

The school questionnaire (ICG) – captured school characteristics and school-level variables related to civic and citizenship participation as provided by principals (or designates) at sampled schools (Afana et al., 2024).

Regional questionnaires were also done in European and Latin American countries (Afana et al., 2024).

2.5 Theory and Hypotheses

The civic engagement gap is vast and plain to see, the question remains what can ameliorate this pressing issue? One such theory, the Compensation Hypothesis, was first discussed by Langton and Jennings (1968) and later further developed by Campbell (2008). The core question is: "Can effective civic education in school compensate for other civic disadvantages?". As our background has solidified, low SES adolescents have lower levels of civic engagement, just like students from a migratory background (although not as pronounced of a difference). The rationale of the Compensation Hypothesis as outlined by Campbell (2008) posits that explanatory civic variables such as an open classroom climate (OPDISC) have a larger impact on students with a lower SES. We will expand upon this theory, primarily by adding the categorical group of students with a migratory background. This is motivated by the observed gap in this group. Similarly, we will add the variables, CITEFF (Citizenship self-efficacy) and (SCHPART) school participation as explanatory variables for this hypothesis. This will add more dimensions to our explanatory variables which means more nuance in explaining this gap. Variable selection will be discussed further in Section 4, although what can be noted here is that both variables added here, can be shaped in the classroom (Sewell and St George, 1997). In conclusion, the Compensation Hypothesis will be used to examine if our chosen civic explanatory variables can compensate for the gaps in civic engagement experienced by students with lower SES and students from a migratory background.

3 Literature Review

3.1 Defining Civic Engagement

In order to grasp the importance of civic engagement, it is imperative to comprehend what the term encompasses. Adler and Goggin (2005) present the claim that there is not a single standard definition for what constitutes civic engagement. In order to provide insight into the different classifications of civic engagement, Adler and Goggin provide specific examples (community service, collective action, political involvement, social change) as well as broader definitions (activities that promote social capital or boost community engagement). Taking the varying, previous definitions into consideration Adler and Goggins propose the following, "civic engagement describes how an active citizen participates in the life of a community in order to improve conditions for others or to help shape the community's future". This definition allows for a more general approach, allowing researchers to consider the diverse set beliefs and actions that could be considered civic engagement.

Youniss, Bales, Christmas-Best, Diversi, McLaughlin, and Silbereisen (2002) bring to attention the purist argument that a more inclusive definition "muddies the boundary between clearly political behaviors such as voting, and less obvious political actions such as community service". Yet, Flanagan and Faison (2001) further advocate for a more encompassing definition implying that civic engagement "implies a feeling that one matters, has a voice and a stake in public affairs, and thus wants to be a contributing member of the community".

Taking this into consideration, numerous papers using the ICCS database have utilized what could be described as a multi-dimensional approach to civic engagement. A strong example of this is observed in Damiani et al. (2024) where the researchers expand civic engagement to include "behavioural and attitudinal components that are related to diverse situations both inside and

outside school". The inclusion of attitude components is particularly necessary when considering youth civic engagement, seeing as youths may not have had the opportunity or necessary resources to engage in civically engaged behavior.

3.2 SES and Immigration status on Civic Engagement

When analyzing the potential implications and interactions of SES and immigration status on civic engagement, we will focus on studies that specifically relate to the Swedish and Nordic context. There is a large body of literature and studies focusing on this topic, especially in other European countries and the United States. Although, a strong possibility is that governmental and cultural differences in distant countries would induce different results than what is observable in Sweden. Hence, we will focus on studies based in Sweden and the other Scandinavian countries to ensure our discussed literature is as relevant as possible.

3.2.1 SES

Zhu and Chiu (2020) used the 2016 ICCS iteration to identify the mechanisms driving the differences between immigrant and native born students in Denmark. Specifically, Zhu and Chiu (2020) analyzed this gap via the Opportunity-Propensity framework, which "assumes that high achievement is a function of three categories of factors: (a) opportunity factors (e.g., coursework), (b) propensity factors (e.g., prerequisite skills, motivation), and (c) distal factors (e.g., SES)" (Brynes and Miller 2007). Looking across these factors, Zhu and Chiu (2020) observed that the total effect of native family status on civic knowledge was positive and significant and that it operated mainly through family SES. Zhu and Chiu (2020) also displayed a positive linkage of higher family SES with more civic participation at school as well as a perception of more open classroom environments.

These results support the assertion that immigrant students have lower levels of civic engagement largely due to coming from a lower SES opposed to linguistic or cultural barriers. This relationship between SES and civic engagement is further explained by Chiu and Khoo (2005) who describe how "parents with more human capital have more education and skills, which they can use to teach their children cognitive skills, social skills, and social and cultural norms more effectively". While these results hold similarities and relevance to our data, there are key differences between Sweden and Denmark that need to be considered. Specifically, Zhu and Chiu (2020) emphasize that Denmark has "few immigrants, high public education spending and policies that support the education of immigrant students". Sweden has similar educational spending as Denmark but substantially more immigrants. Meaning there is not the same level of spending per immigrant student (Brezicha and Leroux 2023).

3.2.2 Exclusion

Alongside family SES, feelings of exclusion have been identified as potential inhibitors of civic engagement among immigrant students. Brezicha and Leroux (2023) use the 2009 iteration of the ICCS to study this possibility, examining how feeling like an outsider in school impacted political trust across schools in Sweden, Norway, Denmark, and Finland. It is important to emphasize the importance of political trust and its inclusion in our multidimensional definition of civic engagement

(Damiani et al., 2024). Focusing on Sweden, Brezicha and Leroux (2023) found that "feeling like an outsider was statistically significant and negatively related to students' feelings of trust in political institutions". Brezicha and Leroux (2023) take this to indicate that, since school is the first government institution many students interact with, feeling excluded at school leads to less trust in political institutions in general. Brezicha and Leroux (2023) also observe the importance of SES in Sweden, finding that "families' occupational prestige as well as students' expected years of education were statistically significant and positively related to students' feelings of political trust". This study echoes the sentiment found in Zhu and Chiu (2020) that SES contributes significantly to civic engagement, but also emphasizes the negative effect of exclusion in the Swedish context.

3.2.3 Perceived Fairness

While Brezicha and Leroux (2023) focus on the impact of exclusion on political trust, Abdelzadeh, Zetterberg, & Ekman (2015) analyse the effect of perception of fair institutional treatment on political trust. Using a unique panel data of approximately 1500 Swedish high school students (ages ranging from 13 to 17) they analyze how fair students perceive their interactions with teachers to be. Similar to Brezicha and Leroux (2023), Abdelzadeh, Zetterberg, & Ekman (2015) use the theoretical basis proposed by Lipsky (1980) that teachers are "street level bureaucrats" and therefore the first formative experience many students have with government authority. Abdelzadeh, Zetterberg, & Ekman (2015) explore this via a three question survey questioning students if they thought their teachers were unbiased, adequately took into account student opinion, and acting in the best interest of the students. Using this strategy, Abdelzadeh, Zetterberg, & Ekman (2015) observe that students "who perceive that they are being fairly treated by an authority are likely to trust political institutions to a greater extent than others".

Unfortunately, Abdelzadeh, Zetterberg, & Ekman (2015) do not describe if there are differing levels of political trust across SES or immigration status. Only that 'gender, age and immigrant status do not moderate cross-lagged paths'. So, while this implies that immigrant students have a similar relationship between trust and perceived fairness as native students, Abdelzadeh, Zetterberg, & Ekman (2015) do not directly specify if immigrant students tend to perceive lower levels of fairness and hence have lower institutional trust.

3.2.4 Cultural and Linguistic Barriers

Finally, it is essential to consider the role of language and cultural differences in contributing to the civic engagement gap between native and non-native students. Barber, Torney-Purta, Wilkenfeld, and Ross (2015) explores this in the Swedish context. Using the IEA Civic Education Study of 1999, Barber et al. (2015) analyze how language spoken at home and views on gender equality influence civic knowledge and attitudes. Specifically, finding that while immigrant students tend to discuss politics more often with their parents (a behavior associated with higher civic knowledge), the linguistic divide of speaking less Swedish outweighs the benefits of the increased level of discussion. Barber et al. (2015) also observed that immigrant students held significantly less progressive views regarding gender equality compared to those of Swedish origin. This is relatively surprising considering Sweden's centralized education system's "long-standing focus on imparting gender equality norms to their nation's immigrants" (Barber et al., 2015). These results indicate

a society potentially fragmented by language, leading to dissimilar cultural attitudes and levels of civic participation. While cultural differences and linguistic barriers are key to consider, it is imperative to note that this dataset was constructed in 1999. Therefore, it is not likely to be representative of Swedish students today or over the last decade.

4 Data

4.1 Data Cleaning

As we are focusing on civic education as it pertains to Sweden, we extracted only the data files related to the surveys conducted in Sweden. Further, we deemed the ISG [1] and ICG[2] files to be the only files relevant to our methodology. This is a result of the ISG containing PV1CIV-PV5CIV which indicate plausible values of the students' result on the ISA[3]. Additionally, we did not utilize the ITG [4] as "student and teacher data must not be merged directly because these two groups constitute separate target populations" (Afana et al., 2024). We merged the ICG and ISG data utilizing a many to one merge technique, using the specific school IDs as a key. This in effect provided us with year specific data sets in which the student's background, civic knowledge, and civic engagement variables were matched with the school wide and community level. The latter variables being derived from the questionnaire the principal of their respective school completed. We then created data frames consisting of the variables key for the analysis. We then merged the respective 2009, 2016, and 2022 data sets, providing us with a raw data set containing 9,991 students across 332 schools.

Within this data set, only 264 of the 332 provided schools had the ICG section completed whereas the other 68 did not have any data for this section. In these situations the principal declined to or was not able to complete the questionnaire, providing no ICG results for the school. Seeing as the entire ICG section was incomplete we could not impute these results and hence decided to drop the 68 schools alongside the corresponding 2,029 students who attended them. While this is a substantial data loss, the school level variables provided by the ICG are crucial to our analysis and therefore we needed to ensure that each analyzed student's principal had completed the ICG. Further, we deemed it necessary to remove students who were missing results across key background and civic engagement variables. Seeing as a vast majority of missing data at this point was across students' migratory status, we opted not to impute as to avoid biasing the comparisons between students who had a migratory background and those who did not. After cleaning, our dataset spanned across 2009, 2016, and 2022, containing 6,870 students and 264 schools.

4.2 Civic Engagement and Civic Knowledge Results

The ICCS scales student civic knowledge results extensively in order to create results that are comparable across different participating countries and time periods. For questions with a single correct answer, the Rasch Model is used to predict whether or not the student answered correctly with variables student ability (θ_n) and the difficulty level of the question (δ_i).

$$P_i(\theta_n) = \frac{\exp(\theta_n - \delta_i)}{1 + \exp(\theta_n - \delta_i)} \tag{1}$$

(Rasch, 1960)

For items that do not have mutually exclusive right and wrong answers, a Partial Credit Model is used to predict how many of the possible points the student will receive using the same variables as

[1]The international student questionnaire
[2]The international school questionnaire
[3]The international student test
[4]The international teacher questionnaire

the Rasch model with the addition of τ_{ik} which represents the difficulty of moving from one score to the next.

$$P_i(\theta_n) = \frac{\exp\left(\sum_{k=0}^{x}(\theta_n - \delta_i + \tau_{ik})\right)}{\sum_{h=0}^{m_i}\exp\left(\sum_{k=0}^{h}(\theta_n - \delta_i + \tau_{ik})\right)}, \quad x_i = 1, 2, \ldots, m_i \tag{2}$$

(Masters, 1982)

After applying the above IRT methods, the results are then standardized to the 2009 scale using mean 500 and standard deviation 100 ensuring that results can be compared across years.

$$\hat{\theta}'_n = 500 + 100\left(\frac{\hat{\theta}^{09}_n - \bar{\theta}}{\sigma_\theta}\right) \tag{3}$$

(Afana et al., 2024)

This scaling provides us with five possible values of a student's civic knowledge (PV1CIV - PV5CIV) which account for the questionnaire's inherent measurement uncertainty. We intend to focus on the lower bound of the plausible values of our analysis (PV1CIV) in order to capture the intended mitigation of uncertainty while simplifying the interpretability of the results. A similar partial credit is applied to the Likert items, using the students' responses across the beliefs and attitudes section to assign them a numeric score that can be compared across iterations. While PV1CIV is scaled with a mean of 500 and a standard deviation of 100, the attitude variables are scaled with a mean of 50 and a standard deviation of 10. This means that when comparing PV1CIV to the other variables, it is essential to remember that they are on different scales and that PV1CIV is the only assessment variable, measuring knowledge, not attitudes.

4.3 Outcome Variable Selection

Similar to the definition used by Damiani et al. (2024) and Manganelli et al. (2015) we will be defining civic engagement in multiple dimensions. To measure civic engagement we will be focusing on civic attitude, behavioral intentions towards future civic actions, and participation in civic-related activities inside and outside of school. We will also analyze civic engagement using civic knowledge, which is in line with the definition of civic engagement used by Wilkenfeld and Torney-purta (2012). Thus, there are papers that focus specifically on voting but we want to capture multiple dimensions and indicators of civic engagement in adolescents to get a clear insight into their civic development.

ELECPART - Students expected answers regarding the likelihood that they would vote in local and national elections and get information about candidates before voting (three items) (Afana et al., 2024).[5]

INTRUST - measuring students' trust in civic institutions, namely the local government of the students' town or city; courts of justice; the police; political parties; national parliament on a four-point Likert scale with the responses and scores completely (3), quite a lot (2), a little (1), not at all (0)(Afana et al., 2024).[6]

[5]Please view Table 12 in Appendix 9.0.1 for full list of items and values.
[6]Please view Table 13 in Appendix 9.0.1 for full list of items and values.

PVCIV - International civic knowledge scale, the ICCS civic knowledge reporting scale was developed in 2009, and the Rasch model (Rasch, 1960) was used to accomplish this work. The scale has a mean (the average score of countries participating in ICCS 2009) of 500 and a standard deviation of 100 for equally weighted national samples (Afana et al., 2024).

4.4 Interaction and Control Variable Selection

In selecting the remaining variables, we isolated variables relevant to understanding the student's background, socioeconomic status, and individual characteristics/tendencies. To portray student background, we used variables pertaining to their socioeconomic status, expected years of education, migratory status, and gender. Specifically, we utilized the National Index of Socioeconomic Background, a composite variable consisting of the student's parents' educational attainment, parents' occupation, and home possession to serve as a proxy for SES. [7] For immigration status, we created a dummy variable that identifies students who are either first-generation immigrants or born outside of Sweden as having a migratory background, whereas native students do not. We use a standard dummy variable presented within the ICCS to identify gender. In order to evaluate the level of motivation and pedagogical experiences of the individual students, we also include variables measuring how school participation, perceived civic efficacy (to what extent do students deem themselves capable of understanding and engaging with civic issues), and how comfortable the student feels voicing their opinions in class. These variables will be further discussed in the ensuing section, as their roles will also be analyzed as potential compensatory factors. We also created a dummy variable for expected educational attainment, differentiating between students who intend to complete tertiary or university education after secondary education and those who do not.

In terms of school level control variables, we utilize two PCA indexes pertaining to available community resources and social tensions within the community. We would have liked to control for more school specific characteristics however a majority of these variables were restricted in order to preserve school anonymity.

4.5 Compensation Hypothesis: Variable Selection

The variables used to analyze the concepts of The Compensation Hypothesis were Openness of Classroom Discussion (OPDISC), Citizenship Self-Efficacy (CITEFF) and Civic Participation in School (SCHPART).

OPDISC measures students' perceptions of openness in the classroom when discussing political or social issues. Assessed with a scale derived from six items representing student responses to the frequency of how often things happened in their classroom which indicated openness. For instance statements such as "Teachers encourage students to make up their own mind" and "Students express opinions in class even when their opinions are different from most of the other students". [8] The most frequently cited method of civic learning is an open classroom climate (Hoskins and Janmaat 2019). It is an important variable used in the analysis since previous research has demonstrated its effectiveness in enhancing political and civic engagement (Campbell, 2008; Torney-Purta, 2002;

[7] Please view Table 10 in Appendix 9.01 for a complete list of items and values.
[8] Please view Table 14 in Appendix 9.0.1 for a complete list of items and values

Finkel and Ernst, 2005). Notably, it is also the main variable used in Campbell's paper regarding the Compensation Hypothesis, where it was found to partially compensate for lower levels of civic engagement experienced by students from a lower socioeconomic background.

SCHPART was derived from seven items. The prompt asks "if the student has done any of the following activities?" to which seven items measure their civic participation, including voting, becoming a candidate in class/school elections and active participation in organized debates, among others.[9]Similar to the motivation behind the choice of OPDISC, this variable was chosen due to its proven effectiveness in prior research as it regards increasing civic engagement (Hoskins and Janmaat 2019). Further, it has been shown to provide greater awareness of issues in communities as well as having sustainable effects on voting (Keating and Janmaat 2016). Lastly, indirect effects of enhancing civic competence have also been shown (Beck and Jennings 1982). Thus, providing solid motivation, specifically as it relates to our outcome variables covering aspects of trust, electoral participation and civic knowledge.

CITEFF was derived from seven items which analyze the student's beliefs in how well they would do in civic and political activities. It includes seven statements from the prompt: "How well do you think you would do in the following activities?". With activities such as "follow a debate about a controversial issue" and "argue your point of view about a controversial political or social issue"..[10] CITEFF was chosen with similar rationale as the prior two variables, prior research has found to positively predict civic engagement (Mangianelli et al., 2014; Damiani et al., 2024). In contrast to the two prior variables, CITEFF is a measure of a student's belief in themselves as a citizen, providing an important civic element to the analysis.

4.6 Inconsistencies & Final Notes

When selecting our variables, we utilized a criteria that prioritized variables that were relevant to our analysis and consistent from 2009 to 2022. Fortunately, a vast majority of ICCS variables have been standardized for comparison between years, however some variables contained subtle differences across iterations prompting intervention. Any variable containing deviations was standardized to the 2022 scale to ensure consistent measurements across years.

Also, it is important to draw attention to the fact Sweden had an exclusion rate of above five percent in each of the three iterations. The ICCS recommends that countries do not exceed the 5 percent threshold in order to preserve the external validity of the results. The exclusion criteria in Sweden includes very small schools, international schools, special needs schools, and international schools (Afana et al., 2024).

Further, all surveys were submitted prior to the invasion of Ukraine meaning any changes in civic attitudes stemming from this would not be present within our data.

[9]Please view Table 16 in Appendix 9.0.1 for a complete list of items

[10]Please view Table 15 in Appendix 9.0.1 for a complete list of items and values for these variables

4.7 Summmary Statistics

Table 1: Mean and SD of Civic Variables of Interest

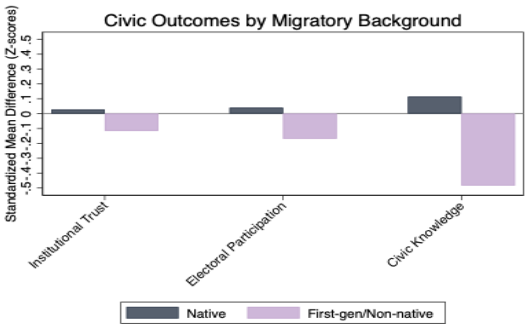
Category	ELECPART	PV1CIV	INTRUST	CITEFF	OPDISC	SCHPART	N
Gender							
Boys	50.68 (9.36)	556.56 (103.60)	53.28 (10.47)	50.52 (11.69)	50.51 (10.82)	50.93 (9.63)	3,375
Girls	52.19 (8.52)	582.94 (99.39)	53.09 (8.44)	51.05 (10.36)	53.10 (9.24)	52.11 (8.76)	3,495
Immigration Status							
Native	51.81 (8.82)	581.70 (99.20)	53.44 (9.31)	50.39 (10.89)	51.66 (9.95)	51.43 (9.02)	5,556
Non-Native	49.93 (9.45)	520.40 (100.52)	52.08 (10.12)	52.48 (11.50)	52.56 (10.84)	51.93 (10.00)	1,314
SES Quartiles							
Lowest 25%	48.84 (9.35)	524.56 (96.18)	51.91 (10.31)	49.12 (11.37)	50.82 (10.08)	49.81 (9.25)	1,718
Lower Middle 25%	50.34 (9.02)	554.99 (96.49)	52.71 (9.42)	49.97 (10.99)	51.58 (10.19)	51.11 (9.53)	1,717
Upper Middle 25%	52.38 (8.51)	587.03 (95.75)	54.01 (8.98)	51.09 (10.69)	52.21 (10.15)	52.30 (8.90)	1,718
Highest 25%	54.24 (8.02)	613.34 (98.56)	54.10 (9.02)	52.97 (10.73)	52.70 (10.01)	52.89 (8.87)	1,717
Total	51.45 (8.97)	569.98 (102.33)	53.18 (9.49)	50.79 (11.04)	51.83 (10.13)	51.53 (9.22)	6,870

Note: The table shows means and standard deviations (in parentheses) for each civic variable of interest by the categories: gender, immigration status, and SES quartiles. The sample spans 13 years (2009–2022) and includes 6,870 students. These summary statistics have been compiled using our pooled dataset from the ICCS's surveys in Sweden from the iterations, 2009, 2016 and 2022.
Standard deviations are presented in parentheses next to the means.

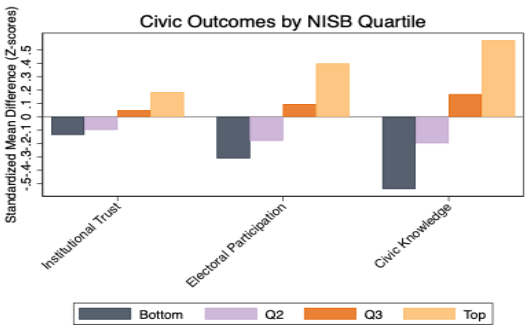
Table 1 shows the mean and standard deviation of the civic variables of interest for our analysis. The first three columns are the values for our aspects of civic engagement, our dependent variable in the upcoming analysis. The remaining three columns are the variables used for our compensation hypothesis analysis. Which will be used as potential compensatory factors for lower levels of civic engagement. We have shown the values of these civic variables by the categorical variables of interest and also gender. Underscoring a gender gap in civic engagement, conveying its importance as a control variable for our analysis.

Figure 1: Civic outcomes and explanatory variables by migratory background and SES

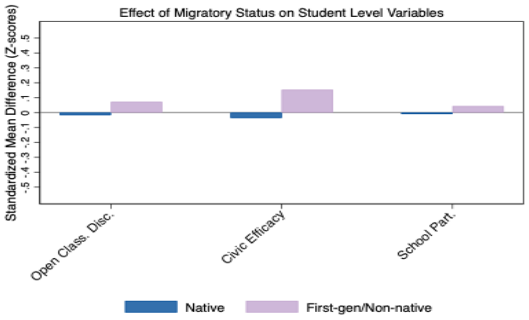
Panel A: Civic Engagement by Migratory Background



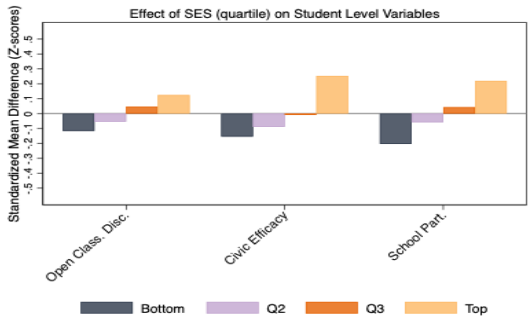
Panel B: Civic Engagement by SES Quartiles (NISB)



Panel C: Explanatory Civic Variables by Migratory Background



Panel D: Explanatory Civic Variables by SES Quartiles (NISB)



Note: Bars reflect standardized mean differences (Z-scores) in civic outcomes across subgroups. Data source: ICCS 2009, 2016, and 2022

Across each indicator variable, students with a higher NISB (our proxy for SES) score higher in terms of civic engagement and student level perception/experience. Contrarily, students with a migratory background score lower across the civic outcome variables, they perform better across the student perception/experience variables. This suggests a nuanced and at times diverging relationship between migratory status and SES when it comes to influencing youth civic engagement.

5 Methodology

This section presents our proposed empirical strategy and how the data described in Section 4 were used to answer the following research questions.

1.) *Is there a differential effect of SES on students from a migratory background as it relates to civic engagement?*

2.) *Can certain contextual civic factors (citizenship self-efficacy, civic school participation, and openness of classroom discussion) compensate for lower levels of civic engagement experienced by students from lower levels of SES and students from migratory backgrounds?*

3.) *If a differential effect of SES on students from a migratory background exists, has this relationship become more pronounced over time?*

In the aim of making inferences on civic engagement based on the socioeconomic and migratory background of a student, there will naturally be the risk of unobserved correlated factors confounding the results. This is mainly due to the fact that civic engagement is a construct created through a multitude of contexts, as discussed by Wilkenfeld and Torney-Purta (2012). Thus, as argued by many articles working with ICCS data, there may be unobserved factors separate from the school environment shaping civic engagement that are outside the scope of the ICCS surveys. Including, media usage, family and peer environment, values, and topical discussions. Such variables were either nonexistent in an ICCS-dataset iteration or unavailable for this analysis due to inconsistencies between datasets. Naturally, other factors may be hindrances in achieving valid results; these will be discussed in more detail in Subsection (5.4). In this section, we will demonstrate how we aim to capture internally valid results to answer our aforementioned research questions.

5.1 Intuition of Identification Strategy

In accordance with the standard of ICCS-based research papers, we will be using multilevel modeling to estimate variation in civic engagement within and across schools (Raudenbush & Bryk, 2022). This is a fitting approach, given that students were nested within classrooms randomly selected within schools (Schulz et al., 2024). However, this poses an issue, as we cannot conclude that all students are independent of one another due to the model including aggregate measures that, by design, are the same for every student within a classroom (Campbell, 2008). Furthermore, due to the stratified probability sample design of ICCS, we will run the following models with robust standard errors clustered at the school level to ensure correct estimates by analyzing students nested within schools. Thus, we estimate civic engagement as a function of both individual and group-level (school-level) predictors. On the first (individual) level, we model school fixed effects to account for unobserved heterogeneity between schools. This assumption is relaxed in the second (school) level, where we allow school heterogeneity to vary randomly.

The overarching purpose of this identification strategy is to achieve a holistic overview of the civic engagement gap. To accomplish this, we aim to understand the individual's traits and demographic backgrounds and how they predict their civic engagement. Similarly, we strive to capture variation

through an overview of broader aspects that are not measurable through students' perceptions at the individual level. This will predominantly be school averages of SES, civic contextual variables of interest (OPDISC, CITEFF, SCHPART), as well as broader aspects such as tension and resources in the community. Thus, we measure the effect of a student's idiosyncratic traits and demographics along with the school's characteristics and trends, potentially predicting civic engagement. Consequently, our analysis will be two-fold, with two separate groups of specifications for within and across variation. The specifications will be presented and discussed in more detail in the following two sections. However, one consistent feature in all specifications, except for analyzing the trend over time in research question three, is the usage of year-fixed effects. It must be duly noted that our data is not true panel data in the sense that we are not looking at the same cohorts over time. While they are nationally representative samples, we do not aim to control for such time-invariant factors as they pertain to the students. Instead, we aim to control for unobserved time-specific shocks potentially influencing civic engagement. These include macro-level trends such as the rapid increase of media usage, or shocks like major political/civic events in the past decade, likely to impact civic engagement. Such events will invariably influence public discourse to a great extent as it relates to contemporary civic and political topics. As such, fixed effects are used to control for exogenous trends potentially influencing civic engagement. The underlying assumption is that contexts that shape a student's civic engagement (for instance, media usage, ethical or moral beliefs, and cultural values) are held sufficiently consistent across the sample. This is due to those unobservable factors either being time-invariant, sufficiently captured by our controls, or fixed effects. Making students comparable with the only changing variables being those of key interest for the aforementioned research questions.

In order to obtain stable estimates that accurately represent our collected sample, it was necessary to use sampling weights to account for the three-stage probability sample design. This is the standard approach outlined in the recommendations by the IEA Data Processing and Research Center and the Citizenship Education Study (ICCS) User Guide (Schultz et al., 2011). In order to do this, we created a student-level weight variable included at the first level and a school-level weight variable used in the second level. Both weights were normalized so that the sum of the student weights in a given classroom equals the sample size of that classroom, according to the aforementioned guidelines.

5.2 Within Variation Specifications

To estimate the effect of the differential effect of SES on migratory students as it relates to civic engagement and analyze the concepts of the Compensation Hypothesis (Langton and Jennings, 1968 & Campbell, 2008) we will be using the following identification strategies for the first level:

Research Question 1:

$$Y_{ijk} = \alpha + \widetilde{SES}_{ij}\beta_1 + MB_{ij}\beta_2 + X^n_{ij}\beta + (\widetilde{SES}_{ij} + \times MB_{ij})\gamma^w + \eta_j + \theta_k + \epsilon_{ijk} \tag{4}$$

Research Question 2: Socioeconomic Status

$$\begin{aligned} Y_{ijk} = \alpha + \widetilde{SES}_{ij}\beta_1 + \widetilde{CITEFF}_{ij}\beta_2 + \widetilde{SCHPART}_{ij}\beta_3 + \widetilde{OPDISC}_{ij}\beta_4 + (\widetilde{SES}_{ij} \times \widetilde{CITEFF}_{ij})\delta^w_1 \\ + (\widetilde{SES}_{ij} \times \widetilde{SCHPART}_{ij})\delta^w_2 + (\widetilde{SES}_{ij} \times \widetilde{OPDISC}_{ij})\delta^w_3 + X^n_{ij} + \eta_j + \theta_k + \epsilon_{ijk} \end{aligned} \tag{5}$$

Research Question 2: Migratory Background

$$\begin{aligned} Y_{ijk} = \alpha + MB_{ij}\beta_1 + \widetilde{CITEFF}_{ij}\beta_2 + \widetilde{SCHPART}_{ij}\beta_3 + \widetilde{OPDISC}_{ij}\beta_4 + (MB_{ij} \times \widetilde{CITEFF}_{ij})\lambda^w_1 \\ + (MB_{ij} \times \widetilde{SCHPART}_{ij})\lambda^w_2 + (MB_{ij} \times \widetilde{OPDISC}_{ij})\lambda^w_3 + X^n_{ij} + \eta_j + \theta_k + \epsilon_{ijk} \end{aligned} \tag{6}$$

All three specifications for the within variation include coefficients that have been group-mean centered (by the school mean) in order to isolate variation within schools, removing between-school confounding. The superscript (w) is to signify that these coefficients belong to the within variation specifications. Another constant across these specifications is the school fixed effect η_j, paramount in order to isolate the variation between students within a school. The second fixed effect is the year fixed effect θ_k, which will also be included in the level 2 specification. Lastly, there is also the student-level residual ϵ_{ijk}, which highlights the unobserved variation in the model.

The left-hand side displays our dependent variable, showcasing a student's civic engagement, divided into three aspects: institutional trust, expected electoral participation, and civic Knowledge. Here, Y_{ijk} represents a civic outcome for student i in school j in relation to an aspect of civic engagement k. The first term on the right-hand side showcases the intercept of the regression. Student i has a vector of individual characteristics (gender and expected years of education) labeled X^n in school j. The first research question will also include centered values of the civic contextual factors, OPDISC, INTRUST, and SCHPART. In the first aspect of the compensation hypothesis, this vector will include migratory background, while in the second, it will include individual-level SES.

MB is our identifier of the migratory background of the student, a dummy variable coded 0 for a native student and 1 for a non-native student. The first interaction term shows the relationship between SES and students with a migratory background as it relates to the outcomes in civic engagement. The coefficient γ will show any differential effect of SES for students with a migratory background within schools.

Equation 5 starts the compensation analysis aspect with the main effect of each civic contextual factor, with each interaction term compensating for the lower levels of civic engagement experienced by students from a lower socioeconomic background. The coefficient δ will show this relationship.

Equation 6 is the same, except it tests whether civic contextual factors can compensate for the lower levels of civic engagement experienced by students with a migratory background. The coefficient λ will show this relationship.

Important to note that research question 3 was run with the specification for research question 1, except for the important distinction that year fixed effects were removed so that the regressions could be run iteratively by year.

5.3 Across Variation Specification

In accordance with the guidelines by Schulz et al., (2022) we will also be measuring variation in civic engagement aspects across schools, which we will estimate with our second level specifications:

Research Question 1:

$$Y_{ijk} = \alpha + \overline{SES}_j\beta_1 + MB_{ij}\beta_2 + X^n_{ij} + X^m_j\beta + (\overline{SES}_j \times MB_{ij})\gamma^a + \theta_k + U_{0j} + \epsilon_{ijk} \tag{7}$$

Research Question 2: Socioeconomic Status

$$\begin{aligned} Y_{ijk} = \alpha &+ \overline{SES}_j\beta_1 + \overline{CITEFF}_j\beta_2 + \overline{SCHPART}_j\beta_3 + \overline{OPDISC}_j\beta_4 + (\overline{SES}_j \times \overline{CITEFF}_j)\delta^a_1 \\ &+ (\overline{SES}_j \times \overline{SCHPART}_j)\delta^a_2 + (\overline{SES}_j \times \overline{OPDISC}_j)\delta^a_3 + X^n_{ij} + X^m_j + \theta_k + U_{0j} + \epsilon_{ijk} \end{aligned} \tag{8}$$

Research Question 2: Migratory Background

$$\begin{aligned} Y_{ijk} = \alpha &+ MB_{ij}\beta_1 + \overline{OPDISC}_j\beta_2 + \overline{CITEFF}_j\beta_3 + \overline{SCHPART}_j\beta_4 + (MB_{ij} \times \overline{OPDISC}_j)\lambda^a_1 \\ &+ (MB_{ij} \times \overline{CITEFF}_j)\lambda^a_2 + (MB_{ij} \times \overline{SCHPART}_j)\lambda^a_3 + X^n_{ij} + X^m_j\beta + \theta_k + U_{0j} + \epsilon_{ijk} \end{aligned} \tag{9}$$

These specifications are very similar to those in the prior section, the change being a shift of focus to analyze the importance and effect of across-school variation and the broader environment of

the student. The superscript (a) indicates that these coefficients belong to the across analysis. A noticeable change from the prior section is the overline over the coefficients $\overline{X}$. This signifies the change to the school-level averages, which have been grand-mean centered (Enders & Tofighi, 2007; Raudenbush & Bryk, 2002). Thus, we can estimate the differential effect and the compensation theory above and beyond the individual student level. Another change is that school fixed effects have been removed, replaced with school controls, X_j^m, including social tension and resources in the community. Indicators of school quality could not be included as control variables due to inconsistencies between datasets (as discussed in section 4). However, controlling for social tension in the community provides important insights into the overarching social climate of the school, which is likely to be telling of students' civic attitudes (Brezicha & Leroux, 2022). Similarly, the resources of the community are telling of the socioeconomic environment of the school, which is likely contributory to the quality of the school. Also, the year fixed effect is included (θ_k), U_{0jk} captures the residual term at the level of the cluster (school), and ϵ_{ijk} shows the student-level residual. Lastly, just as in the past section, research question 3 was run with the specification for research question 1, except for the important distinction that year fixed effects were removed so that the regressions could be run iteratively by year.

5.4 Discussion and Limitations on the identification Strategy

A possible concern with the research design is the reliance on students' self-reporting and the potential measurement error it brings about. For instance, a key variable of this analysis is our proxy for SES. As Campbell (2008) discussed, it is hard to determine as it is difficult for adolescents to accurately assess their family's income. Books at home, along with parents' educational and occupational status, are, of course, the proxy for this, but again, measured by the adolescent. Another concern is the issue of reverse causality as it relates to our contextual school factors. Many authors working with ICCS data raise this valid concern. More civically engaged students are likely to perceive classrooms as more open, are likely to participate more actively in school events, and are likely to have stronger civic values (Campbell, 2008). The multilevel modeling approach discussed in this section is used to work around this problem, as it will not solely rely on individual reporting, and the average perceptions of multiple school respondents will be used as well. While some degree of reverse causality may persist, using both individual and school averages helps reduce this potential source of bias. A key motivation for separating the framework into two distinct regressions is to eliminate the issue of high correlation when including both levels in the same regression.

Another potential issue is the non-random assignment of students to schools. Students from affluent communities may select a school of higher quality, fostering higher scores of civic engagement. Comparatively, students from a more impoverished area may have to select a school with worse quality, for instance, less educated teachers and fewer resources. These are potential confounding variables, making the aim of isolating variation tricky. Our attempt to combat these issues is to employ the school controls, as previously discussed. Lastly, due to these concerns and the non-experimental nature of our research design, the reader may prefer to view the findings presented in the next section as associations rather than causal effects.

5.5 Robustness

To address potential issues with our model specifications and their stability, we conducted a thorough set of robustness checks. We estimated the models with various choices of specifications, including controls and fixed effects. School fixed effects were, however, kept for the within-analysis regressions due to it being a necessary element for the model to estimate within-school variation. The results of this strengthened the validity of the findings in the ensuing sections by displaying stable results across differing specifications. Please refer to Appendix 9.1-9.3 to view these results.

6 Results

6.1 Differential Effect: Baseline Model

In this section, we present answers to our first research question, namely, whether there is a differential effect of SES on students from a migratory background. The findings are shown with our baseline model, which includes two regressions for each outcome variable at the individual and school levels.

For the first outcome variable, INTRUST, the main effect of MB is negative and statistically significant across the board. This displays the civic engagement gap for non-native students in Sweden. Of course, an expected result based on the findings from the summary statistics in Table 1. Contrarily, higher SES translates to higher levels of civic engagement. The subsequent interaction effects will aid in analyzing whether there is a differential effect for non-native students. The two statistically significant results on both levels suggest that individual and school-level SES benefits non-native students much less. A one standard deviation increase in SES displays a negative SES gradient for students with a migratory background. As one standard deviation increase in SES will result in a -0.343 effect on INTRUST at the individual level and -0.423 at the school level. [11]

Interestingly, we note that school-level SES amplifies the gap much more than individual-level SES. This indicates the greater importance of the broader socioeconomic environment rather than the individual SES of the student in shaping their beliefs of institutional trust.

The findings in Table 2 show that the civic engagement gap for non-native students is evident for expected electoral participation as well, with two negative and significant coefficients. We also note this to be marginally stronger in magnitude in comparison to trust in institutions. Thus, showing this to be a variable of significant disparity between native and non-native students. A statistically significant result in column (3) shows a differential effect for non-native students in expected electoral participation at the individual level. However, only minimal economic relevance can be attributed to the positive nature of the gradient due to its small magnitude, which is closer to zero (0.060 for within).[12]Instead, we can conclude that there is no discernible SES gradient for students with a migratory background as it relates to expected electoral participation. While the interaction in column (4) would suggest a much more noteworthy result of +0.258, it must be interpreted with caution as it is only approaching significance. As it was found with a p-value of 0.066.

Consistent with the findings from the two prior outcome variables, the results in the third column display a clear gap in civic engagement, with non-native students scoring much lower in comparison to native students. Also, civic knowledge scores are noticeably higher for higher levels of SES. However, the differential effect is not significant, suggesting that SES has a uniform effect for native and non-native students in Sweden. Suggesting that increased SES benefits both groups as it relates to civic knowledge, although non-native students are at a much lower baseline.

[11] 0.598 – 0.941 = –0.343 for within and 1.862 – 2.285 = –0.423 for across
[12] 1.605+(1.545)=0.060

Table 2: Baseline Models for Civic Engagement Outcomes: Within and Across variation

	INTRUST		ELECPART		PV1CIV	
	(1)	(2)	(3)	(4)	(5)	(6)
	Within	Across	Within	Across	Within	Across
MB (non-native)	-1.850***	-1.298***	-2.038***	-2.376***	-45.345***	-61.253***
	(0.421)	(0.395)	(0.359)	(0.360)	(3.951)	(4.272)
SES	0.598***	1.862***	1.605***	1.702***	24.779***	37.583***
	(0.199)	(0.534)	(0.147)	(0.565)	(1.567)	(5.365)
MB (non-native)× SES	-0.941***	-2.285***	-1.545***	-1.444*	-4.768	-10.255
	(0.330)	(0.764)	(0.321)	(0.786)	(2.998)	(9.159)
Constant	51.829***	51.550***	43.716***	46.140***	478.236***	495.775***
	(0.988)	(0.425)	(0.795)	(0.392)	(8.391)	(4.829)
Year Fixed Effects	✓	✓	✓	✓	✓	✓
School Fixed Effects	✓		✓		✓	
Individual Controls	✓	✓	✓	✓	✓	✓
School Controls		✓		✓		✓

Notes: Multilevel models estimating within- and across-school effects of the socioeconomic differential effect on the migratory background of the student on three civic outcomes: Expected Electoral Participation (ELECPART), Civic Knowledge (PV1CIV), and Institutional Trust (INTRUST). "Within" columns showcase student-level variation within schools and "Across" columns display average school-level differences between schools. Within columns show coefficients which have been group-mean centered (by the school mean) and across columns show coefficients that have been grand-mean centered.Individual controls include gender, migratory background, expected years of education. School controls include a school resource index and social tension index in the community the school belongs to. Robust standard errors are clustered at the school level and shown in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Data source: ICCS 2009, 2016, and 2022

Table 3: Joint Significance Tests for Differential Effect Analysis

Outcome Variable	F-Test (Within)	χ^2 Test (Across)
INTRUST	$F(1, 263) = 7.92$, $p = 0.005$	$\chi^2(1) = 8.95$, $p = 0.003$
ELECPART	$F(1, 263) = 22.67$, $p = 0.000$	$\chi^2(1) = 3.37$, $p = 0.066$
PV1CIV	$F(1, 263) = 2.25$, $p = 0.135$	$\chi^2(1) = 1.25$, $p = 0.263$

Note: Each row reports the joint significance test of the interaction between migratory background (MB) and socioeconomic status (SES) on one civic outcome. The "Within" column reflects variation within schools and the "Across" column reflects between-school variation. Standard errors are clustered at the school level.
Data source: ICCS 2009, 2016, and 2022

6.2 Compensation Hypothesis

6.2.1 Compensation Hypothesis: Socioeconomic Status

In the first row of Table 4, it becomes clear that even in this model, SES is a consistent predictor of higher levels of civic engagement. Trust in institutions and civic knowledge showcase the importance of broader school-level SES in columns (2) and (6), respectively. This is due to the notably stronger effect compared to the individual level effects in columns (1) and (5). While expected electoral participation displays a similar magnitude in effects on both levels.

The rows showcasing the main effect of our chosen civic contextual factors (2, 3, and 5) are all positive, indicating a prediction of higher levels of civic engagement in all aspects. Yet, civic school participation is shown to be less important, specifically with institutional trust, as no significant results have been shown. Another element becomes clear from the across analysis, showing that schools with higher levels of civic school participation do not predict higher levels of civic engagement, with all insignificant results. This points to the greater importance of individual action rather than school characteristics. Most clearly illustrated with significant and positive results, with individual civic school participation predicting higher expected electoral participation and civic knowledge.

While these contextual factors are shown to predict higher levels of civic engagement, they don't seem to be able to compensate for lower levels of civic engagement experienced by students with lower SES. In fact, there are only two significant results to note. One of these is a positive interaction of individual civic school participation and expected electoral participation. For a one-standard-deviation decrease in SES, we note an increase of (0.160).[13]Providing a coefficient of modest economic relevance to the partial compensatory role of individual civic participation in school.

There is also a significant result in the fifth column under PV1CIV, which suggests that a student's citizenship self-efficacy can improve their civic knowledge. Yet it is clear that this will benefit higher SES students more, thus only widening the gap and not compensating.[14]

In conclusion there is little evidence to suggest that these contextual civic factors can effectively compensate for lower levels of civic engagement. Yet, we found partial compensation for individual level civic school participation as it relates to expected electoral participation. While the other significant effect suggests a widening of the gap between students based on their socioeconomic status.

[13]A decrease in SES signifies a low-SES student, defined as one standard deviation below the mean. The increase comes from $0.115 + (-1) \times (-0.045) = 0.115 + 0.045 = 0.160$ (found in column 3).

[14]For a low SES student: 0.625+(1)×0.306=0.625-0.306=0.319, while the the effect for a high SES student (defined as one standard deviation above the mean) will be $0.625 + 0.306 = 0.931$ (found in column 5)

Table 4: Compensation Hypothesis: Socioeconomic Status and Civic Contextual Factors on Civic Engagement Outcomes

	INTRUST		ELECPART		PV1CIV	
	(1)	(2)	(3)	(4)	(5)	(6)
	Within	Across	Within	Across	Within	Across
SES	0.365**	1.262***	1.192***	1.219***	23.355***	34.710***
	(0.161)	(0.449)	(0.121)	(0.443)	(1.394)	(4.430)
CITEFF	0.116***	0.202***	0.222***	0.319***	0.625***	2.273***
	(0.020)	(0.069)	(0.012)	(0.058)	(0.110)	(0.762)
SES × CITEFF	-0.005	-0.085	-0.008	0.213	0.306***	0.482
	(0.021)	(0.158)	(0.014)	(0.162)	(0.107)	(1.311)
SCHPART	0.024	-0.065	0.115***	0.058	1.168***	0.343
	(0.018)	(0.079)	(0.015)	(0.057)	(0.165)	(0.772)
SES × SCHPART	0.020	0.128	-0.045***	-0.182	-0.006	-0.659
	(0.020)	(0.187)	(0.016)	(0.165)	(0.134)	(1.867)
OPDISC	0.108***	0.122**	0.087***	0.086*	1.107***	1.299**
	(0.017)	(0.051)	(0.011)	(0.048)	(0.116)	(0.621)
SES × OPDISC	0.000	0.048	0.017	0.174	0.114	0.425
	(0.022)	(0.118)	(0.014)	(0.127)	(0.119)	(1.277)
Year Fixed Effects	✓	✓	✓	✓	✓	✓
School Fixed Effects	✓		✓		✓	
Individual Controls	✓	✓	✓	✓	✓	✓
School Controls		✓		✓		✓

Notes: Multilevel models estimating within- and across-school effects of school contextual factors (CITEFF, SCHPART, OPDISC) based on the socioeconomic status (SES) of the student on three civic outcomes: Institutional Trust (INTRUST), Expected Electoral Participation (ELECPART), and Civic Knowledge (PV1CIV). "Within" columns capture student-level variation within schools, while "Across" columns capture average school-level differences. Within columns show coefficients which have been group-mean centered (by the school mean) and across columns show coefficients that have been grand-mean centered. Individual controls include gender, migratory background, and expected years of education. School controls include a school resource index and a social tension index for the school's community. Robust standard errors are clustered at the school level and shown in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Data source: ICCS 2009, 2016, and 2022

Table 5: Joint Significance Tests for SES Compensation Hypothesis

Outcome Variables	F-Test (Within)	χ^2 Test (Across)
INTRUST	$F(3, 263) = 0.42,\ p = 0.738$	$\chi^2(3) = 0.72,\ p = 0.870$
ELECPART	$F(3, 263) = 4.27,\ p = 0.006$	$\chi^2(3) = 6.24,\ p = 0.100$
PV1CIV	$F(3, 263) = 4.16,\ p = 0.007$	$\chi^2(3) = 0.22,\ p = 0.975$

Note: Joint tests assess whether the interactions between SES and civic contextual factors (CITEFF, SCHPART, OPDISC) are jointly significant. F-tests derive from within-school regressions; χ^2 tests are from across-school models.
Data source: ICCS 2009, 2016, and 2022

6.2.2 Compensation Hypothesis: Migratory Background

The first row in Table 6 reiterates the findings from the baseline model, displaying a clear civic engagement gap for migratory students. Showing much lower levels of civic engagement across the board. Regarding the civic contextual factors, the results follow a similar pattern to that of the SES-based analysis in Table 4. Citizenship Self-Efficacy suggests a clear positive impact on civic engagement on both levels of variation. Contrarily, civic school participation only has two strongly statistically significant coefficients, on the individual level for expected electoral participation and civic knowledge in columns (3) and (5), respectively. This is a similar pattern to openness of classroom, as it is only significant at the individual level as it relates to these outcomes.

As it relates to compensating lower levels of civic engagement, most interactions and potential backing for the compensation hypothesis are not significant. However, there are two interesting results to note, the first one is the within CITEFF interaction for PV1CIV (column 5, row 3). These results show a negative relationship, implying that even though migrant students have high citizenship self-efficacy, this does not translate to higher civic knowledge. The results suggest that the gap widens for higher citizenship self-efficacy, due to native students benefiting much more than non-native students.[15] However, the coefficient is very weak in relation to the scale of the civic knowledge exam score, with the mean of non-native students being approximately 520 (Table 1).

The second interesting result is in column 2 of the last row, which shows the interaction of an open classroom environment for shaping institutional trust, as it is shown to comparatively negatively impact non native students. For a one standard deviation increase in OPDISC, the institutional trust for a non-native student will shrink while a native student's trust will increase. Of course, this result is only marginally significant ($p = 0.072$), but it raises the question of whether an open classroom may operate differently across cultural or linguistic backgrounds.

In conclusion, we do not find an effective compensatory role of these civic contextual factors; in contrast, we note a widening of the gap due to native students benefiting more in one case. We do, however, find that these variables do seem to predict higher levels of civic engagement.

[15] 0.753+(0.668)=0.085 for non-native students at the individual level and 0.753 for native students.

Table 6: Compensation Hypothesis: Migratory Background and Contextual Civic Factors on Civic Outcomes

	INTRUST		ELECPART		PV1CIV	
	(1)	(2)	(3)	(4)	(5)	(6)
	Within	Across	Within	Across	Within	Across
MB (Non-native)	-1.587***	-1.053***	-1.528***	-2.196***	-43.109***	-60.304***
	(0.402)	(0.391)	(0.337)	(0.376)	(3.600)	(3.939)
CITEFF	0.104***	0.200***	0.215***	0.303***	0.753***	1.872**
	(0.022)	(0.072)	(0.013)	(0.071)	(0.123)	(0.788)
MB (Non-native) × CITEFF	0.063	0.007	0.030	-0.044	-0.668***	2.024
	(0.040)	(0.159)	(0.031)	(0.139)	(0.253)	(1.598)
SCHPART	0.034*	-0.052	0.106***	0.035	1.168***	0.168
	(0.020)	(0.080)	(0.017)	(0.068)	(0.190)	(0.770)
MB (Non-native) × SCHPART	-0.051	-0.051	0.050	0.175	0.034	1.286
	(0.043)	(0.207)	(0.039)	(0.145)	(0.410)	(1.673)
OPDISC	0.105***	0.163***	0.085***	0.075	1.159***	1.027
	(0.019)	(0.055)	(0.014)	(0.058)	(0.131)	(0.636)
MB (Non-native) × OPDISC	0.010	-0.255*	0.001	-0.015	-0.208	1.655
	(0.042)	(0.142)	(0.029)	(0.112)	(0.302)	(1.241)
Year Fixed Effects	✓	✓	✓	✓	✓	✓
School Fixed Effects	✓		✓		✓	
Individual Controls	✓	✓	✓	✓	✓	✓
School Controls		✓		✓		✓

Notes: Multilevel models estimating within- and across-school effects of school contextual factors (CITEFF, SCHPART, OPDISC) based on the migratory background of the student on three civic outcomes: Institutional Trust (INTRUST), Expected Electoral Participation (ELECPART), and Civic Knowledge (PV1CIV). "Within" columns showcase student-level variation within schools and "Across" columns display average school-level differences between schools. Within columns show coefficients which have been group-mean centered (by the school mean) and across columns show coefficients that have been grand-mean centered. Individual controls include gender, expected years of education, and socioeconomic status. School controls include a school resource index and social tension index in the community the school belongs to. Robust standard errors are clustered at the school level and shown in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Data source: ICCS 2009, 2016, and 2022

Table 7: Joint Significance Tests for Migratory Background Compensation Hypothesis

Outcome Variables	F-Test (Within)	χ^2 Test (Across)
INTRUST	$F(3, 263) = 0.94,\ p = 0.420$	$\chi^2(3) = 4.07,\ p = 0.254$
ELECPART	$F(3, 263) = 1.56,\ p = 0.200$	$\chi^2(3) = 1.49,\ p = 0.685$
PV1CIV	$F(3, 263) = 3.49,\ p = 0.016$	$\chi^2(3) = 7.28,\ p = 0.064$

Note: Tests assess the joint significance of interactions between migratory background and school-level civic contextual factors (CITEFF, SCHPART, OPDISC). F-tests refer to within-school variation; χ^2 tests refer to across-school (mixed model) variation.
Data source: ICCS 2009, 2016, and 2022

6.3 Trends Over Time

6.3.1 Institutional Trust: INTRUST

Beginning in 2009, the effect of a migratory background on institutional trust is negative and significant. This continues with slight variance across 2016 and 2022. The within results are consistently more negative than the across, implying that there is more institutional trust variance among immigrant students attending the same school than when looking between different schools.

The effect of SES on institutional trust within schools is positive and significant in 2009 and 2022, with the most substantial impact observed in 2022. There is a notable decrease in effect and loss of significance in 2016. The effect of SES on institutional trust observed across schools is consistently significant, with the largest impact coming in 2016. The across effect is greater in each iteration, implying that disparities in institutional trust are more pronounced between different school SESs compared to individual family SESs.

Analysing the net effect of SES on the institutional trust of migratory students, we see that higher SES is associated with lower institutional trust in a majority of instances. The within effect for this term goes from -.964 to -.199 to -.041[16], whereas the across term goes from -.164 to .131 to -2.057[17]. These results suggest that while higher SES is correlated with lower institutional trust both within and across schools, the effect is most defined when looking across the school level. It is interesting to note that while the within effect has diminished over time, the across term is now its most negative and significant.

6.3.2 Expected Electoral Participation: ELECPART

The effect of migratory background on electoral participation is negative and significant across each iteration. While the within term is stronger in 2009, the across term is more impactful in both 2016 and 2022. Both the within and across variation are at their most negative in 2022, which implies that the gap between native and migratory student electoral participation is at its widest during the most recent period.

The effect of SES on electoral participation is consistently positive and significant. The strength of the within and across terms remain rather stable over time with the within term being more significant. This implies that family SES is more influential in electoral participation than the average school level SES.

An interesting trend emerges when analysing the net effect of SES on the electoral participation of students with a migratory background. In 2009 and 2016, the across (-1.329, -.284)[18] and within (-.666, -.147)[19] results for this effect are both negative, similar to what is observed in institutional trust. However, in 2022 both terms became positive with a coefficient of .375 for within and .918

[16] Within: 2009(.669-1.633=-.964), 2016(.221-.420=-.199), 2022(.853-.894=-.041)
[17] Across: 2009(1.789-1.953=-.164), 2016(1.906-1.775=.131), 2022(1.444-3.501=-2.057)
[18] Across: 2009(1.235-2.564=-1.329), 2016(1.731-2.015=-.284)
[19] Within: 2009(1.516-2.182=-.666), 2016(1.475-1.622=-.147)

for across.[20] This would imply that in the first iterations, migratory students with a higher SES were participating proportionately less in elections, whereas in 2022, higher SES indicated higher electoral participation. The across term is more negative in the first two iterations and more positive in the last, suggesting that the school-level SES has a more pronounced impact on the electoral participation of migratory students.

6.3.3 Civic Knowledge: PV1CIV

The association between migratory background and civic knowledge is negative and significant across all observed years. While the within term remains relatively stable across time, the across term becomes increasingly negative throughout the iterations. This would imply that the differences in civic knowledge between migratory students attending different schools are becoming progressively larger.

SES has a consistent positive and significant effect on civic knowledge, remaining very stable in each year. The across school term is substantially larger than the within term, suggesting that school level factors play a larger role in influencing civic knowledge than individual family SES. It is interesting to note that in 2022, the average term is lower than in the previous two years, implying that the differences between schools may be narrowing.

When analysing the net effect of SES on the civic knowledge of migrant students, the results all remain positive and do not differ significantly from the results observed for native students. There is one exception in 2016 in which the across net effect is near zero.[21] This is a stark departure from what is observed across the other years and suggests that during this year, migrant students' civic knowledge did not benefit from attending higher SES schools.

[20] Within: 2022(1.587-1.212=.375), Across: 2022(1.397-.479=.918)
[21] Across: 2016(43.31-43.77=-.46),

Table 8: Differential Effects by Year: Civic Engagement Outcomes

	INTRUST					
	2009		2016		2022	
	(1)	(2)	(3)	(4)	(5)	(6)
	Within	Across	Within	Across	Within	Across
MB (Non-native)	-2.173**	-1.006*	-1.664**	-0.955*	-2.083***	-1.818**
	(1.002)	(0.604)	(0.684)	(0.533)	(0.590)	(0.748)
SES	0.669*	1.789*	0.221	1.906**	0.853**	1.444**
	(0.339)	(1.079)	(0.385)	(0.806)	(0.366)	(0.690)
MB × SES	-1.633**	-1.953	-0.420	-1.775	-0.894*	-3.501***
	(0.678)	(1.409)	(0.608)	(1.289)	(0.522)	(1.121)
	ELECPART					
	2009		2016		2022	
	(1)	(2)	(3)	(4)	(5)	(6)
	Within	Across	Within	Across	Within	Across
MB (Non-native)	-2.035***	-1.817***	-1.006*	-1.841***	-3.053***	-3.373***
	(0.764)	(0.627)	(0.606)	(0.597)	(0.592)	(0.578)
SES	1.516***	1.235	1.475***	1.731**	1.587***	1.397*
	(0.256)	(1.236)	(0.265)	(0.772)	(0.250)	(0.718)
MB × SES	-2.182***	-2.564	-1.622***	-2.015	-1.212*	-0.479
	(0.562)	(1.694)	(0.427)	(1.432)	(0.615)	(1.177)
	PV1CIV					
	2009		2016		2022	
	(1)	(2)	(3)	(4)	(5)	(6)
	Within	Across	Within	Across	Within	Across
MB (Non-native)	-45.046***	-51.34***	-48.186***	-65.63***	-47.333***	-67.24***
	(7.076)	(7.15)	(6.657)	(7.60)	(6.248)	(6.64)
SES	22.601***	43.14***	23.397***	43.31***	24.284***	36.06***
	(2.495)	(12.15)	(2.610)	(8.56)	(3.212)	(8.98)
MB × SES	-7.973	-8.84	-9.692*	-43.77**	0.780	7.81
	(5.338)	(10.90)	(5.206)	(20.20)	(4.797)	(14.74)
School Fixed Effects	✓		✓		✓	
Individual Controls	✓	✓	✓	✓	✓	✓
School Controls		✓		✓		✓
Observations	2,395	2,395	2,228	2,228	2,190	2,190

Notes: Table reports regressions separately by year (2009, 2016, 2022) for three separate aspects of Civic Engagement: Institutional Trust (INTRUST), Expected Electoral Participation (ELECPART), and Civic Knowledge (PV1CIV). "Within" columns represent individual-level variation; "Across" columns capture school-average effects. Within columns show coefficients which have been group-mean centered (by the school mean) and across columns show coefficients that have been grand-mean centered. Individual controls include gender and expected years of education. School controls include a school resource index and social tension index in the community the school belongs to. Both models also control for Citizenship Self-Efficacy, Openness of Classroom Discussion, and Civic School Participation at each level. Robust standard errors are clustered at the school level and shown in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Data source: ICCS 2009, 2016, and 2022

Table 9: Joint Significance Tests for Migratory Background × SES (S_NISB)
Within- and Across-School Regressions by Year and Outcome

Outcome	Year	F-Test (Within)	χ^2-Test (Across)
PV1CIV	2009	$F(1, 134) = 2.23,\ p = 0.138$	$\chi^2(1) = 0.66,\ p = 0.417$
	2016	$F(1, 123) = 3.47,\ p = 0.065$	$\chi^2(1) = 4.69,\ p = 0.030$
	2022	$F(1, 112) = 0.03,\ p = 0.871$	$\chi^2(1) = 0.28,\ p = 0.596$
INTRUST	2009	$F(1, 134) = 5.80,\ p = 0.017$	$\chi^2(1) = 1.92,\ p = 0.166$
	2016	$F(1, 123) = 0.48,\ p = 0.491$	$\chi^2(1) = 1.90,\ p = 0.169$
	2022	$F(1, 112) = 2.93,\ p = 0.090$	$\chi^2(1) = 9.75,\ p = 0.002$
ELECPART	2009	$F(1, 134) = 15.09,\ p = 0.0002$	$\chi^2(1) = 2.29,\ p = 0.130$
	2016	$F(1, 123) = 14.42,\ p = 0.0002$	$\chi^2(1) = 1.98,\ p = 0.160$
	2022	$F(1, 112) = 3.88,\ p = 0.051$	$\chi^2(1) = 0.17,\ p = 0.684$

Note: Each test assesses whether the interaction between Migratory Background and SES (S_NISB) is jointly significant in predicting the respective outcome. F-tests come from within-school models; χ^2-tests come from across-school models.
Data source: ICCS 2009, 2016, and 2022

7 Discussion

7.1 Differential Effect and Explaining Contrary SES Gradients

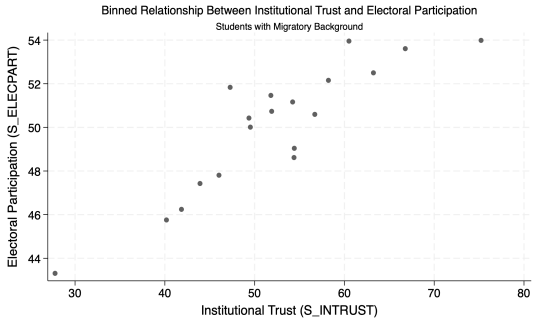
Returning to our first research question (Is there a differential effect of SES on students from a migratory background as it relates to civic engagement?), our results provide a distinct answer. As has been demonstrated in previous literature, our results show SES to be positively associated with each of our outcome variables, while migratory background is linked with lower civic knowledge and less positive civic attitudes (Zhu & Chiu, 2020; Brezicha and Leroux, 2023, and Abdelzadeh, Zetterberg, and Ekman, 2015). However, we expand upon this literature by also comparing how the effect of SES on civic engagement differs between native students and students with a migratory background, specifically in the Swedish context. To reiterate section six, we find that there is a positive SES gradient across all outcome variables for native students. While students of a migratory background possess a similar albeit weaker positive SES gradient for civic knowledge, no discernible gradient is apparent for electoral participation, and a slight negative SES gradient is present for institutional trust.

While our data does not provide empirical evidence that explains why this is the case, we find it beneficial to use past literature and theory to consider potential explanations. For example, experiences of exclusion or discrimination may provide insight as to why we observe this difference in gradients across the two student groups. On a more general level, our results show that for non-native students, higher SES is associated with knowing more about the government (civic knowledge) but not thinking more highly of it (electoral participation, institutional trust). Beginning with institutional trust, Abdelzadeh, Zetterberg, & Ekman (2015) and Brezicha and Leroux (2023) both describe the diminished institutional trust amongst immigrant students in Sweden and its vectors, particularly exclusion and unfair treatment. Hooghe & Dassonneville (2018) describe how the "literature on the relation between political trust and electoral behaviour shows that dissatisfied voters are more likely to abstain from voting". This sheds light on the possibility that migrant students in Sweden may feel less likely to participate in elections as a result of low political trust. However, there is less research dedicated to exploring how exclusion affects the civic knowledge of students of a migratory background.

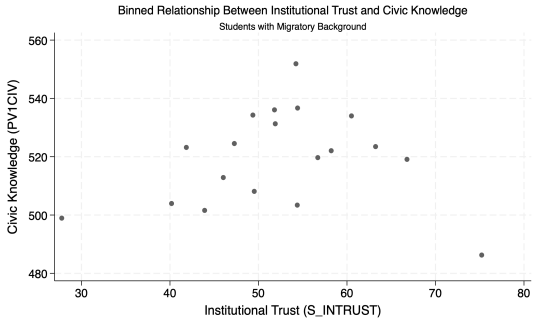
Analysing the figures below, our data suggests that institutional trust has a strong positive effect on the electoral participation of immigrant students. Conversely, no clear trend is present when analysing the effect of institutional trust on civic knowledge.

Figure 2: Effect of Institutional Trust on Civic Participation and Knowledge among Students with Migratory Background

Panel A: Electoral Participation by Institutional Trust



Panel B: Civic Knowledge by Institutional Trust



Note: Binned scatterplots display relationships between institutional trust and civic outcomes among students with migratory background.
Data source: ICCS 2009, 2016, and 2022

This is the basis of our intriguing, albeit speculative, theory as to why we observe different SES gradients across our outcome variables for native and non-native students. We consider the possibility that students of a migratory background experience exclusion and/or discrimination that in turn lowers their institutional trust (similar to Abdelzadeh, Zetterberg, Ekman (2015) and Brezicha & Leroux (2023), which coincides with lower electoral participation. Furthermore, we assume that SES does not act as a buffer to the exclusion experienced by immigrant students, thus explaining why we see dissimilar SES gradients for native vs. non-native students for institutional trust and electoral participation. This assumption is strengthened by Plenty & Jonsson (2017), who analyse the prevalence of exclusion amongst immigrant students across their sample of 4795 Swedish 14–15-year-olds. Within their study, Plenty & Jonsson (2017) control for socioeconomic background and family structure, yet still find that "all immigrant groups had higher rates of isolation in immigrant sparse classrooms". The detail of "immigrant sparse classrooms" could provide a potential explanation for why there is a negative SES gradient for non-native students in institutional trust. Our data shows that a disproportionate number of migratory background students are of lower SES, meaning that immigrant students of higher SES may be attending schools with a higher proportion of native students, which could lead to them being excluded more regularly and therefore having lower institutional trust.

Finally, the idea that experiences of exclusion are driving the difference in SES gradients is compatible with the results we observe for civic knowledge. Particularly, our observation that institutional trust is not indicative of civic knowledge suggests that exclusion does not significantly impact a student's civic knowledge. This is consistent with work done by Chiu & Khoo (2005), which highlights the transfer of human capital from parents to children as critical to civic knowledge as opposed to broader social interactions. This would help to explain why we still observe a positive SES gradient in civic knowledge for students with a migratory background.

We hypothesise that experiences of exclusion and discrimination explain the difference in SES gradients across native students and non-native students. This theory is supported by background-based exclusion not impacting native students, literature regarding the effect of exclusion on civic engagement, and observable trends within our data. Our hypothesis would then suggest that policy initiatives should focus on creating more inclusive classroom environments, an idea that will be returned to later in this section. It is important to reiterate that this is a speculative hypothesis and would require further study to substantiate.

An alternative explanation for these results stems from Guglielmi & Maggini (2024), who describe the "phenomenon of 'overqualification' or 'underemployment" driven by factors such as the non-recognition of foreign qualifications, labour market discrimination, and language barriers." This theory would imply that the parents of migrant students may be similarly educated compared to native parents. However, they possess a lesser occupational status and home resources due to the aforementioned factors. Here, it is crucial to consider how our SES variable (NISB) is constructed, a composite variable comprising the student's parents' educational attainment, parents' level of occupations, and the number of resources present at the student's home. As a result, students would have low family income and home resources but still have a relatively high SES as a result of their parents' educational attainment. This would help to explain the diminished and at times negative returns to SES observed amongst our results, as immigrant students with highly educated parents may still not have access to the home resources and high family income associated with higher SES levels. Further, the trend of non-native students with higher SES having less institutional trust could be attributed to students watching their highly qualified parents being repeatedly neglected or discriminated against in the job market.

While this theory is supported by literature and a preliminary analysis of our results, it is not backed by our dataset. Specifically, Table 23 in the appendix displays the standardized differences in mean between native students and students of a migratory background across the variables composing our SES variable. This analysis shows that the education component actually has the largest discrepancy between native and non-naive students, implying that Sweden is not a case of overqualification, and the parents of immigrant students tend to be less educated than native parents. This is likely a result of a large proportion of immigrants to Sweden being of a refugee background and therefore having limited educational opportunities in the country they were emigrating from (Nilsson & Bunar, 2016).

7.2 Compensation versus Acceleration

Can certain contextual civic factors (Citizenship self-efficacy, civic school participation and openness of the classroom) compensate for lower levels of civic engagement experienced by students from lower levels of SES and students from migratory backgrounds?

Before discussing the results of Tables 6.2.1 and 6.2.2, it is important to return to the theory used to select the variables. Specifically, the results have aimed to expand upon Lipsky's (1980) idea that school is the setting where students form a majority of their civic opinions, insinuating that school-based experiences are critical to civic engagement. This is evidenced by the positive and significant effects of civic efficacy, school participation, and openness of discussion across a vast

majority of the outcome variables. However, as we are focusing on the civic engagement gap in Sweden, we aim to analyse if there is a differential effect on school experiences among students of migratory background and low SES. The compensation hypothesis proposes that students from lower SES families can mitigate civic engagement differences stemming from inadequate at-home resources and opportunities by actively engaging in school activities, particularly in class discussion (Campbell, 2008). If this hypothesis is to hold, we would expect to see strongly positive relations between being of a lower SES and our specified civic contextual variables (openness of discussion, school participation, and civic efficacy). In our dataset, students with a migratory background have a lower average SES, and therefore, the hypothesis would propose that they could compensate for having fewer resources by benefiting more strongly from in-school engagement. The only evidence was one effect in our SES-based analysis in Table 4, which shows partial compensation of civic school participation as it relates to expected electoral participation. Yet for the majority of the variables, we find no strong evidence. Contrarily, we note evidence to suggest that native students benefit disproportionately from civic contextual factors, resulting in a wider gap. In the paper by Campbell (2008), he presents the compensation hypothesis in tandem with another theory, a potential counter-hypothesis that stipulates an "acceleration" effect for advantaged students. We found this to be most prevalent for Citizenship Self-Efficacy, but also partly for Openness of Discussion (approaching significance). Our data does not present the causes for this, yet insights from prior studies exist. Firstly, Hoskins and Janmaat (2019) suggest from their analysis that unequal access to these productive learning environments is the reason why students from low SES do not receive the same benefits as other students do. While they don't note a justifiable reason for this, they point to democratic and political processes in school being voluntary and important elements shaping perceived openness, which is therefore not garnered if students are not active in civic activities in school. This is the case for Sweden too, mainly with a Student Council (Elevråd). Thus, our findings from the partial compensation of civic school participation strengthen this claim with recent data in a new context.

Another explanatory aspect, which is noted in both Hoskins & Janmaat (2019) as well as Campbell (2008), is that students from more socioeconomically advantaged households have a stronger foundation in political efficacy, knowledge, and interest. Thus, these competencies, which are cultivated in the home environment, are "accelerated" in the classroom, leading to a widening of the gap instead of compensation. There is some evidence from our data to suggest that this may be the case for the lack of compensation. Yet, as discussed in 7.1, exclusion and discrimination can also be a factor in the lack of compensation.

7.3 Individual versus School Level Effects

Our analyzes has crystalized the importance of both individual and school-level factors in shaping civic engagement. Strengthening the definition of civic engagement by Damiani et al (2024), which emphasises it being shaped by experiences outside of school environments as well. A good example was found in Table 2 under column (2) showcasing a stronger negative school-level SES gradient than individual for institutional trust. This was noted to indicate a greater importance of the broader environment in shaping institutional trust, a logical result when referring to the definition by Damiani et al (2024). Here, the disucssion in subsection 3.2.3 is of aid. Where, Abdelzadeh, Zetterberg, & Ekman (2015) explored the importance of perceived fairness in society, levels of

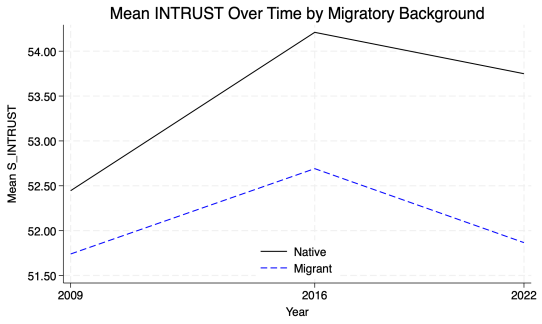
social capital, and exposure to public institutions. Especially in regards to institutional trust. For instance, a student in a comparatively lower SES area may distrust institutional bodies more due to less exposure to institutions of better quality. Similarly, a student residing in an area that is better off in a socioeconomic perspective is more likely to have higher social capital and interactions with well-functioning institutions, potentially providing more institutional trust. Thus, we contribute to the findings by, Abdelzadeh, Zetterberg, & Ekman (2015) through noting similar results in a newer dataset with a larger sample size, but importantly in the same context.

7.4 Trends Over Time

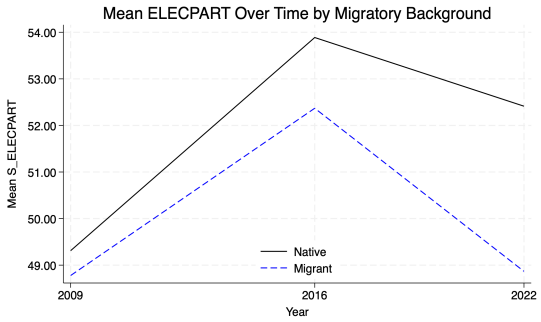
When analysing how the SES gradient on civic engagement has developed over time, it is beneficial to begin by examining the development of the outcome variables over the years.

Figure 3: Evolution of Outcome Variable Means Over Time

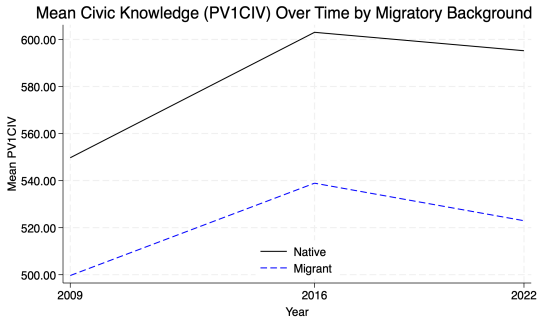
Panel A: Trust in Institutions (S_INTRUST)



Panel B: Electoral Participation (S_ELECPART)



Panel C: Civic Knowledge (PV1CIV)



Note: Lines show mean values over time (2009, 2016, 2022) by migratory background. Solid lines = native background; dashed lines = migrant background.
Data source: ICCS 2009, 2016, and 2022

The above figure clearly shows that the mean increased and peaked for each outcome variable from

2009 to 2016 and then decreased in 2022. Furthermore, the gap between native and immigrant students widens over time across all variables.

An interesting study to pair with these observations comes from Groglopo, Ahmadi, & Munobwa (2023), who analyse how attitudes towards immigrants have developed in Sweden. Groglopo, Ahmadi, & Munobwa (2023) find that since 2005, "there have been positive attitudes towards social rights for people in Sweden with a foreign background". Assuming a more positive societal attitude toward immigrants would result in less social exclusion, this would help explain why there is an increase in institutional trust and electoral participation amongst migratory students from 2009 to 2016. This theory is further supported by our findings in Table 8, particularly in the shift of the across SES gradient for immigrant students going from -1.329 to -.284. If our previous hypothesis regarding exclusion is to hold, more positive attitudes towards immigrant rights may help increase political trust amongst the higher SES migratory students who attend schools that have a large native majority.

During 2016, Groglopo, Ahmadi, & Munobwa (2023) found a dip in positive attitude towards immigrants, potentially attributable to the large Syrian refugee immigration at this time. This could provide insight into the observable decreases in the civic outcome variables for immigrant students from 2016 to 2022. Firstly, a larger influx of new immigrants would need a substantial amount of time to acquire Swedish civic knowledge, resulting in a decrease in migrant PV1CIV. Secondly, a broader negative attitude towards immigrant students could lead to greater levels of exclusion, resulting in lower institutional trust and electoral participation. Returning to the SES across gradient for migrant students on institutional trust, we see that from 2016 to 2022, the gradient shifted from -.284 to -2.057. This suggests that the negative attitude towards immigrants was not isolated to those arriving from Syria and that higher SES migratory students attending majority native schools may have experienced greater exclusion as a result.

Groglopo, Ahmadi, & Munobwa's (2023) research offers us an interesting complement to our data; however, we cannot attribute our trends solely to societal opinions on immigrants. This is largely a result of the trend of native and migratory students following a very similar pattern. This would imply that larger macro effects in Sweden were influencing civic engagement for all students. Particularly, the pandemic occurring in 2019 could provide a strong rationale for why civic outcomes dropped for all students in the 2022 iteration. Regardless of the underlying reason, our data displays a persistent and growing gap in civic engagement that demands to be addressed.

7.5 Policy Implications and Relevance

Our findings have made the civic engagement disparities between migratory students and those from lower SES households abundantly clear, yet they have also brought forward very interesting results that point to the issue of exclusion for these students. As has been made clear, civic engagement is paramount not only for adolescents' futures but also for social cohesion in the communities they are a part of. Recent initiatives have already been taken to strengthen civic engagement for students in disadvantaged positions, as well as initiatives to strengthen the civic educational system in Sweden, which is currently providing insufficient preparation.

One of these initiatives, which only started in 2025, is Next Generation Sweden (Nästa Generation Sverige), founded by Evin Cetin and Caroline Berg (2025), which targets students in disadvantaged areas by providing them with real-life work experience on the basis of active school participation. This initiative strongly follows the sentiment of our found partial compensation for expected electoral participation in section 6.2.2. As well as factors which can improve civic engagement based on related research, for instance, Hoskins and Janmaat (2019), who stress the importance of active participation in school in its effect of strengthening civic values. They also argue that teachers should encourage students from less advantaged backgrounds to participate actively in school; this initiative targets precisely that.

As mentioned in Section 2.2, there is another initiative called The Democracy Ladder, which has some important and good qualities, such as encouraging student voice and democratic participation, which is sure to strengthen civic engagement. However, the online and voluntary nature of this initiative raises questions about its future effectiveness. Policies that focus directly on targeting the issue of exclusion as well as increasing civic participation in school seem most likely to aid in closing the gap in civic engagement in Sweden. This is also the argument by Brechia and Leroux (2023) and the Autor (2018), which suggests the importance of the school as an institution in adolescents' youth. Precisely due to it being one of the first institutions a student interacts with, thus feeling connected to it and participating actively is likely to make other public officials and institutions seem trustworthy, too. However, the importance of the Swedish context must be underscored. The inequalities in civic education have likely been a byproduct of broader societal trends in Sweden in recent years. An example being the country's Gini coefficient reaching .333, its highest level since 1975 (The Lancet Regional Health, 2023). Factors such as demographic shifts, housing market deregulation, and government assistance reduction have ignited Sweden's transition from one of the world's most egalitarian countries to one facing increasing economic inequality and segregation (Mutgan & Mijs, 2023). The point being that there are many matters outside of the school environment that result in valid foundations for less institutional trust for adolescent students with a migratory background. While larger societal issues exist, the school has a hugely important role in fostering trust, empathy, care, and cohesion in its environment, which is likely to lead to greater civic engagement. Of course, this is contingent on students actually attending and participating in school.

8 Conclusion

This paper aimed to analyze any differential effect of socioeconomic status levels on migratory students as it relates to civic engagement. We aimed to examine any pattern over time, as well as analyze potential compensatory factors. Our results strengthen the findings of many ICCS research papers, in finding a positive SES gradient and negative migratory background gradient for civic engagement (Brechia & Leroux, 2023; Zhu & Chiu, 2020; Plenty & Jonsson, 2017). Our findings uniquely contribute to this by focusing specifically on the Swedish context in all available ICCS iterations. We also find unique evidence of a negative SES gradient for migratory students as it relates to Institutional Trust. Thus, while a positive SES gradient persists for native students, this positive effect is nonexistent for migratory students.

Our analysis also sought to find if there are factors that can compensate for levels of civic engagement. Unfortunately, no meaningful evidence that is externally valid was found. The basis for this was Campbell's (2008) paper, which used the concepts of his proposed Compensation Hypothesis and found one of the variables, openness of discussion, to significantly compensate. Due to its proven effectiveness, we expanded this hypothesis to more variables, demographics, and naturally, a different context. Unfortunately, no compensation was found, pointing to deeply rooted disparities in civic engagement in the Swedish educational system. Our overtime analysis also pointed to the fact that the migratory civic engagement gap has been getting worse over time (Table 8), strengthening this point.

Based on these main results, we ask the simple question: why is this the case? Speculative, we hypothesize that the vast migratory civic engagement gap, the negative SES gradient for trust, and the ineffectual compensatory factors stem from feelings of exclusion. We base this on our own results but also the findings of Abedzadeh, Zetterberg, Ekman (2015) and Brezicha and Leroux (2023), which show that migratory students in Sweden who experience exclusion and discrimination in turn lower their institutional trust.

Aside from limitations in our speculative theory regarding the impact of exclusion and discrimination on migratory students, our research and findings included several limitations. As with all ICCS research papers, this paper was heavily reliant on self-reported answers from students. The sample being very young (13-14 years old) means that accurate representations of some variables can be questioned. As discussed in Section 5.4, an important example of this is our variable for SES (NISB), which is a measure of SES by the students themselves. Further research analyzing differential effects of SES and its gradient based on different types of students would benefit from using a more robust measure of actual SES, not self-reported by the child. As mentioned in Brechia & Leroux (2023), there is the possibility of social desirability bias, which is the tendency of participants to underreport socially undesirable attitudes and behaviors, such as not participating in Electoral events, trusting in institutions, or viewing oneself as a good citizen. Another limitation was simply due to the non-experimental nature of our data, making claims of causality tricky, specifically as it relates to such a multi-dimensional concept as civic engagement. Future research would benefit from a more experimental design with more robust controls, specifically as it relates to controls outside of the school environment, such as media usage, peer environments, and the amount of civic and political discussions. Similarly, we are not tracking the same cohort over time. Thus, our findings may rather be seen as associational.

The concept of exclusion and discrimination is something to be researched further, specifically as it relates to important concepts of civic engagement. A research design with a robust measure of exclusion and discrimination in relation to youth civic engagement in Sweden and in other contexts, too, would undoubtedly be very informative for educational policymakers. Jaffe-Walter (2013) presents findings suggesting that anti-muslim rhetoric and stereotypes have challenged the integration of muslim immigrant students, specifically as it relates to female students. Thus, analyzing gender differences present in these relationships would be important too.

Future research can build on our findings by conducting in-depth qualitative research to uncover the causes and consequences of this civic engagement gap and the noticeable disparities. Our findings present clear questions for further research, the most interesting being: Why does SES result in a positive gradient for native students and a negative gradient for non-native students? Why do native students benefit disproportionately from civic contextual factors such as the Openness of the Classroom? And lastly, what is the role of feelings of exclusion in explaining migratory adolescents' lower levels of civic engagement? While our results present patterns and interesting findings, case studies and field work would complement these findings immensely.

In conclusion, we have duly noted a multi-faceted civic engagement gap in Sweden, which has persisted over the last 13 years. The findings point to systematic issues beyond the curriculum resulting in disparities based on students' demographics and environment. Another key point to underscore is that this issue is not insurmountable, and work like "Nästa Generation Sverige" and "Demokratistegen" is currently being done for this issue, although more is needed. The central message of this paper is the importance of youth civic engagement and inclusion in the school environment. A commitment to improving the situation in Sweden should be a given for policymakers; the findings from this paper strengthen that claim. Sustained attention to the students in need, more research, more initiatives, and increased participation for students are all needed.

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9 Appendix

9.1 Variable Compositions

Table 10: SES Variables by Migratory Background

Category	IS3G10A	HISEI	HISED
Migratory Background			
Native	3.56 (9.36)	56.06 (18.07)	3.82 (1.06)
First-gen/Non-native	2.21 (7.68)	50.58 (22.27)	3.37 (1.41)
Total	3.30 (9.07)	55.03 (19.05)	3.73 (1.15)
Observations		6,870	

Variable descriptions:

- **IS3G10A**: Number of books at home, as reported by students.
- **HISEI**: Highest parental occupational status, based on the International Socio-Economic Index of Occupational Status.
- **HISED**: Highest level of parental education, standardized on an international scale.

Table 11: Standardized SES Variables by Migratory Background

Category	IS3G10A	HISEI	HISED
Migratory Background			
Native	0.03 (1.03)	0.05 (0.95)	0.07 (0.92)
First-gen/Non-native	-0.12 (0.85)	-0.23 (1.17)	-0.32 (1.22)
Total	0.00 (1.00)	-0.00 (1.00)	0.00 (1.00)
Observations		6,870	

Table 12: Participatory Variables Composing S_ELECPART

Category	IS4G24A	IS4G24B	IS4G24C
Migratory Background			
Native	1.85 (0.89)	2.04 (1.05)	2.11 (1.05)
Non-Native	1.98 (0.96)	2.18 (1.11)	2.13 (1.05)
SES Quartile			
Lowest 25%	2.03 (0.93)	2.20 (1.10)	2.29 (1.09)
Lower Middle 25%	1.98 (0.86)	2.10 (1.03)	2.20 (1.03)
Upper Middle 25%	1.85 (0.90)	2.01 (1.02)	2.07 (1.04)
Highest 25%	1.64 (0.86)	1.96 (1.08)	1.91 (0.99)
Total	1.87 (0.90)	2.07 (1.06)	2.12 (1.05)
Observations	6,870	6,870	6,870

Note: Each item is scored from 1 (Very likely) to 4 (Not at all likely). Higher values indicate lower levels of expected electoral participation.
Data source: ICCS 2009, 2016, and 2022

Variable descriptions:

- **IS4G24A**: Likelihood of voting in local elections as an adult.
- **IS4G24B**: Likelihood of voting in national elections as an adult.
- **IS4G24C**: Likelihood of getting information about candidates before voting.

Table 13: Institutional Variables Composing S_INTRUST

Category	IS4G18A	IS4G18B	IS4G18C	IS4G18D	IS4G18E	IS4G18F
Migratory Background						
Native	2.11 (0.77)	2.24 (0.89)	2.00 (0.85)	1.94 (0.93)	2.41 (0.94)	2.16 (1.03)
Non-Native	2.15 (0.84)	2.24 (0.92)	2.18 (1.08)	2.23 (1.05)	2.51 (0.98)	2.21 (1.14)
SES Quartile						
Lowest 25%	2.20 (0.83)	2.34 (1.03)	2.17 (1.01)	2.11 (1.05)	2.51 (1.00)	2.30 (1.16)
Lower Middle 25%	2.18 (0.81)	2.29 (0.88)	2.09 (0.88)	2.05 (0.97)	2.49 (1.03)	2.28 (1.12)
Upper Middle 25%	2.09 (0.72)	2.19 (0.80)	2.00 (0.85)	1.93 (0.92)	2.40 (0.87)	2.10 (0.93)
Highest 25%	2.00 (0.75)	2.14 (0.85)	1.88 (0.84)	1.88 (0.89)	2.33 (0.87)	2.01 (0.94)
Total	2.12 (0.78)	2.24 (0.90)	2.03 (0.90)	1.99 (0.96)	2.43 (0.95)	2.17 (1.05)
Observations	6,870	6,870	6,870	6,870	6,870	6,870

Note: Each item is scored from 1 (A lot of trust) to 4 (No trust at all). Higher values indicate lower levels of institutional trust.
Data source: ICCS 2009, 2016, and 2022

Variable descriptions:

- **IS4G18A**: Trust in the national government.
- **IS4G18B**: Trust in local government.
- **IS4G18C**: Trust in the courts.
- **IS4G18D**: Trust in the police.
- **IS4G18E**: Trust in political parties.
- **IS4G18F**: Trust in the national parliament.

Table 14: Open Classroom Discussion Items by Migratory Background and SES Quartile

Category	IS4G16A	IS4G16B	IS4G16C	IS4G16D	IS4G16E	IS4G16F
Migratory Background						
Native	3.29 (0.86)	3.01 (0.95)	3.23 (0.87)	2.76 (0.99)	2.90 (0.97)	2.94 (1.03)
Non-Native	3.25 (0.93)	3.04 (1.01)	3.28 (0.96)	2.88 (1.02)	2.97 (1.10)	2.96 (1.05)
SES Quartile						
Lowest 25%	3.19 (0.94)	2.98 (1.00)	3.20 (0.92)	2.73 (0.98)	2.84 (1.03)	2.84 (1.04)
Lower Middle 25%	3.25 (0.88)	3.00 (0.96)	3.22 (0.86)	2.71 (0.98)	2.89 (0.99)	2.88 (1.04)
Upper Middle 25%	3.32 (0.83)	3.02 (0.94)	3.28 (0.85)	2.81 (1.00)	2.94 (0.94)	3.01 (1.03)
Highest 25%	3.36 (0.86)	3.07 (0.95)	3.26 (0.92)	2.87 (1.02)	2.99 (1.00)	3.04 (1.01)
Total	3.28 (0.88)	3.02 (0.96)	3.24 (0.89)	2.78 (1.00)	2.92 (1.00)	2.94 (1.03)
Observations	6,870	6,870	6,870	6,870	6,870	6,870

Note: Each item is scored from 1 (Very often) to 4 (Never). Higher values indicate lower perceived openness.
Data source: ICCS 2009, 2016, and 2022

Variable descriptions:

- **IS4G16A**: Teachers encourage students to make up their own minds.
- **IS4G16B**: Students bring up current political events for discussion.
- **IS4G16C**: Students express opinions even if they differ from others.
- **IS4G16D**: Teachers encourage discussion between students with different opinions.
- **IS4G16E**: Teachers present several sides of a political or social issue.
- **IS4G16F**: Teachers encourage students to express their own opinions.

Table 15: Civic Efficacy Variables Composing S_CITEFF

Category	IS4G33A	IS4G33B	IS4G33C	IS4G33D	IS4G33E	IS4G33F
Migratory Background						
Native	2.29 (0.87)	2.37 (0.92)	2.40 (0.96)	2.37 (0.97)	2.28 (1.03)	2.41 (0.98)
Non-Native	2.16 (0.91)	2.25 (0.94)	2.24 (0.95)	2.25 (1.01)	2.24 (1.09)	2.29 (1.05)
SES Quartile						
Lowest 25%	2.39 (0.93)	2.45 (0.92)	2.43 (0.99)	2.45 (0.98)	2.41 (1.07)	2.48 (0.99)
Lower Middle 25%	2.34 (0.91)	2.43 (0.96)	2.40 (0.99)	2.43 (0.98)	2.32 (1.00)	2.46 (1.01)
Upper Middle 25%	2.27 (0.82)	2.34 (0.90)	2.37 (0.90)	2.33 (0.91)	2.27 (1.02)	2.38 (0.96)
Highest 25%	2.04 (0.83)	2.15 (0.89)	2.29 (0.94)	2.18 (1.00)	2.08 (1.04)	2.23 (1.01)
Total	2.26 (0.88)	2.34 (0.93)	2.37 (0.96)	2.35 (0.98)	2.27 (1.04)	2.39 (1.00)
Observations	6,870	6,870	6,870	6,870	6,870	6,870

Note: Each item is scored from 1 (Very capable) to 4 (Not at all capable). Higher values indicate lower levels of perceived civic efficacy.
Data source: ICCS 2009, 2016, and 2022

Variable descriptions:

- **IS4G33A**: Argue for their point of view.
- **IS4G33B**: Stand as a candidate in a school election.
- **IS4G33C**: Organize a group to achieve a goal.
- **IS4G33D**: Follow a political debate.
- **IS4G33E**: Write a letter to a newspaper about a social issue.
- **IS4G33F**: Speak in front of the class about a political or social topic.

Table 16: School Participation Variables Composing S_SCHPART

Category	IS4G28A	IS4G28B	IS4G28C	IS4G28D	IS4G28E	IS4G28F
Migratory Background						
Native	2.08 (0.95)	1.93 (0.93)	1.98 (0.95)	2.19 (0.91)	2.33 (0.82)	2.56 (0.84)
First-gen/Non-native	2.10 (1.02)	1.94 (0.95)	2.00 (1.07)	2.14 (1.02)	2.33 (0.98)	2.49 (0.94)
SES Quartile						
Lowest 25%	2.27 (0.93)	2.07 (0.98)	2.04 (0.92)	2.26 (0.89)	2.42 (0.88)	2.58 (0.79)
Lower Middle 25%	2.15 (0.95)	2.01 (0.98)	2.01 (1.03)	2.19 (0.90)	2.35 (0.89)	2.56 (0.85)
Upper Middle 25%	2.08 (1.00)	1.86 (0.92)	1.98 (0.97)	2.17 (0.96)	2.33 (0.79)	2.59 (0.95)
Highest 25%	1.86 (0.93)	1.80 (0.84)	1.91 (0.97)	2.10 (0.97)	2.22 (0.84)	2.47 (0.84)
Total	2.09 (0.97)	1.93 (0.94)	1.99 (0.97)	2.18 (0.93)	2.33 (0.85)	2.55 (0.86)
Observations	6,870	6,870	6,870	6,870	6,870	6,870

Note: Each item is scored from 1 (Very often) to 4 (Never). Higher values indicate lower levels of school-based civic participation.
Data source: ICCS 2009, 2016, and 2022

Variable descriptions:

- **IS4G28A**: Participated in a voluntary activity to help others at school.
- **IS4G28B**: Took part in a debate or discussion at school.
- **IS4G28C**: Voted in a school election.
- **IS4G28D**: Took part in making decisions about class or school activities.
- **IS4G28E**: Took part in discussions at a student assembly or student council.
- **IS4G28F**: Stood as a candidate in a school election.

9.2 Within Analysis Robustness: Differential Effect

Table 17: Robustness: INTRUST (Within-School Regressions)

	INTRUST			
	(1)	(2)	(3)	(4)
MB (non-native)	-1.158**	-1.175**	-1.861***	-1.850***
	(0.450)	(0.448)	(0.422)	(0.421)
SES	1.156***	1.137***	0.585***	0.598***
	(0.194)	(0.194)	(0.199)	(0.199)
MB × SES	-1.235***	-1.225***	-0.934***	-0.941***
	(0.334)	(0.331)	(0.332)	(0.330)
Year Fixed Effects		✓		✓
Individual Controls			✓	✓
School Fixed Effects	✓	✓	✓	✓

Note: Robust standard errors clustered at the school level in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 18: Robustness: ELECPART (Within-School Regressions)

	ELECPART			
	(1)	(2)	(3)	(4)
MB (non-native)	-0.923**	-0.965**	-2.070***	-2.038***
	(0.418)	(0.400)	(0.371)	(0.359)
SES	2.663***	2.617***	1.569***	1.605***
	(0.161)	(0.156)	(0.147)	(0.147)
MB × SES	-2.193***	-2.170***	-1.524***	-1.545***
	(0.325)	(0.325)	(0.320)	(0.321)
Year Fixed Effects		✓		✓
Individual Controls			✓	✓
School Fixed Effects	✓	✓	✓	✓

Note: Robust standard errors clustered at the school level in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.
Data source: ICCS 2009, 2016, and 2022

Table 19: Robustness: PV1CIV (Within-School Regressions)

	PV1CIV			
	(1)	(2)	(3)	(4)
MB (non-native)	-36.62***	-37.13***	-45.77***	-45.35***
	(4.38)	(4.03)	(4.16)	(3.95)
SES	35.43***	34.87***	24.30***	24.78***
	(1.78)	(1.66)	(1.59)	(1.57)
MB × SES	-11.88***	-11.59***	-4.49	-4.77
	(3.20)	(3.17)	(2.99)	(3.00)
Year Fixed Effects		✓		✓
Individual Controls			✓	✓
School Fixed Effects	✓	✓	✓	✓

Note: Robust standard errors clustered at the school level in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.
Data source: ICCS 2009, 2016, and 2022

9.3 Across Analysis Robustness: Differential Effect

Table 20: Robustness: INTRUST (Across-School Regressions)

	INTRUST				
	(1)	(2)	(3)	(4)	(5)
MB (Non-native)	-1.044***	-1.092***	-1.280***	-1.092***	-1.298***
	(0.386)	(0.380)	(0.394)	(0.386)	(0.395)
SES (School-level)	2.771***	2.689***	1.857***	2.818***	1.862***
	(0.460)	(0.489)	(0.508)	(0.461)	(0.534)
MB × SES (School-level)	-2.735***	-2.714***	-2.285***	-2.671***	-2.285***
	(0.778)	(0.763)	(0.776)	(0.773)	(0.764)
Individual Controls			✓		✓
School Controls				✓	✓
Year Fixed Effects		✓			✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Data source: ICCS 2009, 2016, and 2022

Table 21: Robustness: ELECPART (Across-School Regressions)

	ELECPART				
	(1)	(2)	(3)	(4)	(5)
MB (Non-native)	-1.973***	-2.077***	-2.424***	-1.965***	-2.376***
	(0.369)	(0.353)	(0.369)	(0.370)	(0.360)
SES (School-level)	3.925***	3.762***	2.005***	3.718***	1.702***
	(0.462)	(0.537)	(0.505)	(0.467)	(0.565)
MB × SES (School-level)	-2.127***	-2.172***	-1.095	-2.246***	-1.444*
	(0.792)	(0.791)	(0.793)	(0.789)	(0.786)
Individual Controls			✓		✓
School Controls				✓	✓
Year Fixed Effects		✓			✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Data source: ICCS 2009, 2016, and 2022

Table 22: Robustness: PV1CIV (Across School Regressions)

	PV1CIV				
	(1)	(2)	(3)	(4)	(5)
MB (Non-native)	-56.47***	-57.87***	-61.65***	-57.87***	-61.25***
	(4.879)	(4.627)	(4.51)	(4.627)	(4.27)
SES (School-level)	64.87***	62.46***	43.06***	62.46***	37.58***
	(5.201)	(5.307)	(5.53)	(5.307)	(5.36)
MB × SES (School-level)	-18.82**	-18.46**	-7.52	-18.46**	-10.26
	(9.449)	(8.925)	(9.43)	(8.925)	(9.16)
Individual Controls			✓		✓
School Controls				✓	✓
Year Fixed Effects		✓			✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Data source: ICCS 2009, 2016, and 2022

9.4 Compensation Hypothesis: Robustness

9.4.1 Compensation Hypothesis: Robustness Within-analysis - Migratory Background (MB)

Table 23: Robustness Checks – Compensation Hypothesis: Within-School Regressions Migratory Background (INTRUST)

	INTRUST			
	(1)	(2)	(3)	(4)
Panel A: MB × School Participation (SCHPART)				
MB (Non-native)	-1.373***	-1.379***	-1.082**	-1.073**
	(0.425)	(0.423)	(0.447)	(0.447)
SCHPART	0.123***	0.116***	0.107***	0.101***
	(0.018)	(0.018)	(0.018)	(0.017)
MB × SCHPART	-0.034	-0.030	-0.032	-0.028
	(0.037)	(0.037)	(0.037)	(0.037)
Panel B: MB × Openness of Discussion (OPDISC)				
MB (Non-native)	-1.509***	-1.512***	-1.213***	-1.204***
	(0.413)	(0.411)	(0.437)	(0.436)
OPDISC	0.143***	0.138***	0.136***	0.132***
	(0.019)	(0.019)	(0.019)	(0.019)
MB × OPDISC	0.004	0.005	0.009	0.010
	(0.042)	(0.042)	(0.042)	(0.042)
Panel C: MB × Citizenship Self-Efficacy (CITEFF)				
MB (Non-native)	-1.689***	-1.689***	-1.443***	-1.431***
	(0.379)	(0.378)	(0.404)	(0.404)
CITEFF	0.145***	0.140***	0.132***	0.129***
	(0.019)	(0.019)	(0.020)	(0.020)
MB × CITEFF	0.047	0.049	0.050	0.051
	(0.038)	(0.038)	(0.038)	(0.038)
Year Fixed Effects		✓		✓
Individual Controls			✓	✓
School Fixed Effects	✓	✓	✓	✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Data source: ICCS 2009, 2016, and 2022

Table 24: Robustness Checks – Compensation Hypothesis: Within-School Regressions Migratory Background (ELECPART)

	ELECPART			
	(1)	(2)	(3)	(4)
Panel A: MB × School Participation (SCHPART)				
MB (Non-native)	-1.772***	-1.785***	-0.829**	-0.807**
	(0.367)	(0.356)	(0.385)	(0.376)
SCHPART	0.273***	0.256***	0.226***	0.212***
	(0.018)	(0.017)	(0.017)	(0.017)
MB × SCHPART	0.028	0.037	0.045	0.054
	(0.036)	(0.036)	(0.037)	(0.037)
Panel B: MB × Openness of Discussion (OPDISC)				
MB (Non-native)	-1.194	-1.902***	-0.873**	-0.848**
	(1.787)	(0.355)	(0.382)	(0.372)
OPDISC	0.193***	0.180***	0.158***	0.148***
	(0.015)	(0.014)	(0.015)	(0.014)
MB × OPDISC	-0.013	-0.008	0.008	0.011
	(0.032)	(0.031)	(0.032)	(0.032)
Panel C: MB × Citizenship Self-Efficacy (CITEFF)				
MB (Non-native)	-2.313***	-2.314***	-1.447***	-1.416***
	(0.332)	(0.319)	(0.353)	(0.341)
CITEFF	0.299***	0.287***	0.265***	0.255***
	(0.013)	(0.013)	(0.012)	(0.012)
MB × CITEFF	0.029	0.034	0.041	0.045
	(0.028)	(0.028)	(0.028)	(0.028)
Year Fixed Effects		✓		✓
Individual Controls			✓	✓
School Fixed Effects	✓	✓	✓	✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Data source: ICCS 2009, 2016, and 2022

Table 25: Robustness Checks – Compensation Hypothesis: Within-School Regressions Migratory Background (PV1CIV)

	PV1CIV			
	(1)	(2)	(3)	(4)
Panel A: MB × School Participation (SCHPART)				
MB (Non-native)	-56.693***	-56.857***	-40.857***	-40.576***
	(4.155)	(3.864)	(3.849)	(3.601)
SCHPART	2.728***	2.503***	1.939***	1.762***
	(0.196)	(0.184)	(0.199)	(0.188)
MB × SCHPART	-0.747**	-0.629*	-0.440	-0.329
	(0.371)	(0.379)	(0.365)	(0.375)
Panel B: MB × Openness of Discussion (OPDISC)				
MB (Non-native)	-26.624	-58.054***	-41.470***	-41.176***
	(16.356)	(3.945)	(3.948)	(3.705)
OPDISC	2.209***	2.083***	1.673***	1.554***
	(0.149)	(0.138)	(0.141)	(0.133)
MB × OPDISC	-0.604**	-0.676**	-0.405	-0.372
	(0.298)	(0.309)	(0.293)	(0.292)
Panel C: MB × Citizenship Self-Efficacy (CITEFF)				
MB (Non-native)	-58.454***	-58.462***	-41.974***	-41.571***
	(4.312)	(3.994)	(3.992)	(3.723)
CITEFF	1.965***	1.805***	1.357***	1.234***
	(0.145)	(0.134)	(0.132)	(0.124)
MB × CITEFF	-0.969***	-0.902***	-0.745***	-0.686***
	(0.262)	(0.256)	(0.235)	(0.234)
Year Fixed Effects		✓		✓
Individual Controls			✓	✓
School Fixed Effects	✓	✓	✓	✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Data source: ICCS 2009, 2016, and 2022

9.4.2 Compensation Hypothesis: Robustness for Within Analysis: Socioeocnomic Status (SES)

Table 26: Robustness Checks – Compensation Hypothesis: Within-School Regressions Socioeconomic Status (PV1CIV)

	PV1CIV			
	(1)	(2)	(3)	(4)
Panel A: SES × School Participation (SCHPART)				
SES	33.719***	33.564***	24.438***	24.760***
	(1.472)	(1.400)	(1.468)	(1.431)
SCHPART	2.121***	1.928***	1.847***	1.694***
	(0.187)	(0.174)	(0.180)	(0.168)
SES × SCHPART	0.234	0.239	0.262*	0.258*
	(0.144)	(0.143)	(0.142)	(0.142)
Panel B: SES × Openness of Discussion (OPDISC)				
SES	23.585***	34.626***	25.113***	25.362***
	(6.670)	(1.416)	(1.510)	(1.468)
OPDISC	1.778***	1.643***	1.589***	1.477***
	(0.130)	(0.120)	(0.122)	(0.113)
SES × OPDISC	0.220*	0.170	0.206	0.176
	(0.125)	(0.132)	(0.125)	(0.127)
Panel C: SES × Citizenship Self-Efficacy (CITEFF)				
SES	34.025***	33.833***	24.170***	24.515***
	(1.483)	(1.408)	(1.489)	(1.451)
CITEFF	1.297***	1.154***	1.214***	1.103***
	(0.126)	(0.117)	(0.119)	(0.112)
SES × CITEFF	0.386***	0.380***	0.377***	0.369***
	(0.121)	(0.124)	(0.111)	(0.112)
Year Fixed Effects		✓		✓
Individual Controls			✓	✓
School Fixed Effects	✓	✓	✓	✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Data source: ICCS 2009, 2016, and 2022

Table 27: Robustness Checks – Compensation Hypothesis: Within-School Regressions Socioeconomic Status (INTRUST)

	INTRUST			
	(1)	(2)	(3)	(4)
Panel A: SES × School Participation (SCHPART)				
SES	0.820***	0.815***	0.525***	0.535***
	(0.152)	(0.151)	(0.159)	(0.159)
SCHPART	0.106***	0.100***	0.100***	0.095***
	(0.016)	(0.016)	(0.016)	(0.015)
SES × SCHPART	0.027	0.027	0.029	0.029
	(0.018)	(0.018)	(0.018)	(0.018)
Panel B: SES × Openness of Discussion (OPDISC)				
SES	-0.410	0.835***	0.523***	0.530***
	(1.067)	(0.156)	(0.162)	(0.161)
OPDISC	0.137***	0.133***	0.139***	0.136***
	(0.016)	(0.016)	(0.016)	(0.016)
SES × OPDISC	0.024	0.024	0.024	0.023
	(0.020)	(0.021)	(0.022)	(0.022)
Panel C: SES × Citizenship Self-Efficacy (CITEFF)				
SES	0.725***	0.719***	0.400**	0.410**
	(0.161)	(0.161)	(0.164)	(0.164)
CITEFF	0.144***	0.140***	0.143***	0.140***
	(0.018)	(0.018)	(0.018)	(0.018)
SES × CITEFF	0.007	0.007	0.008	0.008
	(0.020)	(0.020)	(0.021)	(0.020)
Year Fixed Effects		✓		✓
Individual Controls			✓	✓
School Fixed Effects	✓	✓	✓	✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Data source: ICCS 2009, 2016, and 2022

Table 28: Robustness Checks – Compensation Hypothesis: Within-School Regressions Socioeconomic Status (ELECPART)

	ELECPART			
	(1)	(2)	(3)	(4)
Panel A: SES × School Participation (SCHPART)				
SES	1.828***	1.816***	1.437***	1.463***
	(0.126)	(0.124)	(0.129)	(0.127)
SCHPART	0.255***	0.240***	0.236***	0.223***
	(0.016)	(0.015)	(0.016)	(0.015)
SES × SCHPART	-0.030**	-0.030**	-0.026*	-0.026*
	(0.015)	(0.015)	(0.015)	(0.015)
Panel B: SES × Openness of Discussion (OPDISC)				
SES	0.915	1.999***	1.576***	1.597***
	(0.792)	(0.127)	(0.131)	(0.130)
OPDISC	0.176***	0.165***	0.161***	0.152***
	(0.012)	(0.012)	(0.012)	(0.012)
SES × OPDISC	0.021	0.022	0.027*	0.024
	(0.015)	(0.015)	(0.015)	(0.015)
Panel C: SES × Citizenship Self-Efficacy (CITEFF)				
SES	1.744***	1.730***	1.286***	1.312***
	(0.124)	(0.123)	(0.127)	(0.126)
CITEFF	0.282***	0.271***	0.273***	0.265***
	(0.012)	(0.011)	(0.011)	(0.011)
SES × CITEFF	-0.002	-0.002	-0.001	-0.002
	(0.015)	(0.015)	(0.015)	(0.015)
Year Fixed Effects		✓		✓
Individual Controls			✓	✓
School Fixed Effects	✓	✓	✓	✓

Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Data source: ICCS 2009, 2016, and 2022

9.4.3 Compensation Hypothesis: Robustness for Across-Anlysis Migratory Background (MB)

Table 29: Robustness Checks – Compensation Hypothesis: Across-School Regressions Migratory Background (PV1CIV)

	PV1CIV				
	(1)	(2)	(3)	(4)	(5)
Panel A: MB × Openness of Discussion (OPDISC)					
Migratory Background (MB)	-58.82***	-62.99***	-54.15***	-60.02***	-58.66***
	(3.941)	(4.141)	(4.547)	(4.236)	(4.582)
OPDISC	1.579***	2.575***	1.659**	3.684***	3.342***
	(0.597)	(0.684)	(0.684)	(0.736)	(0.785)
MB × OPDISC	2.420*	2.292*	1.835	2.661*	2.233
	(1.277)	(1.251)	(1.440)	(1.395)	(1.428)
Panel B: MB × School Participation (SCHPART)					
Migratory Background (MB)	-59.26***	-63.45***	-54.50***	-60.45***	-59.10***
	(3.973)	(4.192)	(4.606)	(4.290)	(4.656)
SCHPART	1.385**	3.551***	1.411*	4.059***	4.169***
	(0.679)	(0.812)	(0.831)	(0.897)	(0.975)
MB × SCHPART	2.714*	1.945	1.988	2.997*	2.037
	(1.530)	(1.512)	(1.815)	(1.731)	(1.801)
Panel C: MB × Civic Self-Efficacy (CITEFF)					
Migratory Background (MB)	-60.58***	-65.17***	-55.88***	-61.95***	-60.77***
	(4.155)	(4.314)	(4.725)	(4.499)	(4.768)
CITEFF	2.305***	4.778***	3.724***	5.228***	6.117***
	(0.668)	(0.775)	(0.744)	(0.837)	(0.845)
MB × CITEFF	2.833*	1.819	0.964	1.474	0.529
	(1.470)	(1.439)	(1.619)	(1.557)	(1.616)
Year Fixed Effects				✓	✓
Individual Controls		✓			✓
School-Level Controls			✓		✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Data source: ICCS 2009, 2016, and 2022

Table 30: Robustness Checks – Compensation Hypothesis: Across-School Regressions Migratory Background (INTRUST)

	INTRUST				
	(1)	(2)	(3)	(4)	(5)
Panel A: MB × Openness of Discussion (OPDISC)					
Migratory Background (MB)	-1.089***	-0.824**	-1.014***	-0.971**	-0.963**
	(0.385)	(0.386)	(0.375)	(0.388)	(0.383)
OPDISC	0.234***	0.209***	0.264***	0.204***	0.255***
	(0.050)	(0.047)	(0.051)	(0.047)	(0.050)
MB × OPDISC	-0.279**	-0.297**	-0.269*	-0.278**	-0.283**
	(0.139)	(0.137)	(0.138)	(0.140)	(0.136)
Panel B: MB × School Participation (SCHPART)					
Migratory Background (MB)	-1.059***	-0.777*	-0.975**	-0.922**	-0.930**
	(0.406)	(0.408)	(0.394)	(0.412)	(0.401)
SCHPART	0.197***	0.122*	0.206***	0.114	0.215***
	(0.071)	(0.070)	(0.075)	(0.072)	(0.072)
MB × SCHPART	-0.217	-0.224	-0.198	-0.190	-0.229
	(0.201)	(0.198)	(0.202)	(0.202)	(0.199)
Panel C: MB × Civic Self-Efficacy (CITEFF)					
Migratory Background (MB)	-1.160***	-0.872**	-1.063***	-1.007**	-1.039**
	(0.419)	(0.420)	(0.406)	(0.422)	(0.415)
CITEFF	0.321***	0.288***	0.334***	0.249***	0.360***
	(0.056)	(0.059)	(0.059)	(0.060)	(0.057)
MB × CITEFF	-0.131	-0.143	-0.140	-0.090	-0.171
	(0.141)	(0.141)	(0.139)	(0.140)	(0.141)
Year Fixed Effects				✓	✓
Individual Controls		✓			✓
School-Level Controls			✓		✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Data source: ICCS 2009, 2016, and 2022

Table 31: Robustness Checks – Compensation Hypothesis: MB × Civic Variables (Outcome: S_ELECPART)

	ELECPART				
	(1)	(2)	(3)	(4)	(5)
Panel A: MB × Openness of Discussion (OPDISC)					
Migratory Background (MB)	-2.334***	-1.714***	-2.137***	-2.034***	-2.031***
	(0.366)	(0.383)	(0.359)	(0.375)	(0.369)
OPDISC	0.225***	0.183***	0.280***	0.163***	0.276***
	(0.057)	(0.057)	(0.060)	(0.054)	(0.062)
MB × OPDISC	0.011	-0.017	0.039	0.025	0.007
	(0.111)	(0.116)	(0.108)	(0.108)	(0.115)
Panel B: MB × School Participation (SCHPART)					
Migratory Background (MB)	-2.352***	-1.738***	-2.154***	-2.065***	-2.048***
	(0.361)	(0.380)	(0.351)	(0.371)	(0.363)
SCHPART	0.319***	0.217**	0.330***	0.193***	0.362***
	(0.079)	(0.082)	(0.080)	(0.068)	(0.087)
MB × SCHPART	0.082	0.083	0.152	0.145	0.079
	(0.146)	(0.144)	(0.136)	(0.134)	(0.146)
Panel C: MB × Civic Self-Efficacy (CITEFF)					
Migratory Background (MB)	-2.518***	-1.861***	-2.304***	-2.190***	-2.215***
	(0.372)	(0.385)	(0.361)	(0.378)	(0.373)
CITEFF	0.472***	0.446***	0.499***	0.344***	0.564***
	(0.062)	(0.062)	(0.064)	(0.060)	(0.062)
MB × CITEFF	-0.089	-0.139	-0.101	-0.001	-0.179
	(0.145)	(0.136)	(0.141)	(0.131)	(0.147)
Year Fixed Effects				✓	✓
Individual Controls		✓			✓
School-Level Controls			✓		✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Data source: ICCS 2009, 2016, and 2022

9.4.4 Compensation Hypothesis: Robustness for Across-Analysis Socioeconomic Status (SES)

Table 32: Robustness Checks – Compensation Hypothesis: Across-School Regressions Socioeconomic Status (ELECPART)

	ELECPART				
	(1)	(2)	(3)	(4)	(5)
Panel A: SES × Openness of Discussion (OPDISC)					
Socioeconomic Status (SES)	3.355***	2.282***	3.145***	3.166***	1.801***
	(0.365)	(0.371)	(0.384)	(0.407)	(0.405)
OPDISC	0.187***	0.165***	0.173***	0.197***	0.172***
	(0.049)	(0.047)	(0.050)	(0.048)	(0.047)
SES × OPDISC	0.043	0.072	0.022	0.132	0.141
	(0.111)	(0.109)	(0.113)	(0.128)	(0.126)
Panel B: SES × School Participation (SCHPART)					
Socioeconomic Status (SES)	3.303***	2.159***	3.049***	3.184***	1.695***
	(0.362)	(0.372)	(0.382)	(0.410)	(0.416)
SCHPART	0.217***	0.229***	0.214***	0.193***	0.217***
	(0.072)	(0.066)	(0.070)	(0.064)	(0.059)
SES × SCHPART	-0.056	-0.060	-0.063	-0.018	-0.012
	(0.142)	(0.134)	(0.136)	(0.177)	(0.162)
Panel C: SES × Civic Self-Efficacy (CITEFF)					
Socioeconomic Status (SES)	2.914***	1.773***	2.656***	2.806***	1.380***
	(0.391)	(0.394)	(0.406)	(0.470)	(0.476)
CITEFF	0.399***	0.397***	0.399***	0.359***	0.366***
	(0.057)	(0.054)	(0.054)	(0.054)	(0.049)
SES × CITEFF	0.156	0.165	0.120	0.222	0.186
	(0.144)	(0.136)	(0.129)	(0.150)	(0.125)
Year Fixed Effects				✓	✓
Individual Controls		✓			✓
School-Level Controls			✓		✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Data source: ICCS 2009, 2016, and 2022

Table 33: Robustness Checks – Compensation Hypothesis: Across-School Regressions Socioeconomic Status (INTRUST)

	INTRUST				
	(1)	(2)	(3)	(4)	(5)
Panel A: SES × Openness of Discussion (OPDISC)					
Socioeconomic Status (SES)	1.923***	1.471***	2.019***	1.828***	1.444***
	(0.385)	(0.393)	(0.393)	(0.404)	(0.419)
OPDISC	0.155***	0.147***	0.159***	0.166***	0.163***
	(0.049)	(0.049)	(0.049)	(0.048)	(0.048)
SES × OPDISC	0.005	0.016	0.010	0.045	0.054
	(0.120)	(0.119)	(0.119)	(0.125)	(0.121)
Panel B: SES × School Participation (SCHPART)					
Socioeconomic Status (SES)	2.051***	1.567***	2.127***	1.986***	1.555***
	(0.399)	(0.412)	(0.407)	(0.416)	(0.435)
SCHPART	0.073	0.081	0.075	0.069	0.081
	(0.074)	(0.074)	(0.074)	(0.075)	(0.075)
SES × SCHPART	0.061	0.059	0.067	0.079	0.080
	(0.166)	(0.165)	(0.166)	(0.180)	(0.177)
Panel C: SES × Civic Self-Efficacy (CITEFF)					
Socioeconomic Status (SES)	1.816***	1.332***	1.877***	1.766***	1.338***
	(0.434)	(0.449)	(0.443)	(0.468)	(0.490)
CITEFF	0.240***	0.240***	0.240***	0.225***	0.230***
	(0.056)	(0.055)	(0.055)	(0.058)	(0.057)
SES × CITEFF	-0.043	-0.046	-0.035	-0.021	-0.023
	(0.130)	(0.127)	(0.133)	(0.134)	(0.133)
Year Fixed Effects				✓	✓
Individual Controls		✓			✓
School-Level Controls			✓		✓

Robust standard errors clustered at the school level in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Data source: ICCS 2009, 2016, and 2022

Table 34: Robustness Checks – Compensation Hypothesis: Across-School Regressions Socioeconomic Status (PV1CIV)

	PV1CIV				
	(1)	(2)	(3)	(4)	(5)
Panel A: SES × Civic Teacher Efficacy (CITEFF)					
Socioeconomic Status (SES)	65.305***	42.227***	61.328***	64.017***	36.624***
	(4.399)	(4.224)	(4.670)	(4.679)	(4.328)
CITEFF	2.772***	3.345***	2.770***	2.217***	2.859***
	(0.690)	(0.638)	(0.719)	(0.665)	(0.636)
SES × CITEFF	-0.031	-0.020	-0.555	0.809	0.218
	(1.367)	(1.169)	(1.303)	(1.333)	(1.038)
Panel B: SES × School Participation Climate (SCHPART)					
Socioeconomic Status (SES)	68.390***	45.752***	64.409***	66.385***	38.529***
	(4.631)	(4.640)	(4.959)	(4.913)	(4.678)
SCHPART	1.280*	1.707**	1.222	1.184	1.842**
	(0.764)	(0.707)	(0.745)	(0.728)	(0.691)
SES × SCHPART	-1.217	-1.397	-1.371	-0.508	-0.455
	(1.426)	(1.361)	(1.358)	(1.713)	(1.443)
Panel C: SES × Openness to Discussion (OPDISC)					
Socioeconomic Status (SES)	67.034***	45.683***	63.515***	64.365***	38.518***
	(4.299)	(4.372)	(4.647)	(4.570)	(4.430)
OPDISC	1.865**	1.636**	1.649**	2.173***	1.970***
	(0.604)	(0.581)	(0.601)	(0.580)	(0.576)
SES × OPDISC	-1.456	-0.800	-1.786	-0.227	0.219
	(1.107)	(1.115)	(1.139)	(1.187)	(1.110)
Year Fixed Effects				✓	✓
Individual Controls		✓			✓
School-Level Controls			✓		✓

Robust standard errors clustered at the school level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Data source: ICCS 2009, 2016, and 2022

10 AI Disclosure

o What AI tools have been used and how.

We used chat GPT to assist in formatting our code and Grammarly to help with detecting gramtic errors in our text.

o In what ways have these tools contributed to increasing the quality of the thesis?

AI allowed us to structure our code in a standardized manner that allowed us to improve the aesthetics of our outputs and navigate our files in a more efficient manner. Further, Grammarly enabled us to detect grammar mistakes that we did not find during our initial reviews of our text.

o What potential risks were found using AI and what measures were taken to reduce these risks?

The most prominent risk would come from using AI to perform research, while its capable of creating summaries of papers it misses the nuance and often leaves out details that our crucial to understanding what the paper is contributing.

o What are the insights gained from using AI tools in the thesis writing process?

AI is very useful when it comes to doing remedial tasks that need to be repeated numerous times, however it is not capable or reliable when it comes to formulating research or communicating reuslts.