The Civic Knowledge Gaps in Chile, Colombia and Mexico: An Application of the Oaxaca-Blinder Decomposition Method Using Data From the 2009 International Civic and Citizenship Education Study (ICCS)

Citation

Permanent link
http://nrs.harvard.edu/urn-3:HUL.InstRepos:27112704

Terms of Use
This article was downloaded from Harvard University’s DASH repository, and is made available under the terms and conditions applicable to Other Posted Material, as set forth at http://nrs.harvard.edu/urn-3:HUL.InstRepos:dash.current.terms-of-use#LAA

Share Your Story
The Harvard community has made this article openly available. Please share how this access benefits you. Submit a story.

Accessibility
The Civic Knowledge Gaps in Chile, Colombia and Mexico: An Application of the Oaxaca-Blinder Decomposition Method using Data from the 2009 International Civic and Citizenship Education Study (ICCS)

Silvia Diazgranados Ferráns

A Dissertation
Presented to the Harvard Graduate School of Education in Candidacy for an Ed.D. in Human Development and Education

Dissertation Committee
Helen Haste, Ph.D.
Robert Selman, Ph.D.
Andrew Ho, Ph.D.

Cambridge, MA, May 9th, 2016
# Table of Contents

LIST OF FIGURES .......................................................................................................................... iii
LIST OF TABLES ............................................................................................................................... iv
Abstract ........................................................................................................................................ v
Introduction .................................................................................................................................. 1
Chapter 1. Conceptual Framework ............................................................................................... 4
   The Competent Citizen and Approaches to Civic and Citizenship Education ....................... 4
   What experiences and contexts are associated with civic competence? ................................. 10
      School resources ..................................................................................................................... 13
      School Climate .................................................................................................................... 15
      Civic Learning opportunities ............................................................................................... 17
      Conclusion ............................................................................................................................ 21
Civic and Citizenship Education in Chile, Colombia and Mexico .............................................. 22
   Chile ........................................................................................................................................ 22
   Colombia ................................................................................................................................. 24
   Mexico ..................................................................................................................................... 26
Chapter 2. The Civic Competence Gaps in Chile, Colombia and Mexico .................................. 28
   Method .................................................................................................................................... 30
      Participants ............................................................................................................................ 30
      Dataset ................................................................................................................................ 31
      Measures ............................................................................................................................... 32
      Analytic Strategy .................................................................................................................. 39
   Results ..................................................................................................................................... 40
Chapter 3. The Factors that Account for the Civic Knowledge Gap in Chile, Colombia and
   Mexico: An Application of the Oaxaca-Blinder Test ................................................................ 50
   Method .................................................................................................................................... 53
      Participants ............................................................................................................................ 53
      Dataset ................................................................................................................................ 54
      Measures ............................................................................................................................... 54
      Analytic Strategy .................................................................................................................. 65
   Results ..................................................................................................................................... 71
Regression Results: A Taxonomy of Models for the Relationship of Civic Knowledge and SES ................................................................. 71

The Decomposition of the Civic Knowledge Gaps: The Oaxaca Blinder-Method .......... 76

Chapter 4. Discussion ................................................................................................................................. 94

The Civic Competence Gaps in Chile, Colombia and Mexico ............................................ 94
The Composition of the Civic Knowledge Gaps in Chile, Colombia and Mexico ............ 100
Limitations and Future Research ........................................................................................................... 112

References ............................................................................................................................................... 116
The Civic Knowledge Gap in Chile, Colombia and Mexico: An Application of the Oaxaca-Blinder Method using Data from the 2009 ICCS.

LIST OF FIGURES

Figure 1. Civic Knowledge by Levels of SES and Country ......................................................... 42
Figure 2. Sense of Internal Political Efficacy by Levels of SES and Country .......................... 43
Figure 3. Expected Adult Electoral Participation by Levels of SES and Country ................... 44
Figure 4. Expected Participation in Legal and Illegal Protests by Levels of SES and Country ... 45
Figure 5. Attitudes toward Corruption in Government by Levels of SES and Country .......... 46
Figure 6. Attitudes toward Authoritarianism in Government by Levels of SES and Country ... 47
Figure 7. Attitudes toward Disobeying the Law by SES and Country ........................................ 48
Figure 8. Attitudes toward Civil Disobedience by Levels of SES and Country ..................... 48
Figure 9. Changes in the NISB (National indicator of Socio-Economic Status) Coefficient by Regression Model ........................................................................................................ 74
Figure 10. Percentages of the Civic Knowledge Gap in Chile, Colombia and Mexico Due to Differences in the Characteristics and Differences in Civic Knowledge Gains of Students from High and Low SES backgrounds ........................................................................................................ 84
Figure 11. Percentage of the total civic knowledge gaps in Chile, Colombia and Mexico accounted by differences in the average individual/family characteristics, school resources, school climate and civic learning opportunities of students from high and low SES background .......... 86
Figure 12. Percentage of the total civic knowledge gaps in Chile, Colombia and Mexico that are accounted by differences in the average civic knowledge gains that students obtain from equal access to school resources, school climate and civic learning opportunities ......................... 89
Figure 13. Decomposition of the Civic knowledge gap in Chile, Colombia and Mexico into 1) differences in average characteristics by dimension, and 2) differences in average civic knowledge gains, between high and low SES students by dimension.................................................93

LIST OF TABLES

Table 1. Participation and Sample sizes for student and teaches within schools..........................31
Table 2. Means, standard deviations and Cronbach’s alpha of outcome variables in each country ........................................................................................................................................34
Table 3. Intercept, Coefficients, Standard errors and Effect Sizes of Socio-Economic Status (NISB) on students’ civic outcomes in Chile (n=5192), Colombia (n=6204) and Mexico (n=6576) ..................................................................................................................................................41
Table 4. List of proficiency levels outlining type of knowledge and understanding at each level of the International Civic Knowledge Scale (Schultz, Ainley & Fraillon, 2011) .......................56
Table 5. Cronbach's alpha, means and standard deviations of predictors for high and low SES students in Chile, Colombia and Mexico.................................................................................................................................64
Table 6. Taxonomy of Models for the Relationship of Individual/family Background Characteristics, School Resources, School Climate and Civic Learning Opportunities with the Civic Knowledge of Students in Chile, Colombia and Mexico ..........................................................................................................................75
Table 7. Regression Analysis of Civic Knowledge for High and Low SES Student Samples in Chile, Colombia and Mexico ..................................................................................................................................78
Table 8. Decomposition of Civic Knowledge Scores of Students in Chile, Colombia and Mexico ................................................................................................................................................83
Abstract

The existence of significant differences in the civic knowledge, civic attitudes and civic skills of young people from different socio-economic (SES) backgrounds represent civic competence gaps that affect their ability to act as personally responsible, participatory and justice-oriented citizens in their society (Carretero et al., 2016; Westheimer & Kahne, 2004). Identifying civic competence gaps, their magnitude, and the factors that account for them should be a priority for researchers, policy-makers and educators in Latin America because they can threaten the strength, stability and legitimacy of democracies in the region (Levinson, 2010). I use data from three nationally representative samples of 8th grade students who participated in the 2009 International Civic and Citizenship Study (ICCS) to identify civic competence gaps between youth from high and low SES backgrounds in Chile, Colombia and Mexico, using eight measures related to civic competence. I document large gaps in students’ civic knowledge in the three countries, and small gaps in their internal sense of political efficacy, intention to participate in future electoral processes and legal and illegal protests, as well as in their attitudes toward corruption, authoritarianism and disobeying the law. I do not find gaps in students’ attitudes toward civil disobedience. I then use the Oaxaca-Blinder method (Oaxaca, 1973; Blinder, 1973) to identify how 1) differences in access to school resources, positive school climates and interactive civic learning opportunities, and 2) differences in the civic knowledge gains that students from different SES backgrounds obtain from equal school resources, school climates and civic learning opportunities, account for the civic knowledge gaps in these countries. Findings suggest that the largest portion of the civic knowledge gap in Chile is due to differences in civic knowledge gains, but in Colombia and Mexico the largest portions are due to differences in levels of access. In all three countries high SES students have significantly more access than low SES students to the school resources, school climate and civic learning opportunities that are associated with higher civic knowledge, and in every case, the school SES accounts for the largest portion of the explained civic knowledge gaps. Given equal characteristics, low SES students in Colombia and Mexico –but not in Chile- obtain more civic knowledge gains than high SES students from school resources, school climate and civic learning opportunities.
Introduction

Researchers and educators interested in empowering young people with the citizen competencies they need to participate actively and constructively as members of their society have documented the existence of significant differences among youth from advantaged and disadvantaged SES backgrounds in the civic knowledge, attitudes and skills they need to live as constructive citizens and effectively influence decisions in the political process, in ways that protect their rights and interests in society. In the United States, Meira Levinson (2010) has notably called attention to the existence of “a profound civic empowerment gap that disproportionately muffles the voices of non-white, foreign-born, and especially low-income citizens and amplifies the voices of white, native-born, and especially wealthy citizens” (p. 26). Levinson discusses how African-American, Hispanic, and poor students perform significantly worse on the National Assessment of Educational Progress’ (NAEP) test of civic knowledge than white, Asian, and middle-class students (Lutkus, Weiss, Campbell, Mazzeo, & Lazer, 1999; U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, & National Assessment of Educational Progress (NAEP), 2007). Similarly, the American Political Task Force (2004) has noted that while low income, less educated citizens, citizens of color, and immigrants, are underrepresented in the political process, their more privileged counterparts participate more and are increasingly better organized to press their demands on the government. In turn, public officials are more responsive to the privileged than to average citizens and the less affluent, such that: “Citizens with low or moderate income speak with a whisper that is lost to the ears of an inattentive government, while the advantage roar with the clarity and consistency that policymakers readily head” (p. 1).
Reports from the IEA’s Civic Education Study (CIVED), which in 1999 collected cross-national data about the civic knowledge, attitudes and skills of 14 year old students in 16 countries (Sherrod, 2003) and the International Civic and Citizenship Education Study (ICCS), which in the year 2009 collected similar data in 38 countries (Schulz, Fraillon, Ainley, Losito, Kerr, 2008) suggest that civic competence gaps similar to the one reported by Levinson (2004) and the American Political Task force (2004) in the United States, may be dividing youth from different backgrounds in other countries of the world (Schultz, Ainley, Fraillon, Kerr & Losito, 2010). The issue may be particularly relevant in Latin America, due to the historical struggle of the region with violence, corruption, authoritarianism, and respect for the rule of law (Reimers, 2007). However, no research has been conducted to formally document the existence and magnitude of civic competence gaps among youth of different SES backgrounds in the region, and the factors that may account for observed gaps. Such research is needed because the existence of gaps in the civic knowledge, civic attitudes and identities and civic skills that young people need to live as constructive members in their society is an issue that needs to be understood and addressed as civic competence gaps not only constitute a threat to the legitimacy of a democracy (Levinson, 2004), but in the context societies that have experienced war, dictatorships and deep inequalities, they may also hurt the possibility of sustaining regional peace, stability and economic growth in the years to come. Furthermore, it is a moral mandate as stated in the 26th article of the Declaration of Human Rights: “Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding,
tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace” (United Nations, 1948).

In have organized this dissertation in four chapters. In chapter one, I document different conceptions of what it means to be a competent citizen, I identify the factors that scholars have used to explain differences in civic competence among youth of different SES backgrounds, and provide some contextual information about the national civic education policies of Chile, Colombia and Mexico. In chapter two, I take advantage of available data from the 2009 ICCS to analyze three nationally representative samples of 8th grade students from Chile, Colombia and Mexico, with the aim of documenting civic competence gaps between high and low SES students along different dimensions of civic performance, using outcomes related to civic knowledge, and civic attitudes and identities. In chapter three, I explore the factors that account for the large civic knowledge gaps that I encounter in the three countries, by looking at how they can explained into components that are due to differences in the access that students from different SES backgrounds have to school resources, positive school climate and interactive civic learning opportunities, and components that are due to differences in the amount of civic knowledge students from different SES backgrounds are able to gain when they are given the same level of access to those school characteristics. In chapter four, I discuss all findings, limitations and future research.
Chapter 1. Conceptual Framework

The Competent Citizen and Approaches to Civic and Citizenship Education

A foundational aim of education is to prepare children to become competent citizens of their society (Dewey, 1916). Around the world, there are different conceptions about what it means to be a competent citizen according to the prevailing values of different social and political systems, but most research on the topic has been conducted in the context of democratic societies (Nussbaum, 2006). Within this literature, there are abundant discussions about the characteristics that young people need to develop in order to effectively undertake their role as citizens and there are different civic education models that respond to such conceptions.

Traditional models of civic education were rooted in social learning models of human development, where individuals were seen as passive learners who are shaped by the environment. Consistently, those models of civic education embraced a notion of civic competence where students are to be provided with information about the structure and functioning of the government and its institutions, through teacher instruction, based on methods of conditioning and reinforcement. New models of civic education are rooted in cultural and ecological models of human development, which recognize that learners are active agents who, in their interaction with different resources, environments and learning opportunities, acquire not just the knowledge, but the attitudes, identities and skills they need to use their knowledge effectively and take an active role in their societies. Responding to these models of human development, a New Civics movement (Spencer Foundation, 2009) has been shifting the focus from solely teaching knowledge and information through teacher instruction, towards one that attends to the development of
other equally important civic competencies—including attitudes, values and skills—through interactive practices (Patty & Cepeda, 2004; Cox, Jaramillo, Reimers & 2005). In this regard, Carretero, Haste & Bermudez (2016) posit a framework that identifies different dimensions of civic learning: 1) civic knowledge and understanding, 2) civic skills, 3) civic values, motivation and identity, and 4) civic action.

1. **Civic knowledge and understanding:** Competent citizens must gain factual knowledge about political institutions, processes and national history. In addition, they must be able to develop the ability to integrate discrete knowledge of facts with an understanding and critical reflection about the principles and concepts required for responsible action. In this regard, research shows that students begin to understand civic concepts in isolated and static ways, but as they gain practice and their conceptual thinking develops, they gradually develop the ability to understand these concepts and link them in increasingly complex and dynamic conceptual networks (Barret, 2007; Carretero, Castorina & Levinas, 2013).

2. **Civic values and identity:** Competent citizens must be able to adopt civic attitudes and identities that dispose them positively toward engaging effectively in democratic life (Youniss & Levine, 2009). Civic values and identities refer to the individual and collective ideals and practices with which people align themselves according to different conceptions about what it means to be a good citizen, as well as to the motivations and self-concepts through which they exercise their citizenship. Some civic values include attitudes toward democratic practices (e.g.: conventional forms of participation such as electoral processes and social movement forms of participation such as protests), as well as toward anti-democratic practices (e.g.: breaking the law,
corruption, authoritarianism in the government, etc.) (MEN, 2004). Civic identities are not psychological traits, but active psychosocial processes through which citizens make sense of their roles and position themselves in relation to their social reality and their civic communities (Carretero et al, 2016; Haste, 2014; Haste & Abraham, 2008). Civic identities include the concepts that young people have about their own civic skills, including their sense of civic agency and civic efficacy, as well as the ideas they have about the types of citizens they want to be and identify with. While sense of agency refers to “the sense of being a meaningful actor, responsible to one’s community welfare”, sense of efficacy refers to “the confidence in one’s ability to take action, effect change and achieve desired results” (Carretero et al, 2016, pg. 298). Research suggests that the civic attitudes and civic identities that young people have affect the degree to which they are able and willing to translate their civic knowledge into meaningful civic actions.

3. *Civic skills*: In order to exercise their citizenship responsibly, young people need a variety of civic skills. Fine, Bermudez and Barr (2007) divide civic skills in terms of intellectual skills, participatory skills and socio-emotional skills. Intellectual skills refer to the ability to analyze information, synthesize it, understand different perspectives, evaluate them, reach conclusions, defend a given position, etc. Participatory skills refer to the skills people need to communicate, collaborate, problem solve, negotiate, organize and take collective action to address problems. Socio-emotional skills refer to the interpersonal abilities that people have to establish constructive relationships with other people in their family, friends and community members. They include the ability to feel empathy, take multiple perspectives and integrate them into their considerations
4. Civic action: Civic actions refer to the way in which students integrate their civic knowledge, civic attitudes and identities and civic skills into behaviors. In the case of young students, civic action refer to the civic behaviors they engage in before they formally become citizens. Participating in civic activities and discussing civic, social and controversial issues form part of the civic actions that students can experience in their families, classrooms and communities. Schools that adopt participatory pedagogies provide students with opportunities to take part in civic activities and discussions, which can help them connect factual information about civics with a deeper understanding of real life situations, and to develop the attitudes, motives, identities and skills they need to exercise their citizenship effectively (Hess, 2009; Hess & McAvoy, 2014; Lievrouw, 2011).

In identifying different types of civic competencies beyond civic knowledge, Carretero et al (2016) align themselves with civic education programs that use a “bottom-up” approach to civic learning, where young people are seen as gaining civic competence through interactive experiences. They question the assumption of traditional “top down” civic education approaches which work under the premise that students become civically competent when they gain civic knowledge through teacher instruction. Such programs fail to recognize that having civic knowledge does not equate with being a constructive and participatory citizen, as civically knowledgeable young people can still lack the civic attitudes, identities and skills they need to support democratic institutions and to participate actively in democratic processes.
Another influential framework of civic competence was introduced by Westheimer and Kahne (2004). These authors conducted a study about different civic education programs in the US and identified the characteristics of three different types of “good citizens”, which are not seen as mutually exclusive, but as representative of a spectrum of distinct ideas, beliefs and orientations about what good citizenship is and what good citizens do, which different education initiatives often emphasize, identify or engage with. The personally responsible citizen is kind to others, volunteers, helps those in need, tells the truth, follows rules, works hard, seeks to maintain harmony and to keep the community calm and safe. The participatory citizen engages in national, state and local civic affairs, and gets involved with community organizations, the local government and other people in collective actions to address the issues that affect the community. Finally, the justice-oriented citizen thinks critically about societal problems and the actions that could be taken to transform problems at their root, challenging the structures that reproduce inequality and injustice, and conducting protests to question authority and the status quo.

These three views of the good citizens are not necessarily in conflict, as citizens who are good neighbors can also participate actively in democratic processes and challenge unjust laws or structures in society. Interestingly, Kahne & Westheimer (2003) authors emphasize that embracing a vision of good citizenship devoid of politics, based solely on the conception of the personally responsible citizen, will not contribute to strengthening a democracy. In fact, an education that emphasizes only the importance of individuals’ good character may promote the development of good, helpful and obedient community members, but unless it also emphasizes participation and social justice, such education would not prepare citizens to question unfair socioeconomic and political structures or to
take constructive action to transform their communities. In other words, competent citizens in democratic societies should not only exhibit the characteristics of personally responsible citizens, but more importantly, the characteristics of the participatory and justice-oriented citizens.

Based on Carretero et al. (2016) and Westheimer and Kahne (2004), I adopt a vision of citizenship according to which civically competent youth in democratic societies have the 1) civic knowledge, 2) civic values and identities, 3) civic skills and 4) civic actions they need to live as (a) personally responsible (b) participatory, and (c) justice oriented citizens. In doing so, I emphasize that competent citizens are not only knowledgeable, but have developed the democratic values, identities and skills they need to act in ways that are consistent with democratic values. I also emphasize that competent citizens do not only lead responsible lives that show respect and care for others and for social norms, but they are also able to participate actively and effectively in political processes, and to question and challenge unjust social structures in ways that strengthen a democracy and protect the wellbeing of the larger society.

According to this notion of civically competent citizens must develop not just the civic knowledge and understanding, but also the civic attitudes and skills they need to act in democratic ways. In fact, young people may have civic knowledge, but lack the attitudes, identities and skills they need to use that knowledge. For example, they may know and understand the mechanisms that are available to them for participation, but they may not have the attitudes and skills they need to effectively engage in civic actions that protect their interests in society. As such, to demonstrate civic competence, they need to become competent in all these dimensions of civic learning. Similarly, this notion of civic
competence also suggests that civically competent citizens need to develop be personally responsible, but also participate actively in their society and take a stand against injustice. In fact, a citizen can be a good, caring and helpful person, without participating in political processes and without showing any concern for issues of social justice. Similarly, a citizen can be a good person, who participates in political processes, but without questioning the existence of structural injustice in society. To be competent citizen, young people need to show that they good character, and participate actively in democratic processes, and demonstrate a concern for social justices in their society.

*What experiences and contexts are associated with civic competence?*

Empirical research in the field of civic education sheds light into the factors that are associated with students’ civic competence.

- *Students from less affluent and less educated families have less civic knowledge than their more wealthy and educated counterparts.*

One of the most significant outcomes of the 1999 CIVED study, which explored the attitudes towards democracy and the civic knowledge of 14 year old students in 28 countries worldwide (Sherrod, 2003), was the existence of a substantial gap in the civic knowledge of students from more or less affluent and highly and less educated home backgrounds (Torney-Purta, 2001; Torney-Purta, 2002). The results are consistent with the findings from the 2009 ICCS (Schulz et al, 2008), where the reports of both the world-wide study (Schulz et al, 2010) and the Latin-American module (Schultz, Ainley, Friedman & Lietz, 2011) showed that students with parents from higher occupational status tend to perform at significantly higher levels than students from less advantaged homes.
The international report of the ICCS (Schultz et al., 2010) shows strong associations between students’ civic knowledge and parental occupation status, parents’ educational attainment and home literacy resources in all countries. This positive association may be due to the fact that students from less affluent backgrounds do not have access to the social and cultural capital that the upper class children enjoy and which society favors (McLeod, 2004). In fact, the family upbringing of disadvantaged students may not provide them with the resources, environments and experiential opportunities they need in order to acquire the background knowledge, attitudes, identities and skills valued by democratic societies. In this regard, Verba, Schlozman and Brady (1995) found that children from more affluent backgrounds come from families where adults are significantly more influential in the political process as they are more likely to vote in presidential elections, be part of campaign work, do informal community work, contact elected officials, participate in protests or sit on a board. Lauglo & Oia (2006) also documented that young people with parents who express interest in political and social issues have significantly higher levels of civic knowledge and civic engagement than children whose parents do not express such interest. Findings from the ICCS show that children who have parents interested in social and political problems and who report talking more frequently with them about those social and political issues exhibited significantly higher scores on the civic knowledge scale than their counterparts (Schultz et al, 2010).

Research point at different mechanisms by which families transmit civic competence advantages to their children. Some researchers argue that parents differ by SES in the way in which they define their parenting roles and the values and expectations that underlie their interactions with their children. For example, a study in which Laureau
(2002) interviewed 88 families showed that parents from affluent backgrounds engage in “concerted cultivation” of children’s skills, while working and poor class families believe in the accomplishment of “natural growth”. Specifically, children from more affluent backgrounds have parents who focus on helping them develop their special skills, by stressing the use of language, dialogue and reflective conversations and by arranging a set of activities that enhance their learning and provide them with opportunities to develop the reasoning and critical skills that leaders need. Parents from working class and poor families tend to believe that their children will succeed and thrive as long they are provided with food, love and safety. They also use more directives and recur more to physical discipline, in ways that dispose children to obey and comply. As a result, children from lower SES backgrounds develop an emerging sense of constriction and powerlessness, while children from upper middle classes develop an emerging sense of entitlement. Other researchers argue that social class differences in parent’s role, values and expectations are less determinant than the differential access that families from different social classes have to a wide range of resources. In this regard, Chin and Phillips (2004) documented the various ways in which families from different social classes organize activities of their children. Analysis of the ethnographic data and interviews collected from thirty-two fourth graders led the authors to conclude that the differences between middle class and working class children can best be explained by the differential access that parents from different social classes have to different resources. Specifically, their findings suggest that parents of children from working class and poor families try hard to arrange high quality activities for their children, but they face many obstacles to succeed because they lack the financial
resources, and the human, social and cultural capital they need to access resources and services to cultivate competence.

- **Schools maintain and reinforce the social inequality that originates at home**

Schools can reinforce social inequality and the gap between students from advantaged and disadvantaged families because schools serving students from different SES backgrounds often provide children with different experiences that effectively lead them to fulfill predefined roles that perpetuate the status quo (Bowles, 1977). Specifically, schools often provide unequal access to children from different SES backgrounds to school resources, and they often expose them to different school climates and different types of civic learning opportunities. While high SES children have access to an education that prepares them to become leaders who have the knowledge, attitudes, identities and skills they need to advocate for their interests in society, low SES children are educated in ways that make them less informed and less able to critically navigate politics in ways that question the status quo, and also less interested in engaging with political systems that they perceived were not designed to represent them.

In what follows, I discuss how differential levels in access to school resources, positive school climates and interactive civic learning opportunities at school can reinforce gaps in civic competence between children of low and high SES backgrounds.

**School resources**

School resources refer to the financial and human capital that allow schools to function effectively and to provide students with a high quality education. Financial resources allow schools to place themselves in safer and better equipped locations, obtain access to more and better learning materials and curricular options, and recruit more and
better qualified teachers and school administrators. Human capital refers to the quantity and quality of the school community members, including both the school staff and teachers who facilitate learning processes, and the students who come school to learn.

Research shows that schools that serve wealthy students have more financial and human resources than schools who serve low income students. In the US, these patterns have been documented by data on curricular offerings and teacher credentials. Specifically, low income students are often concentrated in schools with lower resources, which offer less curricular choices and inferior courses and levels of competition, such that the most disadvantaged students receive the least effective preparation to succeed (Orfield, 2000). US students from poor and minority backgrounds also attend schools that have significantly less access to high-quality teachers (Borman & Kimball, 2005), and less opportunities for professional development (Levine & Marcus, 2007). In Latin America, we observe similar patterns. Reimers (2006) linked education to poverty and inequality in the region by showing how schools fail to provide educational opportunities to the children of the poor. Specifically, he documented how children from low income families not only have less access to preschool, primary and secondary education, but they attend schools with significantly less financial and human resources. PISA studies confirm those patterns by showing how the amount of financial and human resources that Latin American countries spend on education are not equitable distributed across schools, and that countries such as Chile, Colombia and Mexico, often allocate scarce resources to schools that serve children from advantaged backgrounds (OECD, 2014). In the region, public and private schools function as separate systems of education, with very different levels of resources and serving completely different populations of students along the lines of their SES.
backgrounds. In Colombia, poor students in rural areas attend public schools where one
teacher facilitates learning for children of diverse ages and levels of development within
the same room, due to the difficulty of affording separate teachers for students in different
grades in areas of low population density. Poor students in urban areas also attend public
schools that are at great disadvantage when compared to private schools, with less
materials, larger classes, lower teacher quality, and located in communities with less
cultural resources than private schools.

In Chile, the use of co-payments and highly selective processes of admission have
contributed to create one of the most highly segregated education systems of the world,
with schools that have been documented to be even more socioeconomically segregated
than neighborhoods (Elacqua & Santos, 2013; Flores & Carrasco, 2013; Valenzuela,
Villalobos & Gomez, 2013). In this regard, several studies have found that socioeconomic
segregation within schools is one of the key factors contributing to the reproduction of
inequality in Latin America (Rossetti, 2014). As it pertains to the development of civic
competence, some think that socioeconomic segregation may have particularly bad effects
on students because it does not allow low SES students from socializing with peers who
have had richer civic experiences, and it prevents all students from learning the value of
social integration and cohesion (Rothstein, 2004).

School Climate

Cohen, McCabe, Michelli & Pickeral describe school climate as “the quality and
classer of school life that is based on patterns of people’s experiences of school life and
reflects norms, goals, values, interpersonal relationships, teaching and learning practices,
and organizational structures” (2009, p. 182). The climate of a school influences students’
civic competence because it can contribute to the creation of cultures that influence the degree to which students are encouraged and feel motivated to acquire the civic knowledge and the civic attitudes, identities and skills they need to respond to the social challenges they face at school (Diazgranados, Selman & Feigenberg, 2014).

Diazgranados & Selman (2014) identified safety, order, positive student-teacher relationships and openness to student participation as salient characteristics of the school climate, which have a powerful influence on students’ civic competencies as they can provide, or not, young people with the supports they need to deal constructively with social problems and to take an active stand against injustice. In this regard, research shows that the lack of safety and order, as reflected by high incidence of social problems and negative student behaviors constitute stressors that reduce the quality of teaching and learning in the classroom (Van der Doef & Maes, 2002; Lorion, 2003) and that have a negative effect on student’s civic knowledge (Claes, Hooghe & Resskens, 2009). Similarly, the emotional quality of the classroom, as reflected by positive student-teacher relationships has been associated with higher achievement and student engagement (Becker & Luthar, 2002; Pianta, Belsky, Vandergrift, Houts & Morrison, 2008). In Latin America, the results of the Second Regional Comparative and Explicative Study (SERCE), which was conducted in 15 countries including Chile, Colombia and Mexico, concluded that a school climate, characterized by a warm environment and positive student-teacher relationships, was the variable that more consistently explained learning in the region (Treviño, et. al., 2010). Other research in Colombia also shows that students in schools characterized by more caring, safe and participatory climates are more civically competent than students in
schools with negative student-teacher relationships and less safe and participatory environments (Diazgranados, 2015; Diazgranados & Noonan, 2014)

Unfortunately, parallel to other inequality trends, schools serving students from privileged backgrounds have more positive climates than schools serving low income students. In the US, schools serving low income populations, Hispanic and Black majority schools, and low performing schools report less positive school climates, including less positive student-teacher relationships, more student behavior and safety problems, than schools serving high income populations, and white students (Battistich, Solomon, Watson, & Schaps, 1997; Jain, Cohen, Huang, Hanson & Austin, 2015; Rudasill, Reio, Stipanovic, & Taylor, 2010; Skinner & Belmont, 1993). The prevalence of behavior problems and violence is also higher in schools serving low SES students (Paganini, 1999) and researchers have documented that teachers tend to evaluate students from low SES backgrounds more negatively and to discipline them more frequently than they do with high SES students (Brantlinger, 1991). Negative teacher-student relationships and inequitable disciplinary practices toward children of different SES backgrounds, such as the use of zero-tolerance discipline policies in response to school violence, have also been documented to affect mostly schools serving students from low SES backgrounds (Drakeford, 2004; Gregory, Noguera, 2005; Skiba & Noguera, 2010).

*Civic Learning opportunities*

Civic learning opportunities refer to a collection of diverse educational practices - ranging from discussion of controversial social and political issues, to involvement in civic activities and service learning, to the study of history and the government- which aim to increase students’ civic competencies in democratic societies (Kahne, Crow & Lee, 2013).
In the field of civic and citizenship education there are greatly active debates about the types of pedagogical approaches that schools should privilege in order to promote civic learning. Haste (2004) has described a long standing tension in education theory between “knowledge” and “praxis” as the route to understanding. While top down/knowledge models of education assume that providing young people with information is in and on itself the way to promote civic competence, bottom up/praxis approaches informed by theories of Dewey (1916) and Vigotsky (1962) assume that young people must actively engage in a variety of developmentally appropriate and relevant tasks to become civically competent, because only through praxis and interaction will they be able to make sense of the knowledge they have gained and to apply it to their own lives. While traditional models of civic education embrace top/down approaches and place the focus on transmission of knowledge through teacher instruction, a New Civics movement (Spencer Foundation, 2009) embraces bottom-up models that recognize the importance of other civic competencies and interactive instruction as the path to learning.

Among the diversity of civic education practices that exist around the world (Torney-Purta, Schwille, & Amadeo, 1999), discussing controversial social and political issues in open classroom environments and providing students with the opportunity to get involved in interactive civic activities at school and in the community have gained the attention of education researchers and practitioners who align themselves with the New Civics. Discussing and debating controversial social and political issues in the classroom is a pedagogical practice that is grounded in deliberative democratic values, or the notion that legitimate political decisions are the result of open, inclusive and respectful discussions and debates among citizens, who follow and monitor the actions of the government
(Gutmann & Thompson, 1996). For educators who embrace deliberative views of democracy in their classroom, young people can best gain the knowledge and understanding, and the civic attitudes, identities and skills they need to be competent citizens, by participating in discussions and debates about current and historical issues where they can expose their positions and arguments and listen to the ideas of people who have other views (Duhaylongsod, Snow, Selman & Donovan, 2015; Hess, 2009; Hess & McAvoy, 2014, Torney-Purta, 2002; ). The second practice, providing students with opportunities to get involved in civic activities and gain first hand experiences with real social and political issues, is a pedagogical practice grounded in participatory democratic values, or the notion that citizens should take active part in decision-making processes in their communities. For educators who embrace participatory views of democracy, young people can become civically competent when they can connect the civic knowledge they have with real social and political issues through first hand experiences (Bruner, 1960; Dewey, 1916; Dewey, 1938).

Cross-sectional and longitudinal studies have shown that when done well, civic learning opportunities can dramatically increase civic competence in students from less advantaged backgrounds (CIRCLE & Carnegie Corporation of New York, 2003; Hess, 2009; Hess & McAvoy, 2014, Torney-Purta, 2002; Gibson & Levine, 2003; Kahne & Middaugh, 2008; Kahne & Sporte, 2008; Kahne & Westheimer, 2003). In fact, multiple international studies using data from the ICCS have shown that open classrooms for discussion and engagement in civic activities are an effective strategy to promote civic knowledge (Alivernini & Manganelli, 2011; Barber, Torney-Purta, Wilkenfeld, & Ross, 2015; Barber, Sweetwood & King, 2015; Isac, Maslowski, Creemers & van der Werf,
2014; Mangenelli, Alivernini & Di Leo, 2012), higher sense of political efficacy (Knowles & McCafferty-Wright, 2015; Diemer & Rapa, 2016; Mangenelli et al, 2012), participation in conventional citizenship practices such as electoral processes (Isac et al, 2014; Quintelier & Hoghe, 2013), and in social movement related practices such as participation in legal protests (Quintelier & Hoghe, 2013). Research also shows that, controlling for prior civic engagement and demographic backgrounds, different pedagogical approaches promote different forms of civic and political engagement. While discussing social issues in an open classroom environment promotes students’ engagement with political issues and electoral processes, the opportunity to participate in civic actions and service learning projects increases students’ community-based and expressive action (Kahne, Crow & Lee, 2013).

Interestingly, data from the Belgian Political Panel Study (BPPS), which tracked late adolescents’ political attitudes and behaviors to explore the effects of civic education on political engagement, showed that formal civic education and the inclusion of students in group projects can compensate for inequalities in parental socialization with respect to political engagement (Neudorf et al., 2013). But unfortunately, schools that serve students from privileged SES backgrounds provide more interactive and participatory civic learning opportunities than schools serving less privileged children. In this regard, Kahne & Middaugh (2008) found that the amount of civic learning opportunities that students received were associated with their race, SES and school achievement, with privileged students receiving more offerings. Kahne (2009) also found that when suburban schools are compared with urban and rural schools, or when schools with high test scores on academic achievement are compared with schools with lower scores, privileged schools are more likely to offer interactive civic education, in the form of more simulations of civic
processes, more opportunities to engage in civic actions and practice civic skills and more extra-curricular activities related to civic learning. Struggling schools tend not to provide such experiences, either because they lack the resources or because they concentrate on academic subjects. Similarly, using data from the National Household Educational Survey, Condon (2007) found that children from privileged backgrounds are more likely to attend schools with a school government where they can participate in debates, than students from less privileged backgrounds. And finally, Oakes (2005) also showed that schools reproduce inequalities by disproportionately placing socio-economically disadvantaged students and African-American and Latinos in lower tracks, giving them less access to civic learning opportunities critical for their learning.

Conclusion

A revision of literature suggests that when accounting for civic competence gaps it is important to consider the role of: 1) family background characteristics such as SES, the degree to which parents show interest in politics, the degree to which parents are actively involved in civic and political initiatives, and the efforts they make to cultivate civic competence in their children by having discussions about social and political issues with them; 2) the resources of the school, as reflected by financial, human and cultural capital of the school, including the school SES, the school sector (public or private), and other variables that may reflect resources such as teacher-student ratios, teacher credentials, resources available in the community where the school is located, etc., 3) the climate of the school, as reflected by school safety, order and discipline, problematic student behaviors, student-teacher relationships, etc., and finally, 4) the civic learning opportunities at school, as reflected by the frequency with which students discuss civic and social issues at school,
the degree to which the discussions take place in classrooms that are open to different
perspectives, and the opportunities students have to participate in interactive civic activities
such as community service learning and civic actions, etc.

*Civic and Citizenship Education in Chile, Colombia and Mexico*

Latin America is a greatly diverse region that is developing economically (CEPAL, 2015), but which has experienced a long history of social turmoil, violence and
dictatorships. Persistent poverty, great inequalities and the appearance of authoritarian
forms of government have constrained opportunities for social and political participation
of large segments of the population in the region (Reimers, 2007). The expansion of crime,
vviolence and drug-trafficking has undermined the rule of law (Reimers, 2007). The
subservience of public institutions to the interest of political parties, bureaucrats or unions
as well as corruption, have affected the effectiveness of public services and of citizens’
trust (Reimers, 2007). In turn, public distrust in institutions and low participation in
democratic processes are a chronic threat to social stability and to the sustainability of
democratic values and practices in the region (Cox, 2010). In what follows, I present
background information about the civic education policies of the three Latin American
countries that have experienced social and political issues with significant consequences
for democratic citizenship: Chile, Colombia and Mexico.

*Chile*

After seventeen years of military repression and multiple violations of human rights
–including the assassination, torture and disappearance of thousands of members opposing
the regime of General August Pinochet, in 1989 Chile started a peaceful process of
transition to democratic society. Twenty five years later, the country is a politically stable
society with high levels of trust in political parties (Bargsted, Castillo & Somma, 2014). Interestingly, while Chileans exhibit very low levels of conventional participation in electoral processes, in recent years they have shown increasing interest in participating in non-conventional forms of engagement such as protesting and large scale social movements (Donoso, 2013). Economically, Chile suffers from great income disparities and segregation (Larrañaga & Valenzuela, 2011) and exhibits the highest indices of inequality of all the member states of the Organization for Economic Cooperation and Development (OECD) region (OECD, 2013).

In Chile, the National Ministry of Education determines the national curriculum that all schools must offer, but schools can include additional subjects and topics of their choosing. Civic and citizenship education are of medium priority for the country (Schultz, Ainley, Friedman & Lietz, 2011). The Ministry has established a mandatory framework for schools that aims to ensure that children will know their rights and responsibilities, develop competencies that are coherent with democracy and a commitment to their country, are able to assess public information and express their opinions, study history in ways that allow them to understand current issues and participate in society (Schultz et al, 2011). The national framework of citizenship education specifies vertical goals that are specific to grades and subjects, and transversal goals which are cross-curricular in nature. Typically, civic and citizenship education is integrated into social science, but its prominence varies according to grade level, with some grades being required to address vertical goals while other grades are not (Conacevic, 2013). The extent to which students are encouraged to participate in cross-curricular activities of civic and citizenship education and the specific characteristic of the opportunities provided to students depend entirely on
each school (Conacevic, 2013). In this regard, it is worth noting that in Chile the quality of education varies significantly between schools, because co-payments and highly selective processes of admission have made Chile one of the most segregated education systems of the world, with schools that have been documented to be even more socioeconomically segregated than neighborhoods (Elacqua & Santos, 2013; Flores & Carrasco, 2013; Valenzuela et al., 2013). The effects of the high socioeconomic segregation are such that researchers have found that the educational achievement of students in Chile depends more on the aggregate SES of the school than on their own family SES background (Mizala & Torche, 2012).

**Colombia**

Colombia is an ethnically diverse nation, which has endured the most difficult and prolonged armed conflicts in Latin America. Poverty, inequality and corruption are at the origin of the violent confrontations that have affected the country for more than six decades, which went beyond the fights between multiple actors—army, guerrillas and paramilitary—struggling for political power and control of lands when drug-trafficking made war a profitable enterprise for the parties involved. As a result, more than five million people have been displaced and more than 220,000 have lost their lives (Centro Nacional de Memoria Histórica, 2011). Unfortunately, Colombia also exhibits high rates of family violence (Knaul & Ramírez, 2005), gang-related and community violence (McIlwaine & Moser, 2001), school-related violence (Cepeda-Cuervo, Pacheco-Durán, García-Barco, & Piraquive-Peña, 2008; Chaux et al., 2009), and criminal activity that cannot be directly linked to the armed conflict.
The difficulties that affect Colombia, led the government to think about the ways in which education could contribute to change the culture of violence, discrimination, corruption, and civic apathy that had emerged in the society and decided to make civic and citizenship education a national priority (Jaramillo & Mesa, 2009). In 2003 the Ministry of Education promoted discussions among a group of researchers, academics, school teachers, NGO leaders and policy-makers, with the purpose of identifying the citizenship competencies that every Colombian student must learn in school (Chaux, 2009). In their efforts, they moved away from traditional approach to civic education that focused on transmission of knowledge and factual information regarding the country’s system of government, towards an emphasis on competencies learned through experiential learning. They formulated national standards that established clear and public criteria about the basic levels of competencies that children have the right to learn in school (Patty & Cepeda, 2005). Citizenship competencies were defined as “the articulated combination of the basic knowledge and the cognitive, communicative, emotional and integrative attitudes and actions that citizens need in order to live and act constructively in a democratic society” (MEN, 2004). The Colombian National Standards were organized according to three areas of citizenship performance: 1) Peaceful coexistence— the competencies that people need to establish social relations based in mutual care, respect and tolerance; 2) Participation and democratic responsibility— the competencies people need to exercise their citizenship in an active, informed, critical and responsible way; 3) Plurality, identity and respect for differences— the competencies people need to recognize, value and respect differences among different individuals and social groups. All three areas of citizenship performance
were framed within the perspective of respect and defense of human rights, a transversal category present across all dimensions (MEN, 2004).

Citizenship education in Colombia functions as a cross-curricular subject that is regarded as being part of all content subjects and school activities (Fernandez, 2013). The national standards serve as quality guidelines that establish the topics and skills that schools must teach students, but schools have the right to make decisions about their own teaching programs, curriculum, assessments, pedagogical methods, governance, culture, etc. However, schools must develop institutional education projects to specify their own plan to meet the national standards in the way that fits them best (Fernandez, 2013). Additionally, all schools should provide students with opportunities to participate in the school government and the student council, and to take part in creating and reviewing the schools’ coexistence handbook (Fernandez, 2013)

Mexico

Despite having one the longest-standing tradition of democratic governance in Latin America, Mexico has been criticized for the prolonged hegemony of one political party in power for 60 consecutive years. In this regard, Nobel Peace Prize Mario Vargas Llosa described Mexico "the perfect dictatorship", discussing the ways in which the government had been able to successfully avoid criticisms that could put at risk its perpetuation in power. Economically, the country exhibits the same social inequalities that are prevalent in the rest of Latin America, and it has recently seen the emergence of great violence and corruption fostered by drug-trade.

Civic and citizenship education is of high priority for Mexico and is considered an integral part of an education vision that aims to strengthen democratic and cultural
coexistence (Schultz et al., 2009). A reform of civic and citizenship education at the end of the 20th century led to the incorporation of content related to human rights and democratic values, with a focus on the development of the civic and ethical competencies that children need to coexist peacefully, participate actively and consider others when making decisions (Schultz et al., 2011). The national curriculum contains a formative field of personal development, ethical and citizenship education, which is delivered in different ways from preschool to upper secondary school. In preschool the area helps students explore issues of identity, autonomy and interpersonal relationships. In primary school, the area helps students develop relationships of coexistence based on respects for human dignity, equality of rights, solidarity and rejection of discrimination, and appreciation of resources. (Ministry of Education, 2008). In lower secondary education, a subject is taught at least 160 hours per year and schools should also ensure that all curricular subjects contribute to the development of civic and ethical reflection and that the school environment act as a space within to which students can practice democracy (Medina, 2013). For higher grades, the Integral Reform of Upper Secondary Education in Mexico establishes a National Baccalaureate that brings a common curricular framework to all states, which attempts to help young people develop generic competencies needed for work, as well as civic, citizenship and ethical competencies needed for live in a democratic society (Medina, 2013).
Chapter 2. The Civic Competence Gaps in Chile, Colombia and Mexico

The existence of significant differences in the civic knowledge, civic attitudes, identities and skills between groups of people from different socioeconomic (SES) backgrounds represent civic competence gaps that affect their ability to act as personally responsible, participatory and justice-oriented citizens in their society (Carretero et al., 2016; MEN, 2004; Westheimer & Kahne, 2004). Identifying civic competence gaps, their magnitude, and the factors that account for them should be a priority for researchers, policy-makers and educators in Latin America because they can threaten the strength and legitimacy of democracies (Levinson, 2010). In the context of countries such as Chile, Colombia and Mexico, which have struggled with war, authoritarianism, corruption and deep inequalities, they may also disrupt the stability, peace and economic growth of the region.

In this chapter I use data from the 2009 ICCS dataset to identify civic competence gaps between high and low SES students along two dimensions of civic performance in Chile, Colombia and Mexico, three Latin American countries that have embraced different approaches to civic and citizenship education. I use eight scales available in the ICCS to operationalize a notion of civic competence according to which civically competent youth have the civic knowledge, civic values and identities, and civic skills they need to act in personally responsible, participatory and justice oriented ways (Carretero et al., 2016; Westheimer & Kahne, 2004). I use unadjusted regression models to identify the effect of SES on students’ civic knowledge, attitudes and identities, as demonstrated in eight scales from the 2009 ICCS. Specifically, I ask the following questions:
• Do children from high SES backgrounds in Chile, Colombia and Mexico exhibit higher civic competence than children from low SES backgrounds?
   
o  Do high SES students exhibit higher levels of competence in ways that are consistent with the personally responsible, participatory and justice oriented citizens?
   
o  Do the magnitude of the civic competence gaps between high and low SES students vary in different countries and across measures?

I expect to find that children from high SES backgrounds in the three countries will exhibit significantly better scores than children from low SES backgrounds in all measures related to civic competence because it is likely that their SES have given them access to the supports they need to develop the knowledge, attitudes and identities they need to act as personally responsible, participatory and justice oriented citizens. Specifically, I expect that high SES students will exhibit higher levels of sophistication on measures related to civic knowledge and understanding, as well as civic attitudes and identities that are consistent with personally responsible, participatory and justice-oriented types of citizenship. In fact, I expect that high SES students will exhibit less supportive attitudes toward breaking the law and lower interest in participating in future illegal protests. I expect high SES students to be more participatory, and therefore, to exhibit a higher internal sense of political efficacy and higher intentions to participate in electoral processes. I expect high SES students to be more justice-oriented, and therefore, to express higher interest in participating in future legal protests, and to report negative attitudes toward the use of authoritarianism and corruption in the government, and positive attitudes toward the use of civil disobedience.
With regard to country comparisons, I expect to find larger civic competence gaps in Chile than in Colombia and Mexico, because the Chilean school system has been widely documented to exhibit some of the most pronounced socioeconomic segregation in the world and because Chile has a national policy of citizenship education that gives leaves up to each school the responsibility of developing their own civic education programs, in ways that will accentuate the differences in civic competence between students of different SES backgrounds because schools who serve different populations often have significantly different levels of financial, human and cultural capital to develop civic education strategies effectively. With regard to the size of different types of civic competence gaps, I expect to observe larger gaps in students’ civic knowledge because this dimension was measured with a performance-based measure, and smaller gaps in students’ civic attitudes and identities because these outcomes were measured with self-reports, which are more susceptible to social desirability bias (Diazgranados et al., 2015).

Method

Participants

I used nationally representative samples of grade 8 students in Colombia, Chile and Mexico, who in the year 2009 participated in the ICCS study. The ICCS is a cross-sectional study that was conducted by the IEA to assess students’ civic knowledge and attitudes in 38 countries. Within Chile, Colombia and Mexico, the test was administered to 17,952 students and 5,610 teachers, within 580 schools (See Table 1), who responded to a civic knowledge test and to an international and a Latin America background questionnaire that contained 90 items, for approximately two hours of their time. Teachers and school principals responded to a one-hour questionnaire providing contextual information. In the
analysis, I incorporated data from the civic knowledge test and both the student and teacher questionnaires.

Table 1. Participation and Sample sizes for student and teachers within schools

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Number of Schools that Participated</th>
<th>Total Number of Students Assessed</th>
<th>Total Number of Teachers Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colombia</td>
<td>188</td>
<td>6204</td>
<td>2010</td>
</tr>
<tr>
<td>Chile</td>
<td>177</td>
<td>5192</td>
<td>1756</td>
</tr>
<tr>
<td>Mexico</td>
<td>215</td>
<td>6576</td>
<td>1844</td>
</tr>
<tr>
<td>Total</td>
<td>580</td>
<td>17,952</td>
<td>5,610</td>
</tr>
</tbody>
</table>

Dataset

The ICCS dataset was collected using surveys that were administered to participants using a probabilistic two-stage stratified cluster sample design within each country. The first stage used a PPS (probability proportional to size as measured by number of students enrolled in a school) procedure to sample schools within each country. During the second stage, an intact class from the target grade within each sampled schools was chosen randomly and all students were surveyed. In schools that did not have more than 20 teachers teaching at the target grade, all teachers were surveyed. In schools where there were more teachers, up to 15 teachers teaching at the target grade were chosen at random to be surveyed. The complex sample design of the ICCS allowed researchers to collect at a reasonable cost enough information to obtain estimates with enough precision levels for all target groups within each country. When computing estimates using ICCS data, I
accounted for the complex sample design of the test by using sampling and replicate weights.

**Measures**

**Outcomes**

I use eight outcomes available in the 2009 ICCS dataset that capture students’ civic knowledge and a set of civic attitudes and identities that are related to their civic competence. *Table 2* shows the means, standard deviations and Cronbach’s alpha of these outcome scales for each participant country. Below, I discuss each construct in detail.

- **INTERNATIONAL CIVIC KNOWLEDGE SCALE**: Civic knowledge and understanding was measured with 79 cognitive test items which give international comparable results for students’ performance. 73 items included a multiple choice format, and six items allowed for open ended responses, with students requested to write a short response to each question. Given the challenges of measuring the broad domain of civic knowledge within the limited testing time imposed by physical and cognitive constrains, student booklets were structured using a complex assessment design that allow for the administration of a great amount of items in a sensible way. The test was presented in a balanced rotated cluster design, which means that while at the school level all items were responded, any individual student only had to complete 35 items of the test. The test mapped to four content areas (civic society and systems, civic principles, civic participation, civic identities) and three cognitive domains (knowing, reasoning and analyzing). (Schultz et al., 2008). The scale was obtained using the Rasch model (Rasch, 1960), with a reliability of .84. Given the complex survey design, plausible values –which are estimated using regression models that
predict missing values on the questions that students did not answer based on the responses of other students with similar values- are needed to estimate summary student statistics to account for measurement error (von Davier, Gonzalez, & Mislevy, 2009). The scale was set to have an international mean of 500 and standard deviation of 100 points for equally weighted national samples. Three proficiency levels were established using a hierarchical scale in which civic knowledge becomes more sophisticated as student progress up the scale (See Schultz, Ainley & Fraillon, 2011).

Civic values, motivations and identity were measured with 7 scales where students rated their own levels of agreement or disagreement with different statements that were later used to create scales. All variables were standardized to have an international mean of 50 and a standard deviation of 10. All scales showed good internal consistency (See Table 2 for Cronbach’s alpha within each country). Confirmatory Factor Analysis were used to confirm that the data fit the models for each construct (See Schultz, Ainley & Fraillon, 2011)
### Table 2: Means, standard deviations and Cronbach’s alpha of outcome variables in each country

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Mean (Standard Deviation)</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chile</td>
<td>Colombia</td>
</tr>
<tr>
<td>Civic Knowledge</td>
<td>483.21 (87.49)</td>
<td>461.92 (80.86)</td>
</tr>
<tr>
<td>INPOLEF a</td>
<td>51.35 (9.99)</td>
<td>52.31 (8.76)</td>
</tr>
<tr>
<td>ELECPART b</td>
<td>49.83 (12.38)</td>
<td>53.65 (8.89)</td>
</tr>
<tr>
<td>LEGPROT c</td>
<td>53.67 (10.89)</td>
<td>54.94 (8.65)</td>
</tr>
<tr>
<td>ILLPROT d</td>
<td>52.57 (9.72)</td>
<td>49.87 (9.73)</td>
</tr>
<tr>
<td>ATTCORR e</td>
<td>48.62 (10.44)</td>
<td>48.18 (9.22)</td>
</tr>
<tr>
<td>AUTGOV f</td>
<td>47.98 (10.52)</td>
<td>48.5 (9.16)</td>
</tr>
<tr>
<td>DISLAW g</td>
<td>49.23 (10.97)</td>
<td>48.72 (9.93)</td>
</tr>
<tr>
<td>CIVDIS h</td>
<td>48.93 (10.03)</td>
<td>50.43 (9.79)</td>
</tr>
</tbody>
</table>

Note: Civic knowledge was standardized to have an international mean of 500 and a standard deviation of 100. All other scales were standardized to have an international mean of 50 and a standard deviation of 10. Cronbach’s alpha were calculated for each national sample (See Schultz et al, 2011). INPOLEF=Internal Sense of Political Efficacy; ELECTPART=Expected Participation in Future Electoral Processes; LEGPROT=Expected Participation in Legal Protests; ILLPROT=Expected Participation in Future Illegal Protests; ATTCORR=Attitudes toward Corruption in the Government; AUTGOV=Attitudes Toward Authoritarianism in the Government; DISLAW=Attitudes toward Disobeying the Law; CIVDIS=Attitudes toward Civic Disobedience

- **INPOLEF**: A continuous student-level variable that measures students’ sense of internal political efficacy. The scale reflects the mean of six items in which students rate their level of confidence about their capacity to become politically involved. For example: “I have a good understanding of the political issues facing this country”, “As an adult I will be able to take part in politics”, “When political issues or problems are
being discussed I have something to say”. Higher values on this scale reflect a higher sense of internal political efficacy. Consistent with participatory orientation to citizenship (Westheimer & Kahne, 2004, MEN, 2004), competent citizens are expected to exhibit higher values on this scale.

- **ELECTPART**: A continuous student-level variable that measures students’ expected adult electoral participation. The scale reflects the mean of four items, describing students’ intention to vote as adults in 1) national and 2) local elections and 3) to get information about a candidate before voting (I would certainly do this/ I would probably do this / I would probably not do this/ I would certainly not do this). Higher values reflect greater expectation of participating in electoral processes in the future. Consistent with participatory orientations to citizenship, competent citizens are expected to exhibit higher values on this scale (Westheimer & Kahne, 2004; MEN, 2004)

- **LEGPROT**: A continuous student-level variable that measures students’ expected participation in future legal protests. The scale reflects the mean of six items, describing students’ behavioral intentions to use of legal mechanisms to protest things they believe are wrong (e.g.: writing a letter to a newspaper, taking part in a peaceful march or rally, contacting an elected representative, collecting signatures for a petition, choosing not to buy certain products, etc.). Higher values represent greater expectation of participating in legal protests in the future. Consistent with justice-oriented orientations to citizenship, competent citizens are expected to obtain higher values on this scale, as students should be interested in taking part in actions that would transform negative aspects of society (Westheimer & Kahne, 2004; MEN, 2004).
• **ILLPROT:** A continuous student-level variable that measures students’ expected participation in illegal protests. The scale reflects the mean of three items describing students’ behavioral intentions to use of illegal protest mechanisms (e.g.: spray-painting slogans on walls, blocking traffic and occupying public buildings). Higher values represent greater agreement with the idea of participating in illegal protests in the future. Competent citizens are expected to exhibit lower values on this scale because while they should be able to express in public their disagreement with any aspect of society that they consider unfair, it is important that they do it using democratic mechanisms of participation that show respect for the rule of law (Westheimer & Kahne, 2004; MEN, 2004)

• **AUTGOV:** A continuous student-level variable that measures students’ attitudes toward authoritarianism in the government. The scale reflects the mean of nine items, describing students’ level of agreement or disagreement toward the use of authoritarian practices in the government. For example: “*It is better for government leaders to make decisions without consulting anybody*”, “*People in the government must enforce their authority even if it means violating the rights of some citizens*”, “*People in government lose part of their authority when they admit their mistakes*”, “*People whose opinions are different than those of the government must be considered its enemies*”, “*The government should close communication media that are critical*”, “*If the president does not agree with Congress, he or she should dissolve it*”. Greater values represent higher acceptance of authoritarian practices in the government. Competent citizens should exhibit lower values in this scale as they are expected to be able to question
undemocratic practices and abuses of power in the government (Westheimer & Kahne, 2004; MEN, 2004)

- **ATTCORR**: A continuous student-level variable that measures students’ attitudes toward corruption in the government. The scale reflects the mean of six items, describing students’ level of agreement or disagreement toward statements that reflect the use of corrupt practices in government. For example: “It is acceptable for a civil servant to accept bribes if his salary is too low”, “It is acceptable for a civil servant to use the resources of the institution in which he/she works for personal benefit”, “Good candidates grant personal benefits for voters in return for their votes”, “Paying an additional amount to a civil servant in order to obtain a personal benefit is acceptable” , “It is acceptable that a civil servant helps his/her friends by giving them employment in his/her office”. Higher scores represent greater acceptance of corruption in the government. Competent citizens are expected to exhibit lower values in this scale as they are expected to question undemocratic practices and express disagreement with abuses of power in the government (Westheimer & Kahne, 2004; MEN, 2004).

- **DISLAW**: A continuous student-level variable that measures students’ attitudes toward disobeying the law. The scale reflects the mean of eleven items, describing students’ level of agreement or disagreement with statements that endorse breaking the law in different situations. For example: “When it is the only way one has to help one’s family”, “When others who disobeyed it were not punished”, “When others do it”, “When one distrusts the enacting body”, “When one is sure nobody will realize”, “When nobody gets hurt”, “When it is not done with bad intentions”, “When one is not familiar with the law”, “When one can obtain economic benefits”. Higher values
represent greater acceptance of the notion that it is acceptable to disobey the law. Consistent with personally responsible orientation to citizenship, competent citizens are expected to exhibit lower values in this scale are they should be able to understand the value of social norms and respect the rule of law (Westheimer & Kahne, 2004; MEN, 2004).

- **CIVDIS**: Students’ attitudes toward civil disobedience was measured using one item (LS2P05G) from the student questionnaire, a variable that asks participants to report their level of agreement or disagreement toward the following statement: “A law may be disobeyed when it is the only way of fighting publicly against an unfair law”. Higher values represent greater agreement with ideals of civil disobedience. Consistent with justice orientations to citizenship, competent citizens are expected to exhibit higher values on this scale as they should be able to understand that citizens are responsible to challenge unfair laws in ways that raise public awareness and have the potential to promote positive social transformations in society (Westheimer & Kahne, 2004; MEN, 2004).

**Predictor**

- **National Index of Socio-Economic Status (NISB)**, is a continuous individual-level measure that was created through factor analysis including the following variables: 1) *Highest level of education of the mother and father in approximate years of education*, 2) *Highest level of occupation of mother and father*, and 3) *Approximate number of books at home*. Missing values were imputed for each national dataset using predicted values for students who only had one variable missing from the three indicators involved. Resulting variables were standardized for each national dataset and then used
for a principal component analysis that was conducted separately for each national sample. The NISB scores were obtained as the factor scores for the first principal component, with a mean of 0 and a standard deviation of 1 for each national dataset (Schulz et al., 2011).

Analytic Strategy

I used the IDB analyzer software (IEA, 2015) for the analysis, an application developed by the IEA to combine and analyze data from international large-scale assessments. The IDB analyzer generates SPSS code that takes into account both the complex sample and the complex assessment design of the ICCS, using sampling weights and replicate weights, as well as five plausible values for the estimates of students’ civic knowledge.

In order to identify the existence and magnitude of civic competence gaps dividing Chilean, Colombian and Mexican youth along SES lines along different dimensions of performance, I obtained unadjusted, unconditional models for different outcomes related to students’ civic competence and identified gaps between students of low and high SES backgrounds. I conducted separate analysis for each country because the sampling weights in the ICCS that account for the complex sampling design of the data can only be used within countries. A typical model of the regression conducted for each country_k is given:

1) $Outcome_{ijk} = \beta_{0k} + \beta_{1k}NISB_{ijk} + \epsilon_{ijk}$

In this model, $Outcome$ is one of a number of variables, including a performance-based outcome (civic knowledge, standardized around a mean of 500 and a standard deviation of 100) and a set of self-reported outcomes related to students’ civic competence (sense of internal political efficacy, expected adult electoral participation, attitudes towards...
authoritarianism, corruption in the government, expected participation in legal and illegal protests, attitudes toward breaking the law and civil disobedience, all of which have been standardized around a mean of 50 and a standard deviation of 10). Parameter $\beta_{0k}$ is the population intercept, the estimated outcome when SES (NISB) is at the within country mean, and slope parameter $B_{1k}$ represents the population slope of the question predictor — socio-economic status, NISB, a variable that was standardized within each country (mean=0, standard deviation=1). The parameter of interest is $\beta_{1k}$. If the estimated values of this parameter are positive and statistically significant in the regression models using CIVICKNOW, INPOLEF, ELECTPART, LEGPROT, ILLPROT, CIVDIS as outcomes, we will be able to conclude that children in high SES have higher civic knowledge, higher sense of political efficacy, higher intention to participate in electoral processes, legal and illegal protests and civil disobedience than children in low SES. If the estimated values for this parameter are negative and statistically significant in the regressions for AUTGOV, ATTCORR and DISLAW, we will be able to conclude that children in high SES have lower supportive attitudes toward authoritarianism, corruption in the government and toward breaking the law, than students from low SES backgrounds.

Results

The analysis of the data shows the existence of significant civic competence gaps dividing students of high and low SES backgrounds in all three countries. Table 3 presents uncontrolled regression models that contain the means and standard deviations for each civic outcome, the main effects of SES and respect effect sizes in each country. Note that given that SES (NISB) has been centered around its mean within each country, the intercept
can be easily interpreted as the average civic knowledge of a student from a medium SES background within each country.

Table 3. Intercept, Coefficients, Standard errors and Effect Sizes of Socio-Economic Status (NISB) on students’ civic outcomes in Chile (n=5192), Colombia (n=6204) and Mexico (n=6576)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Intercept</th>
<th>SES Slope (SE)</th>
<th>SES Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civic Knowledge</td>
<td>483.21</td>
<td>35.34***</td>
<td>0.4</td>
</tr>
<tr>
<td>Sense of Internal Political Efficacy</td>
<td>51.35</td>
<td>0.96***</td>
<td>0.1</td>
</tr>
<tr>
<td>Expected Adult Electoral Participation</td>
<td>49.83</td>
<td>1.16***</td>
<td>0.09</td>
</tr>
<tr>
<td>Expected Participation in Legal Protests</td>
<td>53.67</td>
<td>0.69***</td>
<td>0.06</td>
</tr>
<tr>
<td>Expected Participation in Illegal Protests</td>
<td>52.57</td>
<td>-0.90***</td>
<td>-0.09</td>
</tr>
<tr>
<td>Attitudes toward Corruption</td>
<td>48.62</td>
<td>-2.02***</td>
<td>-0.19</td>
</tr>
<tr>
<td>Attitudes toward Authoritarianism</td>
<td>47.98</td>
<td>-2.53***</td>
<td>-0.24</td>
</tr>
<tr>
<td>Attitudes toward Disobeying the Law</td>
<td>49.23</td>
<td>-1.97***</td>
<td>-0.18</td>
</tr>
<tr>
<td>Attitudes toward Civil Disobedience</td>
<td>48.93</td>
<td>-0.34</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Note: The intercept can be interpreted as the average civic knowledge score of a student in medium SES within each country because NISB has been centered around its mean within each national sample.

Socioeconomic (SES) slope is defined as the estimated difference in the outcome for a X unit change in the NISB indicator

SES effect size is defined as the slope divided by the standard deviation of the outcome.

Civic Knowledge

In the three countries, students from high SES backgrounds exhibited higher civic knowledge than their low SES counterparts, with statistically significant differences in the range of .29 and .40 standard deviations (p<.001). Chilean students exhibited the highest level of civic knowledge (mean=483), but also the largest gap between high and low SES students (.40 sd). Colombian students exhibited the lowest civic knowledge (mean=457),
but also the smallest performance gap between high and low SES students (.29 sd). (See Figure 1)

*Figure 1. Civic Knowledge by Levels of SES and Country*

*Sense of Internal Political Efficacy*

In the three countries, students from high SES backgrounds exhibited higher sense of internal political efficacy than their low SES counterparts, with statistically significant differences in the range of .04 and .10 standard deviations (p<.001). Chilean students exhibited both the lowest level of internal political efficacy (mean=51.35) and the largest gap between high and low SES students (.10 sd). Colombian students exhibited the highest level of internal political efficacy (52.31), and a small gap between high and low SES students (.05 sd) similar to the one observed between high and low SES Mexican youth (.04 sd). (See Figure 2)
Students’ Expected Adult Electoral Participation

In the three countries, students from high SES backgrounds reported higher intention to participate in electoral processes as adults than their low SES counterparts, with statistically significant differences in the range of .06 and .10 standard deviations (p<.001). Colombian students reported the highest interest in participating in electoral processes as adults (mean=53.65) and the smallest gap between students of different SES backgrounds (sd=.06). Chilean students exhibited both the lowest interest in participating in electoral processes (mean=48.93) and the largest gap between high and low SES youth (effect size=.10 sd). (See Figure 3)
Figure 3. Expected Adult Electoral Participation by Levels of SES and Country

Expected Participation in Future Protests

In the three countries, students from both high and low SES backgrounds reported higher expected participation in legal protests than illegal protests. However, students from high SES backgrounds reported higher levels of expected participation in legal protests than their low SES counterparts, and low SES students reported higher levels of expected participation in illegal protests than high SES students. Colombian students exhibited both the highest expected participation in legal protests (mean=54.94) and the lowest expected participation in illegal protests (mean=49.87). Mexican students reported the lowest intention to participate in legal protests (mean=53.09), and Chilean students the highest intention to participate in illegal protests (mean=52.57). In Chile we observed the largest gap in the expected participation of high and low students in legal (sd=.06) and illegal protests (sd=.09). Students from different backgrounds in Colombia and Chile exhibited
similar differences in their attitudes toward participation in protests (in the range of .03 to .04 sd for legal protests, and -.04 to -.05 sd for illegal protests) (See Figure 4)

**Figure 4. Expected Participation in Legal and Illegal Protests by Levels of SES and Country**

**Attitudes toward Corruption in the Government**

In all three countries, students from high SES backgrounds reported more disagreement toward corruption in the government than their low SES counterparts, with statistically significant differences in the range of .11 and .19 standard deviations (p<.001). In Chile we observe the largest gap in the attitudes toward corruption between high and low SES students (sd=.19). While Chilean students from low SES backgrounds expressed the highest levels of agreement toward corruption in the government (mean=50.64), their high SES counterparts exhibited the highest level of disagreement (46.66) among participants from the three countries. Once again, we observed the smallest gap in students’ attitudes toward corruption in the government between Colombian participants of high and low SES backgrounds (sd=.11). (See Figure 5)
Attitudes toward Authoritarianism in Government

In all countries, students from high SES backgrounds reported less supportive attitudes toward authoritarianism than children from low SES backgrounds, with statistically significant differences in the range of .15 and .24 standard deviations (p<.001). Chilean students from high SES backgrounds exhibited the highest levels of disagreement toward authoritarianism (mean=45.45), and Mexican children from low SES backgrounds the lowest levels of disagreement (mean= 50.84). We observe that the largest gap among high and low SES students occurs in Chile (sd=.24) and the smallest one among Colombians (sd=.15). (See Figure 6)
Figure 6. Attitudes toward Authoritarianism in Government by Levels of SES and Country

Attitudes toward Disobeying the Law

In the three countries, students from high SES backgrounds reported more disagreement with attitudes that supported disobeying the law than their low SES counterparts, with statistically significant differences in the range of .10 and .18 standard deviations (p<.001). The largest gap among high and low SES students occurred in Chile (sd=19). Mexican and Colombian students from different SES backgrounds exhibited the same gap (sd=.10), but on average, Colombian students are more disapproving of disobedience to the law (mean=48.72) than their Mexican counterparts (mean=49.16) (See Figure 7)
Civil Disobedience

We do not observe statistically significant differences between high and low SES students from Colombia, Chile or Mexico. On average, Chilean students are more disapproving of civil disobedience than their Colombian and Mexican counterparts. (See Figure 8)
Summary

Using unadjusted regression models to identify the effect of SES on the civic competence of Chilean, Colombian and Mexican students, we find that:

1) With regard to the existence of civic competence gaps: Students from high SES backgrounds in the three countries exhibit significantly higher levels of civic competence than their low SES counterparts, which are reflected in their higher civic knowledge and higher sense of political efficacy, as well as in civic attitudes that are consistent with personally responsible, participatory and justice-oriented approaches to citizenship. We do not find any differences in their attitudes toward civil disobedience.

2) With regard to the comparative size of the civic competence gaps, we observe that in all three countries there are medium gaps in students’ civic knowledge – ranging from .29 to .40 standard deviations (p<.001), and small gaps in their internal sense of political efficacy and their civic attitudes –ranging from .04 to .24 standard deviations (p<.001).

3) With regard to country-level differences, we find that Chile exhibits significantly larger civic competence gaps in all outcomes than those observed in Colombia and Mexico. Chile exhibits the highest levels of civic knowledge but the lowest levels of civic attitudes. By contrast, Colombia exhibits the lowest levels of civic knowledge, but the highest levels of competence in civic attitudes.
Chapter 3. The Factors that Account for the Civic Knowledge Gap in Chile, Colombia and Mexico: An Application of the Oaxaca-Blinder Test

In the previous chapter I used unadjusted regression models to identify the effect of SES on students’ civic competencies and I found medium and statistically significant gaps in the civic knowledge of high and low SES students from Chile, Colombia and Mexico, and small statistically significant gaps in their internal sense of political efficacy, expected participation in electoral processes, expected participation in legal and illegal protests, attitudes toward corruption, attitudes toward authoritarianism in the government and attitudes toward disobeying the law. In this chapter I conduct further analysis on the civic knowledge gaps observed between high and low SES students in Chile, Colombia and Mexico because the unadjusted regressions showed that civic knowledge gaps are medium to large, and represent two to six times the sizes of the other civic competence gaps considered in the analysis. Specifically, my aim is to identify the factors that account for the civic knowledge gaps observed in Chile, Colombia and Mexico, and to decompose them into explained and unexplained sources of variance.

Previous research has identified the relationship that exists between civic knowledge and a set of individual/family background characteristics, school resources, school supports and civic learning opportunities, but no study has shown the degree to which civic knowledge gaps between students from different SES backgrounds can be explained both in terms of unequal access to a given set of school characteristics, as well as in terms of differences in the amount of civic knowledge that students from different SES backgrounds are able to gain, for reasons other than unequal access to a given set of supports. By identifying the components of the gap that are due to unequal access to school
characteristics, this study can shed light into the degree to which civic competence gaps can be accounted for by differences in access to, say, school resources, rather than by differences in access to, say, positive school climate characteristics or civic learning opportunities at school. By identifying the components of the civic knowledge gaps that are due to differences in civic knowledge gains when there is equal access to school characteristics, this study can also shed light into the school resources, school climates and civic learning opportunities that students from different SES backgrounds in different countries are taking more advantage of and from which they are reaping more civic knowledge benefits. I use data from the 2009 ICCS to conduct traditional regressions analysis and the Oaxaca-Blinder decomposition method (1973) to answer following questions:

- To what extent are the civic knowledge gaps that we observe in Chile, Colombia and Mexico accounted for by differences in the access that students from different SES backgrounds have to school resources, school climate and school civic learning opportunities, and to what extent are they accounted for by differences in the civic knowledge that students from different SES backgrounds gain, when given equal access to those supports?
  - Do students from high SES backgrounds in Chile, Colombia and Mexico have more access than students from low SES backgrounds to the school resources, school climate and civic learning opportunities that are associated with higher civic knowledge?
  - Do students from low SES backgrounds in Chile, Colombia and Mexico obtain more or less civic knowledge than their counterparts when given
access to the same school resources, school climate and civic learning opportunities as high SES students?

- How much are the differences in the access that high and low SES students have to school resources, school climate and civic learning opportunities contributing to the civic knowledge gaps in Chile, Colombia and Mexico? How important are these differences relative to one another?

- How much are the differences in the civic knowledge gains that students from high and low SES backgrounds obtain when given equal access to specific school resources, school climate and civic learning opportunities, contributing to the civic knowledge gaps in Chile, Colombia and Mexico? How important are these differences relative to one another?

With regard to characteristics, I expect to find that in all countries, students from high SES backgrounds will have significantly more access to the school resources, school climate and civic learning opportunities that are associated with higher civic knowledge. With regard to civic knowledge gains, results can go either way. Depending on unobserved variables that are related to differences in the quality of policies or programs and/or differences in the civic values and identities embraced by students from different SES backgrounds, we can find that one SES group or the other could gain more civic knowledge than their counterparts. Specifically, it is possible that when all students have the same characteristics and equal access to school resources, school climate and civic learning opportunities, students from high SES backgrounds may still gain more civic knowledge than students from low SES backgrounds for two reasons. First, it is also possible that the resources, school climates and civic learning opportunities that high SES students have in
school are of higher quality than the ones available to low SES students. Second, it is also possible that high SES students are part of a culture that values civic engagement while low SES students may be part of a culture that distrusts the government and see little value in politics and civic engagement. If this is the case, high SES students may be better equipped with the civic attitudes and identities they need to take better advantage of the resources, environments and opportunities for civic learning they have available in schools. The alternative case is also possible. In fact, if the main reason why low SES students are behind in terms of their civic knowledge is the lack of access to learning supports and not differences in their values, we could find that given equal access to school resources, positive school climates and interactive civic learning activities, low SES students could actually gain more civic knowledge than students from high SES backgrounds because those school supports can help them compensate for the lack of civic learning opportunities at home.

Method

Participants

I used nationally representative samples of grade 8 students in Colombia, Chile and Mexico, who in the year 2009 participated in the ICCS study. The ICCS is a cross-sectional study that was conducted by the IEA to assess students’ civic knowledge and attitudes in 38 countries. Within Chile, Colombia and Mexico, the test was administered to 17,952 students and 5,610 teachers, within 580 schools (See Table 1), who responded to a civic knowledge test and to an international and a Latin American background questionnaire that contained 90 items, for approximately two hours of their time. Teachers and school principals responded to a one-hour questionnaire providing contextual information. In the
analysis, I incorporated data from the civic knowledge test and both the student and teacher questionnaires.

**Dataset**

The ICCS dataset was collected using surveys that were administered to participants using a probabilistic two-stage stratified cluster sample design within each country. The first stage used a PPS (probability proportional to size as measured by number of students enrolled in a school) procedure to sample schools within each country. During the second stage, an intact class from the target grade within each sampled schools was chosen randomly and all students were surveyed. In schools that did not have more than 20 teachers teaching at the target grade, all teachers were surveyed. In schools where there were more teachers, up to 15 teachers teaching at the target grade were chosen at random to be surveyed. The complex sample design of the ICCS allowed researchers to collect at a reasonable cost enough information to obtain estimates with enough precision levels for all target groups within each country. When computing estimates using ICCS data, I accounted for the complex sample design of the test by using sampling and replicate weights.

**Measures**

**Outcomes**

- INTERNATIONAL CIVIC KNOWLEDGE SCALE: Civic knowledge and understanding was measured with 79 cognitive test items which give international comparable results for students’ performance. 73 items included a multiple choice format, and six items allowed for open ended responses, with students requested to
write a short response to each question. Given the challenges of measuring the broad domain of civic knowledge within the limited testing time imposed by physical and cognitive constrains, student booklets were structured using a complex assessment design that allow for the administration of a great amount of items in a sensible way. The test was presented in a balanced rotated cluster design, which means that while at the school level all items were responded, any individual student only had to complete 35 items of the test. The test mapped to four content areas (civic society and systems, civic principles, civic participation, civic identities) and three cognitive domains (knowing, reasoning and analyzing). (Schultz et al., 2008). The scale was obtained using the Rasch model (Rasch, 1960), with a reliability of .84. Given the complex survey design, plausible values –which are estimated using regression models that predict missing values on the questions that students did not answer based on the responses of other students with similar values- are needed to estimate summary student statistics to account for measurement error (von Davier, Gonzalez, & Mislevy, 2009). The scale was set to have an international mean of 500 and standard deviation of 100 points for equally weighted national samples. Table 4 shows three proficiency levels were established using a hierarchical scale in which civic knowledge becomes more sophisticated as student progress up the scale (See Schultz, Ainley & Fraillon, 2011).
Table 4. List of proficiency levels outlining type of knowledge and understanding at each level of the International Civic Knowledge Scale (Schultz, Ainley & Fraillon, 2011)

<table>
<thead>
<tr>
<th>Level 3 (563 points and above):</th>
<th>Students make connections between the processes of social and political organization and influence, and the legal institutional mechanisms used to control them. They generate accurate hypothesis on the benefits, motivations, and likely outcomes of institutional policies and citizen’s actions. They integrate, justify, and evaluate given positions, policies, or laws, based on the principles that underpin them. Students demonstrate familiarity with broad international economic forces and the strategic nature of active participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 2 (479-562 points).</td>
<td>Students demonstrate familiarity with the broad concept of representative democracy as a political system. Recognize how institutions and law as can be used to protect and promote society’s values and principles, recognize the potential of citizens as voter in a representative democracy, and generalize principles and values from specific examples of policies and laws. Demonstrate understanding of the influence that active citizenship has beyond the local community, and generalize the role of the individual active citizen to broader civic societies and the world.</td>
</tr>
<tr>
<td>Level 1 (395-478 points).</td>
<td>Students demonstrate familiarity with equality, social cohesion, and freedom as principles of democracy. They relate these broad principles to everyday examples of situations in which protection of or challenge to the principles demonstrated. They are also familiar with fundamental concepts of the individual as an active citizen.</td>
</tr>
</tbody>
</table>
Predictor

- National Index of Socio-Economic Status (NISB), is a continuous individual-level measure that was created through factor analysis including the following variables: 1) Highest level of education of the mother and father in approximate years of education, 2) Highest level of occupation of mother and father, and 3) Approximate number of books at home. Missing values were imputed for each national dataset using predicted values for students who only had one variable missing from the three indicators involved. Resulting variables were standardized for each national dataset and then used for a principal component analysis that was conducted separately for each national sample. The NISB scores were obtained as the factor scores for the first principal component, with a mean of 0 and a standard deviation of 1 for each national dataset (Schulz et al., 2011).

Covariates

In account for the civic knowledge gaps observed in Chile, Colombia and Mexico I used a series of variables available in the ICCS which helped me operationalize individual/family background characteristics, school resources, school climate and civic learning opportunities that may have an effect on students’ civic knowledge. In what follows, I present the measures I use as outcomes and predictors in the study. Table 5 shows the means, standard deviations and Cronbach’s alpha of covariates variables in Chile, Colombia and Mexico.
Individual/Family Characteristics

These variables were chosen because they capture individual and family background characteristics that may be associated with students’ civic knowledge and civic values, motivations and identity.

- *Gender* is an individual-level dummy variable that indicates whether the student is a girl (1) or boy (0).
- *NormAge* is an individual-level dummy variable that indicates whether the student is 14 years old (0) or older (1).
- *PARINT* is a continuous individual-level variable that measures the highest level of parental interest in political and social issues (*not interested at all / not very interested / quite interested / very interested*). Higher levels reflect greater parental interest in political and social issues.
- *IS2G13A* is an ordinal individual-level variable that measures the frequency with which students talk with their parents about political or social issues at home (*Never / monthly / weekly / daily*). Higher values reflect higher frequency of discussions with parents about political and social issues.

School Resources

These variables were chosen to capture the resourcing of the school, which may affect the school quality and students’ civic knowledge and civic values, motivations and identity:

- *SchoolNISB* is a continuous school-level variable that measures the average SES background of students in the school, which was obtained by aggregating the mean of
students’ NIBS levels. Higher values reflect schools with higher average student SES levels.

- **PRIVATE** is a dichotomous variable that reflects whether the school is public (0) or private (1).

- **SCHSIZE** is a continuous school-level variable that reflects the total number students enrolled in the school. Higher values reflect larger schools.

- **CSTRATIO** is a continuous school-level variable that reflects the student-teacher ratio at school. Lower values indicate better resourcing of the school.

- **RESCOM** is a continuous school-level variable that reflects the availability of resources (e.g.: public library, cinema, theater, language school, museum or gallery, public garden or park) in the local community. Higher values reflect more availability of resources in the community.

**School Climate**

These variables, which were standardized in the ICCS to have a mean of 50 and a standard deviation of 10, were included because they reflect important qualities of the emotional and instructional school climate and relationships in the school, which may affect students’ civic knowledge and civic values, motivations and identity:

- **CSTUTBEH** is a continuous school-level variable, which reflects the mean of 4 items in which the school principal rates his/her perceptions of students’ behavior at school (e.g: students are well behaved when entering the school premises/students adhere to school rules/ students show care for school facilities / students are well behaved during breaks). Higher values on this scale come from principals who report that high number
of children exhibit positive behaviors in the school. This variable is expected to have a positive association with students’ civic competence.

- **NoCSCPROBR** is a continuous school-level variable, which reflects the mean of 9 items in which principals rate their perceptions of the extent to which there are social problems (vandalism, truancy, bullying, racism, religious intolerance, sexual harassment, drug abuse, alcohol abuse, violence) at school (reversed). Higher values on this scale come from principals who report low incidence of social problems in the school. This variable is expected to have a positive association with civic competence.

- **NoEXPAGGM** is a continuous school-level variable that we obtained by aggregating at the school level students' responses to five items reporting the frequency with which they have experienced physical and verbal aggression at school (someone in your school hit, slapped, kicked, pushed or pinched you / someone in your school insulted you / someone threatened to hit you / someone rejected you and did not allow you to join the group / a classmate called you an offensive nickname) (reversed). Higher values reflect schools that are safer. This variable is expected to have a positive relationship with students’ civic competence.

- **STUTRELM** is a continuous school-level variable that was obtained by aggregating at the school level students’ mean responses to five items in which they rate their level of agreement of disagreement with statements about the quality of student-teacher relationships at school (e.g.: most teachers treat me fairly / students get along with most teachers / most of my teachers really listen to what I have to say / most teachers are interested in students’ wellbeing / If I need extra-help I will receive it from my teachers). Higher values reflect more positive perceptions of student-teachers
relationships. This variable is expected to have a positive relationship with students’ civic competence.

*Civic Learning Opportunities*

These variables, which were standardized in the ICCS to have an international mean of 50 and a standard deviation of 10, were included in the analysis because they represent the interactive civic learning opportunities that the literature suggests can have an effect on students’ civic knowledge and civic values and identity.

- **OPDISCM** is a continuous school-level variable, which was obtained by aggregating at the school level students responses to six items in which they rate their level of agreement of disagreement with statements about their perceptions of the degree to which their classroom is an environment open to discussions (e.g.: teachers encourage students to make up their own minds / teachers encourage students to express their opinions / students bring up current political events for discussion in class / students express opinions in class even when their opinions are different from most of the other students, teachers encourage students to discuss the issues with the people having different opinions / teachers present several sides when explaining them in class). Higher values on this scale reflect group-level perceptions of classrooms that are more open to discuss political and social issues. This variable is expected to exhibit a positive relationship with students’ civic competence.

- **SCHDISCM** is a continuous school-level variable that reflects the mean of nine items in which students rate the frequency of discussions about civic issues at school (e.g.: Rights and duties citizens assume when they become adults / Consequences of consuming illegal drugs / Integration of people with different cultural backgrounds into
the school, neighborhood or community / Advantages and disadvantages of nongovernmental organizations operating in a democratic country / Integration of people with different cultural backgrounds in the school, neighborhood and community / Respect for different religious sites, facilities that people with physical and mental disabilities should have in different environments (school, street, workplace, etc. / Difficulties encountered by people with AIDS in being accepted by society). Higher scores on this variable reflect higher frequency of discussions about civic issues at school. This variable is expected to exhibit a positive association with students’ civic competence.

- SCSTUDOP is a continuous school-level variable that reflects the mean of seven items in which principals report how many students have had the opportunity to participate in community activities (Activities related to the environment, geared to the local area / human rights projects / Activities related to underprivileged people / Cultural activities / Multicultural and intercultural initiatives within the local community / Campaigns to raise awareness / Activities related to improving facilities for the local community). High scores on this variable come from principals who report that children have had many opportunities to participate in different community activities. This variable is expected to exhibit a positive association with students’ civic competence.

- PARTSCHM is a school-level variable, which we obtained by aggregating at the school level students’ responses to six items in which they report whether they have participated in civic activities at school (e.g.: Voluntary participation in school-based music or dram activities outside of regular lessons / Active participation in a debate / Voting for class representative or school parliament / Taking part in decision-making
about how the school is run / Taking part in discussion at a student assembly / becoming a candidate for class representative / taking part in decision-making about how the school is run, etc.). High scores on this variable reflect higher levels of civic participation in school. This variable is expected to exhibit a positive relationship with students’ civic competence.
<table>
<thead>
<tr>
<th>Country</th>
<th>Dimension</th>
<th>Variable</th>
<th>Cronbach α*</th>
<th>High NISB</th>
<th>Low NISB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>s.e.</td>
<td>Std. Dev.</td>
</tr>
<tr>
<td>Student/ family background</td>
<td>SGENDER -</td>
<td>0.53</td>
<td>0.03</td>
<td>0.50</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>NORMAGE -</td>
<td>0.97</td>
<td>0.01</td>
<td>0.16</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>PARINT -</td>
<td>2.05</td>
<td>0.03</td>
<td>0.77</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>IS2G13A -</td>
<td>2.31</td>
<td>0.04</td>
<td>1.11</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>SchoolNISB 0.64</td>
<td>0.85</td>
<td>0.05</td>
<td>0.64</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>PRIVATE -</td>
<td>0.80</td>
<td>0.03</td>
<td>0.40</td>
<td>0.02</td>
</tr>
<tr>
<td>School Resources</td>
<td>SCHLSIZE -</td>
<td>983.37</td>
<td>55.05</td>
<td>610.53</td>
<td>62.06</td>
</tr>
<tr>
<td></td>
<td>CSTRATIO -</td>
<td>22.90</td>
<td>1.80</td>
<td>22.55</td>
<td>8.34</td>
</tr>
<tr>
<td>Chile</td>
<td>RESCOM 0.82</td>
<td>52.37</td>
<td>1.27</td>
<td>9.40</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>CSTUDBEH 0.85</td>
<td>52.34</td>
<td>1.44</td>
<td>11.68</td>
<td>1.57</td>
</tr>
<tr>
<td>School Climate</td>
<td>EXPAGMrev 0.77</td>
<td>-51.04</td>
<td>0.59</td>
<td>3.99</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>SCSCPRev 0.87</td>
<td>-46.36</td>
<td>1.38</td>
<td>12.08</td>
<td>1.27</td>
</tr>
<tr>
<td></td>
<td>STUTREL M 0.76</td>
<td>50.79</td>
<td>0.47</td>
<td>3.91</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>OPDISCM 0.76</td>
<td>53.50</td>
<td>0.51</td>
<td>3.64</td>
<td>0.45</td>
</tr>
<tr>
<td>Civic Learning Opportunities</td>
<td>SCHDISCM 0.85</td>
<td>49.81</td>
<td>0.34</td>
<td>2.84</td>
<td>0.19</td>
</tr>
<tr>
<td></td>
<td>PARTSCHLM 0.62</td>
<td>52.38</td>
<td>0.28</td>
<td>2.37</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>SCSTUDOP 0.79</td>
<td>47.54</td>
<td>1.13</td>
<td>8.93</td>
<td>0.80</td>
</tr>
<tr>
<td>Colombia</td>
<td>RESCOM 0.80</td>
<td>50.15</td>
<td>1.06</td>
<td>9.32</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>CSTUDBEH 0.78</td>
<td>48.83</td>
<td>1.16</td>
<td>11.59</td>
<td>1.18</td>
</tr>
<tr>
<td>School Climate</td>
<td>EXPAGMrev 0.78</td>
<td>-50.35</td>
<td>0.63</td>
<td>4.27</td>
<td>0.58</td>
</tr>
<tr>
<td></td>
<td>SCSCPRev 0.78</td>
<td>-49.80</td>
<td>1.24</td>
<td>10.48</td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td>STUTREL M 0.74</td>
<td>52.29</td>
<td>0.68</td>
<td>4.49</td>
<td>0.62</td>
</tr>
<tr>
<td></td>
<td>OPDISCM 0.65</td>
<td>51.62</td>
<td>0.48</td>
<td>3.42</td>
<td>0.30</td>
</tr>
<tr>
<td>Civic Learning Opportunities</td>
<td>SCHDISCM 0.85</td>
<td>50.40</td>
<td>0.62</td>
<td>4.23</td>
<td>0.74</td>
</tr>
<tr>
<td></td>
<td>PARTSCHLM 0.63</td>
<td>53.94</td>
<td>0.41</td>
<td>3.14</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>SCSTUDOP 0.80</td>
<td>50.63</td>
<td>1.31</td>
<td>9.81</td>
<td>1.08</td>
</tr>
<tr>
<td>Mexico</td>
<td>RESCOM 0.83</td>
<td>55.57</td>
<td>1.20</td>
<td>8.87</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td>CSTUDBEH 0.81</td>
<td>47.84</td>
<td>1.34</td>
<td>11.90</td>
<td>1.06</td>
</tr>
<tr>
<td>School Climate</td>
<td>EXPAGMrev 0.79</td>
<td>-49.18</td>
<td>0.50</td>
<td>2.64</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td>SCSCPRev 0.82</td>
<td>-50.29</td>
<td>1.31</td>
<td>12.43</td>
<td>0.77</td>
</tr>
<tr>
<td></td>
<td>STUTREL M 0.74</td>
<td>52.44</td>
<td>0.42</td>
<td>3.06</td>
<td>0.22</td>
</tr>
<tr>
<td></td>
<td>OPDISCM 0.71</td>
<td>50.87</td>
<td>0.40</td>
<td>3.14</td>
<td>0.23</td>
</tr>
<tr>
<td>Civic Learning Opportunities</td>
<td>SCHDISCM 0.85</td>
<td>50.55</td>
<td>0.44</td>
<td>2.94</td>
<td>0.22</td>
</tr>
<tr>
<td></td>
<td>PARTSCHLM 0.66</td>
<td>49.24</td>
<td>0.36</td>
<td>2.71</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>SCSTUDOP 0.81</td>
<td>52.51</td>
<td>1.08</td>
<td>9.55</td>
<td>0.77</td>
</tr>
</tbody>
</table>

(Note: All variables within the school climate and civic learning opportunities dimension were standardized around an international mean of 50 and a standard deviation of 10. SGENDER= Gender; NORMAGE= Normative Age; PARINT= Parental interest in political and social issues; IS2G13A=Frequency with which students talks with parents about political issues; CSTUDBEH=Student behavior; SchoolNISB=School SES; SCHLSIZE=School Size; CSTRATIO= Student-teacher ratio; RESCOM= Resources available in the community; CSTUDBEH= Students’ behavior at school; NoSCSProg= Social problems at school (inverted); NoExppg= School safety; STUTRELm=Quality of student teacher relationships; OPDISCM=Open classroom for discussions; SCHDISCM=Frequency of discussions about social and civic issues; PARTSCHLM= Participation in civic activities; SCSTUDOP=Opportunities to participate in community activities)
Analytic Strategy

I used the IDB analyzer software (IEA, 2015) for the analysis, an application developed by the IEA to combine and analyze data from international large-scale assessments. The IDB analyzer generates SPSS code that takes into account both the complex sample and the complex assessment design of the ICCS, using sampling weights and replicate weights, as well as five plausible values for the estimates of students’ civic knowledge.

In order to answer the research questions, I used two methods. First I used a conventional regression approach that adjusts the gap in civic knowledge after accounting for various individual and school level variables. I compare the unadjusted coefficient on NISB to the adjusted coefficient incorporating other sets of covariates. Although I later address the extent to which the SES is mediated by various factors formally with Oaxaca-Blinder, that approach is limited by the forced dichotomization of the continuous SES variable. I thus begin with a conventional descriptive approach before proceeding to a more formal specification that imposes a severe dichotomization on the data. In the regression models I estimated students’ civic knowledge as a function of a set of variables, including individual/family background, school resources, school climate, and civic learning opportunities. For each national sample, I conducted regressions creating a taxonomy of models for civic knowledge in which I progressively include individual/family background characteristics, then school resources, then school climate and then civic learning opportunities. Separate analyses for each country were necessary because the IEA conducted sampling procedures for the ICCS within each country and weights are to be used within national samples. To conduct the analysis, I used the following formula:
1) \( CK_{ijk} = \beta_{0k} + \beta_{1k}NISB + \beta_{2k}IndFam_{ijk} + \beta_{3k}SchRes_{jk} + \beta_{4k}SchClimate_{jk} + \beta_{5k}SchCivLearnOpp_{jk} + \epsilon_{ijk} \)

where \( CK \) is the standardized score obtained by a student in the ICCS civic knowledge test. \( IndFam \) is a vector of individual/family characteristics, including \( Age_{ij} \), \( Gender_{ij} \), \( PARTINT_{ij} \) and \( I2SG13A_{ij} \). \( SchRes \) is a vector of school-level characteristics, including \( SchoolSES_j \), \( Private_j \), \( SCHSIZE_j \), \( CSTRATIO_j \), and \( RESCOM_j \). \( SchClimate \) is a vector of school-level variables that reflect the climate of a school, including \( SCHPROBR_j \), \( CSTUDBEHR_j \), \( EXPAGGMR_j \), \( STUTREL_j \). \( SchCivLearnOpp \) includes a vector of school-level variables related to the opportunities for learning provided by the school, including \( OPDDISCM_j \), \( SCHDISCM_j \), \( SCSTUDOP_j \), \( PARTCHLM_j \). The parameter of interest is \( \beta_{1k} \). If the estimated values of this parameter are positive and statistically significant in the regression models, we will be able to conclude that children in high SES backgrounds have higher civic knowledge than children in low SES backgrounds after controlling for school resources, school climate and civic learning opportunities.

Given that a conventional regression approach only allows me to identify the relationship between civic knowledge and SES, after accounting for school resources, school climate and civic learning opportunities, I proceeded to conducted further analyses. Specifically, I used the Oaxaca-Blinder method to decompose the civic knowledge gaps observed in Chile, Colombia and Mexico into components that are due to differences in access to school resources, school climate and civic learning opportunities, and components that are due to differences in the civic knowledge that students from different SES backgrounds gain when they are given equal access to those school characteristics. In order to do so, I first estimated students’ civic knowledge as a function of the same set of
variables that I used in the 5th model of the conventional regressions, but instead of including NISB as the key predictor, I broke up each national sample in groups of high SES (above the NISB mean) and low SES (below the NISB mean). For each country, I conducted two separate regression models for samples of students from high and low SES backgrounds. Separate analyses by groups of SES are necessary in the Oaxaca-Blinder to obtain the Beta values (civic knowledge gains per additional unit of a given variable) and the X values (the average characteristics) of each SES group, that are needed for the decomposition analyses.

2) \( CK_{ijk} = \beta_0 + \beta_1 IndFam_{ijk} + \beta_2 SchRes_{jk} + \beta_3 SchClimate_{jk} + \beta_4 SchCivLearnOpp_{jk} + \epsilon_{ijk} \)

where CK is the standardized score obtained by a student in the ICCS civic knowledge test (international mean of 500, standard deviation of 100). IndFam is a vector of individual/family characteristics. SchRes_{jk} is a vector of school-level characteristics, that reflect the resources of the school. SchClimate_{jk} is a vector of school-level variables that reflect the climate of a school. SchCivLearnOpp_{jk} is a vector of school-level variables related to the opportunities for civic learning provided by the school. I proceeded to decompose the differences in civic knowledge between students of high and low SES backgrounds into components that are due to differences in access to resources and component that are due to differences in civic knowledge gains. The average civic knowledge gap between students of high and low SES backgrounds for each national sample can be decomposed as:

3) \( CK_{highSES} - CK_{lowSES} = \beta_{highSES} (X_{highSES} - X_{lowSES}) + X_{highSES} (\beta_{highSES} - \beta_{lowSES}) \)
where CK represents the standardized individual-level score of civic knowledge, X represents a vector of student, family and school characteristics for a student, $\beta$ is a vector of coefficients, and the $\text{HighSES}$ and $\text{LowSES}$ subscripts are identifiers for students from different SES backgrounds, which I obtained by creating groups with NISB scores that were one standard deviation above and below the national mean for each country sample. The civic knowledge gap on the left side of the equation can be decomposed into two components as observed in the right side of the equation. The first component, $\beta_{\text{HighSES}}(X_{\text{HighSES}} - X_{\text{LowSES}})$, represents the explained portion of the civic knowledge gap that is attributable to differences in the characteristics of children of different SES backgrounds, and it indicates how differences in the average characteristics of individual/family background, school resources, school climate and civic learning opportunities of high and low SES students affect their civic knowledge. In other words, this explained portion reflects differences in access to characteristics that promote civic knowledge and it can be interpreted as the mean increase we would observe in the civic knowledge of low SES students had they had access to the same characteristics of high SES students. The second component, $X_{\text{HighSES}}(\beta_{\text{HighSES}} - \beta_{\text{LowSES}})$, represents the unexplained portion of the gap and it quantifies the change we would observe in the civic knowledge of low SES students when we apply the coefficients of the high SES students to the characteristics of the low SES students. In other words, this unexplained portion shows the differences in civic knowledge gains that students from low SES backgrounds exhibit when they have access to the same characteristics as high SES students. There may be more than one reason why we observe differences in civic knowledge gains. The first one is that the unexplained portion of the gap reflects other unobserved characteristics that
are correlated with civic knowledge, which are likely related to students’ SES background. The second explanation is that students from different SES backgrounds reap different amounts of civic knowledge from equivalent characteristics. In other words, given similar individual/family and school characteristics, two otherwise identical students perform differently at high and low SES levels because they do not take the same advantages of the educational inputs they have available. In this study, the differences in civic knowledge for high and low SES students is given by the following formula:

4) \[ CK_{\text{HighSES}} - CE_{\text{LowSES}} = \beta_{1k} + \beta_2 (IndFam_{\text{HighSES}} - IndFam_{\text{LowSES}} + \beta_{3k} (SchRes_{\text{HighSES}} - SchRes_{\text{LowSES}}) + \beta_{4k} (SchClimate_{\text{HighSES}} - SchClimate_{\text{LowSES}}) + \beta_{5k} (SchCivilLearnOpp_{\text{HighSES}} - SchCivilLearnOpp_{\text{LowSES}}) \]

Where coefficient \( \beta_{1k} \) is the portion of the civic knowledge gap that remains after accounting for the differences in mean characteristics. To obtain the explained and unexplained proportions:

5) \[ \frac{\beta_{1k}}{CK_{\text{HighSES}} - CK_{\text{LowSES}}} = \text{Unexplained component} \]

6) \[ \frac{\beta_{2k} (Fam_{\text{HSES}} - Fam_{\text{LSES}}) + \beta_{3k} (SchRes_{\text{HSES}} - SchRes_{\text{LSES}}) + \beta_{4k} (SchClimate_{\text{HSES}} - SchClimate_{\text{LSES}}) + \beta_{5k} (CLO_{\text{HSES}} - CLO_{\text{LSES}})}{CK_{\text{HSES}} - CK_{\text{LSES}}} = \text{Explained component} \]

The components of the explained portion are:

7) \( \beta_{2k} (Fam_{\text{HSES}} - Fam_{\text{LSES}}) = \text{Individual and family background} \)

8) \( \beta_{3k} (SchRes_{\text{HSES}} - SchRes_{\text{LSES}}) = \text{School resources} \)

9) \( \beta_{4k} (SchClimate_{\text{HSES}} - SchClimate_{\text{LSES}}) = \text{School Climate} \)

10) \( \beta_{5k} (CLO_{\text{HSES}} - CLO_{\text{LSES}}) = \text{Civic learning Opportunities} \)
A positive contribution of a covariate to the explained civic knowledge gap indicates that students from high SES backgrounds have more access to supports that lead to higher civic knowledge than students from low SES backgrounds. Conversely, a negative contribution indicates that students from low SES backgrounds have more access to characteristics that lead to higher civic knowledge than students from high SES backgrounds.

The components of the unexplained portion are:

11) \( X_{HSES}(\beta_{2k}Fam_{HSES} - \beta_{2k}Fam_{LSES}) = \)

*Returns to Individual and family background Characteristics*

12) \( X_{HSES}(\beta_{3k}SRes_{HSES} - \beta_{3k}SRes_{LSES}) = \) *Returns to school resources*

13) \( X_{HSES}(\beta_{4k}SClim_{HSES} - \beta_{4k}SClim_{LSES}) = \) *Returns to school climate*

14) \( X_{HSES}(\beta_{5k}CLO_{HSES} - \beta_{5k}CLO_{LSES}) = \) *Returns to Civic learning Opportunities*

A positive contribution of a covariate to the unexplained civic knowledge gap indicates that given access to the same characteristics, high SES students gain more civic knowledge than their low SES counterparts. A negative contribution of a covariate to the unexplained gap indicates that, given access to the same characteristics, low SES students gain more civic knowledge than high SES students.

Note that while the regressions in equation 2 use whole national samples to account for the effects of NISB on the civic knowledge of students, including controls for different characteristics, the decomposition of the Oaxaca Blinder method uses group means and the \( \beta \) coefficients of the regressions conducted with equation 3 (which is similar to equation 2, except that it does not include NISB as national samples are purposefully divided above and below the NISB mean), to identify how differences in access to characteristics and
differences in the civic knowledge that students from different SES backgrounds gain, account for the civic knowledge gap between two otherwise identical students from different SES backgrounds. In this sense, while taxonomy of models created with equation 2 help us to appreciate the changes in the NISB coefficient (i.e.: civic knowledge gap between students of high and low SES backgrounds) when controlling for different characteristics, the Oaxaca helps us to know how much of those changes are due to differences in the access that students from different SES backgrounds have to certain characteristics (e.g.: school resources, school climate and civic learning opportunities) and how much are due to differences in the civic knowledge they gain when they have equal access to those characteristics.

**Results**

I present regressions showing the civic knowledge gaps of Chile, Colombia and Mexico after accounting for individual/family characteristics, school resources, school climate and civic learning opportunities at school. I then use the Oaxaca-Blinder method to decompose the gaps showing the portions that are due to differences in access to resources and the portions that are due to differences in the civic knowledge gains that students from different SES backgrounds obtain when they have equal school inputs.

*Regression Results: A Taxonomy of Models for the Relationship of Civic Knowledge and SES*

To identify the relationship that exists between students’ civic knowledge and their SES in Chile, Colombia and Mexico, I used regressions that controlled for a set of individual background and school characteristics, which accounted for the complex sampling and assessment design of the data. In Table 6, I present five selected examples
from the taxonomy of fitted models I estimated using regression analysis. In Model 1, I present an uncontrolled model that contains the main effect of NISB on students’ civic knowledge. In Model 2, I add four individual-level covariates that reflect individual and family characteristics (gender\(_{ij}\), NormAge\(_{ij}\), PARINT\(_{ij}\), and IS2G113a\(_{ij}\)). In Model 3, I add four school-level covariates that reflect the resources of a school (Private\(_{j}\), SchoolSES\(_{j}\), SCHLSIZE\(_{j}\), CSTRATIO\(_{j}\) and RESCOM\(_{j}\)). In Model 4, I add four school-level variables reflecting characteristics of the school climate (NoSCSCPR\(_{j}\), CSTUDBEH\(_{j}\), NoEXPAGG\(_{j}\), STUTREL\(_{j}\)). In Model 5, I add four school-level variables, reflecting the civic learning opportunities at school (OPDISCm\(_{j}\), SCHDISCm\(_{j}\), SCSTUDOP\(_{j}\), PARTSCHLm\(_{j}\)). Below, I interpret the effects of these variables on students’ civic knowledge substantively.

As shown in the previous section, we observe a large gap in the civic knowledge of students of high and low SES backgrounds in Chile, Colombia and Mexico. The unadjusted gap (See Model 1) shows that every additional unit in the SES (NISB) scale is associated with a positive and statistically significant difference of 32.34 points in the civic knowledge scale in Chile (p<.01), 23.22 points in Colombia (p<.01) and 24.39 points in Mexico (p<.01). After controlling for individual and family characteristics (See Model 2), we observe that in all countries, SES continues to have a small, positive and statistically significant effect on students’ civic knowledge. The changes we observe in the effect of SES (NISB) on students’ civic knowledge between Model 1 and Model 2 are of approximately 3 points in Chile and Colombia and half a point in Mexico. Once we account for school resources (See Model 3), we observe that every additional unit in the NISB scale is associated with a positive difference in the civic knowledge scale of 11.07 points in Chile (p<.01), 7.80 points in Colombia (p<.01) and 9.22 points in Mexico (p<.01). The drop in
the coefficients is pronounced when compared to the previous models. Specifically, in comparison to Model 2, the NISB coefficient decreases in Model 3 by approximately 21 points in Chile, 12 points in Colombia and 15 points in Mexico. After controlling for school climate variables (See Model 4) and civic learning opportunities (Model 5), we observe very small changes in the NISB coefficient, beyond what we had already seen in Model 3. In our final model (See Model 5), which accounts for individual/family characteristics, school resources, school climate and civic learning opportunities, we observe that every additional unit in the NISB scale is associated with small, positive and statistically significant differences in the civic knowledge scale of 11.24 points in Chile (p<.01), 8.06 points in Colombia (p<.01) and 9.35 points in Mexico.

Figure 9 illustrates the fitted values of the effect of NISB on students’ civic knowledge, after adjusting for individual/family characteristics (Model 1), school resources (Model 2), school climate (Model 3) and civic learning opportunities (Model 4). In all models, predictors are centered on their sample means, to make the intercept easily interpretable as the estimated civic knowledge of a 14 year old male of average SES, attending a public school, with average school resources, average school climate characteristics, and average civic learning opportunities, within each participant country. Note how the effect of SES (NISB) changes in size across fitted models, but continue to display a statistically significant effect on students’ civic knowledge, throughout. Note also the pronounced drop that occurs in the coefficients of the three countries in Model 3, which suggests that the resources of a school explain great part of the variation that we observe in the civic knowledge of students from high and low SES backgrounds.
Figure 9. Changes in the NISB (National indicator of Socio-Economic Status) Coefficient by Regression Model. (Note: Model 1 accounts for the effect of NISB. Model 2 adds controls for student background characteristics. Model 3 adds controls for school resources.)
<table>
<thead>
<tr>
<th>Variables</th>
<th>Chile</th>
<th>Colombia</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 3</td>
</tr>
<tr>
<td>Intercept</td>
<td>Constant</td>
<td>483.21 **</td>
<td>419.20 **</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.79)</td>
<td>(-2.92)</td>
</tr>
<tr>
<td></td>
<td>NISBM</td>
<td>33.34 **</td>
<td>32.48 **</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.33)</td>
<td>(2.02)</td>
</tr>
<tr>
<td></td>
<td>NormAGE</td>
<td>47.51 **</td>
<td>41.77 **</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(7.49)</td>
<td>(8.07)</td>
</tr>
<tr>
<td>Individual / Family</td>
<td>Gender</td>
<td>12.20 **</td>
<td>10.63 **</td>
</tr>
<tr>
<td>Characteristics</td>
<td></td>
<td>(3.84)</td>
<td>(3.2)</td>
</tr>
<tr>
<td></td>
<td>IS2G113a</td>
<td>10.68 **</td>
<td>10.69 **</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.21)</td>
<td>(1.32)</td>
</tr>
<tr>
<td></td>
<td>PARINT</td>
<td>-0.27</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.74)</td>
<td>(1.68)</td>
</tr>
<tr>
<td>School Resources</td>
<td>NISBM</td>
<td>37.22 **</td>
<td>35.02 **</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4.5)</td>
<td>(5.35)</td>
</tr>
<tr>
<td></td>
<td>PRIVATE</td>
<td>-1.74 **</td>
<td>-6.63 **</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(5.36)</td>
<td>(5.28)</td>
</tr>
<tr>
<td></td>
<td>SCHLSIZE</td>
<td>0.02 **</td>
<td>0.02 **</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.2)</td>
<td>(.18)</td>
</tr>
<tr>
<td></td>
<td>CSTRATIO</td>
<td>-0.09 **</td>
<td>-0.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.05)</td>
<td>(.05)</td>
</tr>
<tr>
<td></td>
<td>RESCOM</td>
<td>-0.10</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.39)</td>
<td>(.31)</td>
</tr>
<tr>
<td>School Climate</td>
<td>NOSSCPR</td>
<td>0.30</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.2)</td>
<td>(.18)</td>
</tr>
<tr>
<td></td>
<td>CSTUDBEH</td>
<td>0.30</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.2)</td>
<td>(.18)</td>
</tr>
<tr>
<td></td>
<td>NOEXPAGM</td>
<td>-1.33</td>
<td>-0.80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-.85)</td>
<td>(.86)</td>
</tr>
<tr>
<td></td>
<td>STUTRELH</td>
<td>1.61</td>
<td>-0.65</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.64)</td>
<td>(.57)</td>
</tr>
<tr>
<td></td>
<td>OPDISCM</td>
<td>2.50 *</td>
<td>1.90 *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.08)</td>
<td>(.82)</td>
</tr>
<tr>
<td>Civic Learning</td>
<td>SCHDISCM</td>
<td>0.75</td>
<td>(.38)</td>
</tr>
<tr>
<td>Opportunities</td>
<td></td>
<td>(.73)</td>
<td>(.84)</td>
</tr>
<tr>
<td></td>
<td>SCSTUDOP</td>
<td>0.73</td>
<td>0.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.41)</td>
<td>(.26)</td>
</tr>
<tr>
<td></td>
<td>PARTSCHLM</td>
<td>1.47</td>
<td>2.92 *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.93)</td>
<td>(1.32)</td>
</tr>
<tr>
<td>R-Square</td>
<td></td>
<td>0.16</td>
<td>0.2</td>
</tr>
</tbody>
</table>
The Decomposition of the Civic Knowledge Gaps: The Oaxaca Blinder-Method

In order to decompose the civic knowledge gaps in Chile, Colombia and Mexico into explained and unexplained sources of variance, I use the Oaxaca-Blinder method (Oaxaca, 1973; Blinder, 1973). In what follows, I first present the results from regression analysis conducted for samples that are purposefully divided into high and low SES students in the three countries (See Table 7). I then present the results of the Oaxaca-Blinder decomposition (Table 8), where I used the group sample means and coefficients from the regressions in Table 7, to decompose the civic knowledge gap into one component that is due to unequal access to school resources, school climate and civic learning opportunities, and another component that is due to unequal civic knowledge gains when access to characteristics is the same.

Regression Analysis

To decompose the factors that explain the civic knowledge gap in the three countries I start by conducting regressions that explore the relationships that exist between a set of individual/family and school-level characteristics and the civic knowledge of students from high and low SES backgrounds. These regressions use the same covariates employed in Model 5 of Table 6, but instead of using whole national samples they employ samples that were split at their NISB means for high and low SES students within each country. In other words, I conducted two separate regressions that include all individual/family, school resources, school climate and civic learning opportunities covariates, using two samples that were divided for students of different SES backgrounds. Table 7 presents the regression results for students of high and low SES backgrounds in Chile, Colombia and Mexico.
Table 7. Regression Analysis of Civic Knowledge for High and Low SES Student Samples in Chile, Colombia and Mexico

<table>
<thead>
<tr>
<th>Variables</th>
<th>Chile</th>
<th>Colombia</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>(CONSTANT)</td>
<td>72.95</td>
<td>127.58</td>
<td>58.48</td>
</tr>
<tr>
<td>Student background</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SGENDER</td>
<td>7.51</td>
<td>0.05</td>
<td>3.94</td>
</tr>
<tr>
<td>NORMAGE</td>
<td>35.74</td>
<td>** 0.10</td>
<td>6.95</td>
</tr>
<tr>
<td>PARINT</td>
<td>-0.16</td>
<td>0.00</td>
<td>2.14</td>
</tr>
<tr>
<td>IS2G13A</td>
<td>7.80</td>
<td>** 0.10</td>
<td>1.87</td>
</tr>
<tr>
<td>School Resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NISBm</td>
<td>32.07</td>
<td>** 0.20</td>
<td>7.26</td>
</tr>
<tr>
<td>PRIVATE</td>
<td>-5.31</td>
<td>-0.03</td>
<td>5.69</td>
</tr>
<tr>
<td>SCHLSIZE</td>
<td>0.01</td>
<td>0.09</td>
<td>0.00</td>
</tr>
<tr>
<td>CSTRATIO</td>
<td>-0.14</td>
<td>** 0.07</td>
<td>0.04</td>
</tr>
<tr>
<td>RESCOM</td>
<td>-0.01</td>
<td>0.00</td>
<td>0.40</td>
</tr>
<tr>
<td>School Climate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NoScScPr</td>
<td>0.15</td>
<td>0.02</td>
<td>0.20</td>
</tr>
<tr>
<td>CSTUDBEH</td>
<td>0.21</td>
<td>0.03</td>
<td>0.21</td>
</tr>
<tr>
<td>NoEXPAGm</td>
<td>-0.39</td>
<td>-0.01</td>
<td>1.05</td>
</tr>
<tr>
<td>STUTRELm</td>
<td>-0.99</td>
<td>-0.05</td>
<td>0.76</td>
</tr>
<tr>
<td>Civic Learning Opportunities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPDISCm</td>
<td>3.42</td>
<td>* 0.16</td>
<td>1.39</td>
</tr>
<tr>
<td>SCHDISCm</td>
<td>0.66</td>
<td>0.03</td>
<td>1.64</td>
</tr>
<tr>
<td>SCSTUDOP</td>
<td>0.62</td>
<td>0.07</td>
<td>0.49</td>
</tr>
<tr>
<td>PARTSCHLm</td>
<td>0.68</td>
<td>0.03</td>
<td>1.01</td>
</tr>
<tr>
<td>R-square</td>
<td>R2 = .17</td>
<td>R2 = .26</td>
<td>R2 = .11</td>
</tr>
</tbody>
</table>

* p ≤ 0.05, ** p ≤ 0.01
School Resources

On average in the population, and after controlling for other characteristics, we find that:

1) The SES of a school has a medium, positive and statistically significant effect on the civic knowledge of high and low SES students from Chile and Mexico, a small effect on high SES Colombian students, and no effect on low SES Colombians. Every additional unit in the School SES scale (NISBm) is associated with a positive difference of 36.05 points in the civic knowledge of high SES Chilean students (p<.01), 37.07 points in low SES Chilean students (p<.01), 41.42 points in high SES Mexican students (p<.01), 29.92 points in low SES Mexican students (p<.01), and 17.14 points in high SES Colombian students (p<.05).

2) Being in a private school does not have an effect on the civic knowledge of students from any SES backgrounds in any of the participant countries.

3) The size of a school has a positive and small effect on the civic knowledge of high and low SES Chilean students, but no effect on other national samples.

4) The resources available in the community where the school is located has a small, positive and statistically significant effect on the civic knowledge scores of low SES Colombian students (p<.05) but not effect on other samples.

School Climate

On average in the population, and after controlling for other characteristics, we find that:

1) The incidence of social problems, student behavior and school safety, do not have a statistically significant effect on the civic knowledge of students from
any SES backgrounds in any of the three national samples considered in the analysis.

2) The existence of positive student-teacher relationships has small, negative and statistically significant effects on the civic knowledge of high and low SES students in Colombia and high SES students in Mexico. Specifically, every additional unit in the STUTRELm scale is associated with civic knowledge scores that are 4.55 points lower for high SES Colombian students (p<.01), 1.76 points lower for low SES Colombian students (p<.05), and 2.58 points lower for high SES Mexican students (p<.05).

- **Civic Learning Opportunities**

  On average in the population, and after controlling for other characteristics, we find that:

  1. An open classroom for discussion has small, positive and statistically significant effects on the civic knowledge of low SES students from Chile, and high and low SES students from Colombia and Mexico. Specifically, every additional point in the OPDISCm scale is associated with civic knowledge scores that are 3.42 points higher for low SES Chilean students (p<.05), 2.40 points higher for low SES Colombian students (p<.05), 2.20 points higher for high SES Colombian students (p<.05), 4.60 points higher for low SES Mexican students (p<.01) and 2.34 points higher for high SES Mexican students (p<.05).

  2. The frequency with which students have discussions about civic issues at school has small, positive and statistically significant effect on the civic knowledge of students from low SES backgrounds in Colombia and high SES backgrounds
in Mexico, but no effect on other groups from the different national samples.

Specifically, every additional point in the SCHDISCm scale is associated, on average, with 1.58 more points in the civic knowledge scores of low SES students in Colombia (p<.05) and with 3.18 more points in the civic knowledge of high SES students in Mexico (p<.05).

3. The opportunities students have to participate in community activities has a positive and statistically significant effect on the civic knowledge of high SES students from Chile, but no effect on the civic knowledge of students in other SES and national samples. On average, every additional unit in the SCSTUDOP scale is associated with .89 more points in the civic knowledge scores of low SES students in Chile (p<.05).

4. Students’ participation in civic activities at school has a small, positive and statistically significant effect on the civic knowledge of high SES students from Chile and Colombia, but no effect on other groups. On average, every additional unit in the PARTSCHLM scale is associated with 2.95 more points in the civic knowledge of high SES students in Chile (p<.05) and 3.56 more points in the civic knowledge of high SES students in Colombia (p<.05).

**Decomposition results**

I decomposed the differences in civic knowledge between children of high and low SES backgrounds in the three countries, based on the estimations obtained in the regression analyses discussed above. Table 8 presents the results of the decompositions for Chile, Colombia and Mexico. The analyses include all the predictor variables described in Table 5. The headings “Characteristics” and “Returns” show the differences in the civic
knowledge gap that are due to differences access to characteristics (i.e.: group sample means of explanatory variables) and the differences that are due to differences in the civic knowledge gains (i.e.: group coefficients of explanatory variables) that students from different SES backgrounds obtain given the same access to characteristics. Results are presented in terms of: 1) the mean change we would observe in the civic knowledge of low SES students had they had the same characteristics as high SES students (value we would observe when applying the “X” characteristics of high SES students to the Beta coefficient of low SES students), 2) the mean change we would observe in low SES students’ civic knowledge had they obtained the same civic knowledge gains as their high SES counterparts assuming both groups are given equal access to characteristics (value we would observe when applying the Beta coefficient of high SES students to the “X” characteristics of low SES students), 3) the percent that those changes in characteristics and returns represent in relationship to the total civic knowledge gap. The panels in the tables include results for individual variables and subtotal for groups of variables (individual/family characteristics, school resources, school climate and civic learning opportunities).
Table 8. Decomposition of Civic Knowledge Scores of Students in Chile, Colombia and Mexico

<table>
<thead>
<tr>
<th>Determinants of Civic Knowledge Differentials</th>
<th>Chile</th>
<th>Colombia</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Character Returns</td>
<td>-45.37</td>
<td>6.85</td>
<td>12.37</td>
</tr>
<tr>
<td>Character Returns (bhigh-xlow)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Character Returns (bhigh-blown)</td>
<td>-30.64</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Student background</td>
<td>-0.05</td>
<td>-0.26</td>
<td>-1.00</td>
</tr>
<tr>
<td>SGENDER</td>
<td>-0.19</td>
<td>-0.23</td>
<td>0.30</td>
</tr>
<tr>
<td>NORMAGE</td>
<td>-0.03</td>
<td>-0.47</td>
<td>-1.83</td>
</tr>
<tr>
<td>PARINT</td>
<td>-0.13</td>
<td>-0.42</td>
<td>-3.64</td>
</tr>
<tr>
<td>IS2G13A</td>
<td>-1.13</td>
<td>-0.41</td>
<td>-3.64</td>
</tr>
<tr>
<td>Subtotal</td>
<td>4.52</td>
<td>1.50</td>
<td>1.39</td>
</tr>
<tr>
<td>School Resources</td>
<td>4.97</td>
<td>7.56</td>
<td>5.97</td>
</tr>
<tr>
<td>NISHm</td>
<td>28.83</td>
<td>9.89</td>
<td>2.82</td>
</tr>
<tr>
<td>PRIVATE</td>
<td>-3.85</td>
<td>2.92</td>
<td>2.82</td>
</tr>
<tr>
<td>SCHLIZE</td>
<td>2.32</td>
<td>0.94</td>
<td>1.28</td>
</tr>
<tr>
<td>CSTRATIO</td>
<td>-0.12</td>
<td>0.18</td>
<td>0.17</td>
</tr>
<tr>
<td>RESCOM</td>
<td>2.25</td>
<td>1.94</td>
<td>0.17</td>
</tr>
<tr>
<td>Subtotal</td>
<td>29.43</td>
<td>14.84</td>
<td>27.58</td>
</tr>
<tr>
<td>School Climate</td>
<td>3.50</td>
<td>2.29</td>
<td>2.29</td>
</tr>
<tr>
<td>NoScScPr</td>
<td>0.61</td>
<td>-0.26</td>
<td>-0.90</td>
</tr>
<tr>
<td>CSTUDIEH</td>
<td>0.58</td>
<td>0.54</td>
<td>0.04</td>
</tr>
<tr>
<td>NoEXPAgm</td>
<td>2.12</td>
<td>0.24</td>
<td>0.04</td>
</tr>
<tr>
<td>STUTRELm</td>
<td>0.18</td>
<td>0.63</td>
<td>0.04</td>
</tr>
<tr>
<td>Subtotal</td>
<td>3.50</td>
<td>6.91</td>
<td>2.29</td>
</tr>
<tr>
<td>Civic Learning Opportunities</td>
<td>2.21</td>
<td>6.42</td>
<td>4.68</td>
</tr>
<tr>
<td>OPDISCm</td>
<td>1.09</td>
<td>3.51</td>
<td>1.64</td>
</tr>
<tr>
<td>SCSTUDOFC</td>
<td>-0.66</td>
<td>0.54</td>
<td>2.80</td>
</tr>
<tr>
<td>PARTSCHLm</td>
<td>0.68</td>
<td>0.02</td>
<td>0.28</td>
</tr>
<tr>
<td>Subtotal</td>
<td>2.21</td>
<td>6.42</td>
<td>4.68</td>
</tr>
<tr>
<td>Total</td>
<td>39.67</td>
<td>32.97</td>
<td>36.99</td>
</tr>
<tr>
<td>Overall</td>
<td>148.09</td>
<td>59.61</td>
<td>67.30</td>
</tr>
</tbody>
</table>

Note: The first column within each country represents the additional civic knowledge points a low SES student would exhibit if he/she had the same characteristics as a high SES student. The second column represents the additional civic knowledge points a low SES student would exhibit if he/she had obtained the same returns to a characteristic than a high SES student. A positive contribution of a covariate to the explained gap (see ‘Characteristics’) indicates that high SES students are more endowed than low SES students, and a negative contribution indicates that low SES students are more endowed than high SES students. A positive contribution of a covariate to the unexplained gap (See ‘Returns’) indicates that high SES students obtain higher civic knowledge returns than their counterparts. A negative contribution indicates that low SES students obtain higher civic knowledge returns than high SES students. The third and fourth columns reflect these same results as a percent of the total gap.
Figure 10 shows the percentages of the civic knowledge gap in Chile, Colombia and Mexico that are due to differences in access to characteristics, and the percentages that are due to differences in the civic knowledge that students from different SES backgrounds gain when they have access to the same characteristics. In Chile, the portion of the civic knowledge gap that is due to differences in characteristics is significantly smaller than the portion that is due to differences in the civic knowledge gains but the opposite is true for Colombia and Mexico.

Figure 10. Percentages of the Civic Knowledge Gap in Chile, Colombia and Mexico Due to Differences in the Characteristics and Differences in Civic Knowledge Gains of Students from High and Low SES backgrounds

Based on the decomposition, I estimate that in all countries students would benefit from having equal access to the same characteristics, but low SES Chilean students would greatly benefit if they could obtain similar civic knowledge gains than their high SES counterparts from the access they have to a given set of school characteristics. Specifically:
• If low SES Chilean students had the same characteristics as high SES Chilean students, they would obtain, on average, 39.67 more points in their civic knowledge scores, the equivalent of a 27% reduction in the civic knowledge gap. If they had gained the same civic knowledge benefits from those characteristics as high SES Chilean students, they would have obtained, on average, another 108.42 civic knowledge points, the equivalent of a 73% reduction in the civic knowledge gap.

• If low SES Colombian students had had the same characteristics as high SES students, they would have obtained, on average, 32.97 additional points in their civic knowledge scores, the equivalent of a 56.61% reduction in the civic knowledge gap. If they had obtained the same benefits as their high SES counterparts, they would have exhibited, on average, 22.34 additional points in their civic knowledge scores, the equivalent of a 40.39% reduction in the civic knowledge gap.

• If low SES Mexican students had had the same characteristics as privileged students, they would have obtained, on average, 36.99 additional points in their civic knowledge scores, the equivalent of a 67.30% reduction in the civic knowledge gap. And if they had obtained the same civic knowledge gains as high SES students, they would have also gained, on average, 17.97 extra points in their civic knowledge scores, the equivalent of a 32.70% reduction in the civic knowledge gap.

The Explained Component of the Civic Knowledge Gaps

Figure 11 shows how differences in the access that students from different SES backgrounds have to school resources, school climate and civic learning opportunities of high account for different portions of the total civic knowledge gaps in Chile, Colombia
and Mexico. Comparing the results across countries, we see that differences in characteristics consistently favor students from high SES backgrounds in all national samples. Specifically, the decomposition shows that high SES students from Chile, Colombia and Mexico have more access to the school resources, school climate and civic learning opportunities that are associated with higher civic knowledge (Note that the contributions of each dimension under the heading “Characteristics” in Figure 11 are positive, reflecting the advantages high SES students have over low SES students in terms of the access they have to school resources, positive school climates and interactive civic learning opportunities. See also the subtotals for each dimension under the heading “Characteristics” in Table 8).

Figure 11. Percentage of the total civic knowledge gap accounted by differences in the average Individual/family background characteristics, school resources, school climate and civic learning opportunities of students from high and low SES background.
Specifically, the decomposition shows that:

- **School Resources:** In all three countries, differences in access to school resources account for the bulk of the explained variance in the civic knowledge gap between students of high and low SES backgrounds. Differences in access to school resources are equivalent to 19.88% of the total civic knowledge gap in Chile, 26.83% of the civic knowledge gap in Colombia and 50.40% of the civic knowledge gap in Mexico. If low SES students in these countries had had access to the same school resources as high SES students, we would observe reductions of similar proportions in the civic knowledge gaps of these countries. It is worth noting that the advantages that high SES students gain from the school resources are mostly driven by large differences in the school SES, a measure that reflects the aggregated SES levels of students in the school (See Table 8).

- **School Climate:** Differences in the characteristics of the school climate are equivalent to 2.37% of the civic knowledge gap in Chile, 12.49% of the gap in Colombia and 4.16% of the gap in Mexico. If low SES students in these countries had had access to similar school climates than high SES students –especially with regard to positive student-teacher relationships–, we would observe reduction of the civic knowledge gaps in these countries of similar proportions.

- **Civic Learning Opportunities:** Differences in civic learning opportunities that favor high SES students are equivalent to 1.49% of the civic knowledge gap in Chile, 11.61% of the gap in Colombia and 8.51% of the gap in Mexico. If low SES students in Chile, Colombia and Mexico had had access to the same civic learning opportunities as high SES students –especially with regard to open classroom for discussion and
opportunities to discuss civic and social issues in school-, we would observe a reduction of the civic knowledge gaps of these countries of similar proportions.

*The Unexplained Component of the Civic Knowledge Gaps*

Figure 12 shows how differences in the average civic knowledge gains obtained by students from high and low SES backgrounds when they have equal access to school resources, positive school climates and interactive civic learning opportunities account for portions of the total civic knowledge gaps in Chile, Colombia and Mexico. Comparing across countries, we notice mixed results. The decomposition shows that in Chile students from high SES backgrounds consistently gain more civic knowledge from the schools resources, school climate and civic learning opportunities than students from low SES backgrounds (note that the contributions of different dimensions for Chile under “Returns” in Figure 12 are always positive, reflecting that high SES students gain more civic knowledge from a given set of characteristics than their counterparts. See also subtotals for each dimension under “Returns” in Table 8). In the other two countries, low SES students sometimes obtain more civic knowledge gains than their more privileged counterparts from having equal access to equal to certain dimensions (note that the contributions under “Returns” in Figure 12 are sometimes negative, reflecting that low SES students gain more civic knowledge from a given set of characteristics than their counterparts. See also subtotals for each dimension under “Returns” in Table 8). Specifically: 1) When provided equal access to school resources, high SES Chilean students gain more civic knowledge than their low SES counterparts, low SES Colombia students gain more civic knowledge than their high SES counterparts, and in Mexico both groups learn the same, 2) When provided equal access to positive school climates, low SES students in Colombia and
Mexico are able to obtain more civic knowledge than their more privileged counterparts, 3) When provided equal access to interactive civic learning opportunities, low SES students in Mexico gain more civic knowledge than their high SES counterparts, but the same is not true for Chile or Colombia.

![Figure 12](image.png)

**Figure 12. Percentage of the total civic knowledge gaps in Chile, Colombia and Mexico that are accounted by differences in the average civic knowledge gains that students obtain from equal access to school resources, school climate and civic learning opportunities.**

(Note: Positive contributions indicate that, given equal access to the characteristics of a given dimension, high SES students are obtaining more civic knowledge gains than low SES students. Negative contributions indicate that, given equal access to the characteristics of a given dimension, low SES students are gaining more civic knowledge than high SES students).
Specifically, the decomposition of the unexplained component of the civic knowledge gap shows the following, in relationship to different dimensions considered in the analysis:

- **School Resources**: Differences in the civic knowledge gains that high and low SES students obtain from accessing similar school resources are mixed: Positive differences in Chile indicate that high SES students acquire more civic knowledge than low SES students given equal school resources, in ways that are equivalent to 13.80% of the civic knowledge gap in Chile. Negative differences in Colombia indicate that given equal school resources, low SES Colombian students learn more civic knowledge than high SES students, such that without these gains we would have observed a civic knowledge gap larger by 27.63% in this country. Minimal differences between Mexican students of high and low SES backgrounds suggest that students from different SES backgrounds reap similar civic knowledge from the resources of their schools.

- **School Climate**: Differences in the civic knowledge students from high and low SES backgrounds gain when provided equal access to school climates characteristics are positive in Chile, and thus, favor high SES students, in ways that are equivalent to 55.69% of the civic knowledge gap in that country. Negative differences indicate that low SES students in Colombia and Mexico are gaining more civic knowledge from equally positive school climates than their high SES counterparts, which helps to counteract the advantages high SES students have over them, in ways that are equivalent to 55.79% of the gap in Colombia and 276.92% of the gap in Mexico, and without which we would have observed larger civic knowledge gaps in these countries.
Here it is worth noting that the individual variables that accounting for the largest proportions of the civic knowledge gap in Chile, Colombia and Mexico that are due to differences in the civic knowledge gains that students obtain from equal access to positive school climates are student-teacher relationships and school safety. It is also worth noting in Colombia and Mexico, low SES students are gaining more civic knowledge than high SES students from having equal access to positive student-teacher relationships (See Table 8).

- **Civic Learning Opportunities:** Positive differences in the civic knowledge gains that students from high and low SES backgrounds obtain from having access to equal civic learning opportunities favor high SES students in Chile and Colombia, in ways that are equivalent to 27.74% and 89.50% of the civic knowledge gap in those countries. Negative differences indicate that low SES students in Mexico gain more civic knowledge than high SES students from the civic learning opportunities, in ways that are equivalent to 54.83% of the civic knowledge gap in this country, and without which we would have observed a larger civic knowledge gap in Mexico. Here it is worth noting that the variables that account for the largest proportions of the civic knowledge gaps in Chile, Colombia and Mexico are open classrooms for discussion and participation in civic activities. Interestingly, in the three countries, students from high SES backgrounds are obtaining more civic knowledge gains than low SES students from participating in civic activities, but in the three countries as well, low SES students are obtaining significantly more civic knowledge gains than their high SES counterparts from open classrooms for discussion (See Table 8).
In Figure 13 everything comes together to show how 1) civic knowledge gaps can be decomposed into explained (See Characteristics) and unexplained components (See Returns), 2) the explained component can be further decomposed into portions that are due to differences in family background, school resources, positive school climates and civic learning opportunities, and 2) the unexplained component can be further decomposed into differences in the average civic knowledge gains that students from different SES backgrounds obtain given equal individual/family background, school resources, school climate and civic learning opportunities. The intercept can be interpreted as “pure efficiency”, or how students from different SES backgrounds are more or less able to obtain civic knowledge than their counterparts.
Figure 13. Decomposition of the Civic knowledge gap in Chile, Colombia and Mexico into 1) differences in average characteristics by dimension, and 2) differences in average civic knowledge gains, between high and low SES students, by dimension (Note: Positive contributions under “Characteristics” indicate that high SES students have higher levels than low SES students. Positive contributions under “Returns” indicate that high SES students obtain higher civic knowledge gains from equal access to a given dimension; negative contributions indicate that low SES students obtain higher civic knowledge).
Chapter 4. Discussion

The Civic Competence Gaps in Chile, Colombia and Mexico

I used data from the 2009 ICCS to document the existence and magnitude of civic competence gaps between students from high and low SES backgrounds in traditional and non-traditional dimensions of civic learning. Based on Carretero et al. (2016), Westheimer & Kahne (2004) and MEN (2004), I defined civic competence as having the knowledge, civic attitudes, civic identities and civic skills that young people need to live as personally responsible, participatory and justice oriented citizens in democratic societies. Inherent to this definition is a vision of civic education that moves away from an exclusive focus on civic knowledge to one that embraces other dimensions of civic performance that are equally important in democratic societies (Carretero et al, 2016; Jaramillo & Mesa, 2009; MEN, 2004; Patty & Cepeda, 2007; Reimers & Villegas, 2006; Spencer Foundation, 2009).

I took advantage of measures included in the 2009 ICCS dataset to explore civic competence gaps of students in Chile, Colombia and Mexico as related to two dimensions of civic learning: 1) Civic knowledge and understanding, as captured by the International Scale of Civic Knowledge, 2) Civic values and identities, as captured by measures of internal sense of political efficacy, expected participation in future electoral processes and future legal and illegal protests, attitudes toward disobeying the law, attitudes toward corruption, attitudes toward authoritarianism in the government, and civil disobedience.

I do not document civic competence gaps as related to civic skills and civic actions because the ICCS did not include adequate measures to capture constructs related to these important dimensions of civic competence.
Findings from regression analysis indicate that students in Chile, Colombia and Mexico exhibit civic knowledge gaps along the lines of their SES backgrounds that favor high SES students, in ways that are consistent with observations from researchers and scholars in the United States (American Political Task Force, 2004; Levinson, 2010). Specifically, high SES students in these countries exhibit significantly higher levels of civic knowledge than students from low SES backgrounds, which suggests that they understand better the processes underlying different forms of social and political organization and influence, and the legal and institutional mechanisms that control them. Given that in order to make informed decision about civic and social issues citizens need to be knowledgeable about political structures and processes (Selman & Kwok, 2010), high SES students will be more able to participate actively, exercise power and protect their interests in the political system than their low SES counterparts (Levinson, 2010).

Additionally, I document civic competence gaps in other dimensions of competence, related to students’ civic attitudes and identities (Carretero et al., 2016). In this regard, I expected that students from high SES backgrounds would be more likely than their low SES counterparts to exhibit the characteristics of the personally responsible, participatory citizen and justice-oriented citizens (Westheimer & Kahne, 2004). Personally responsible citizens have a positive orientation toward serving and helping others, following the rules and keeping harmony and safety in the community (Westheimer & Kahne, 2004). Results show that high SES students in Chile, Colombia and Mexico exhibit lower supportive attitudes toward disobeying the law and report lower expectations to engage in unlawful practices such as illegal protests. Given that competent, responsible citizens know, respect and follow the laws and understand the importance of obeying them
even when they disagree with some of them (MEN, 2004), low SES students in Chile, Colombia and Mexico may be at risk of engaging in practices that are not personally-responsible, such as breaking the law and participating in illegal protests.

Participatory citizens get involved in national, state and local affairs and take active part in democratic processes to have an influence in society (Westheimer & Kahne, 2004). Results indicate that high SES students in Chile, Colombia and Mexico have a higher sense of internal political efficacy and higher intentions to participate in future electoral processes than their low SES counterparts. Given that competent, participatory citizens get involved in political processes that generate positive social transformations in society, it is important that young people feel confident in their skills and express interest in taking an active part in electoral processes (MEN, 2004). In fact, having a strong internal sense of political efficacy and feeling good about their ability to understand politics and act politically can help students become more engaged and participate more actively in political processes (Balch, 1974; Converse, 1972; Verba et al, 1995). Similarly, having a positive attitude toward future participation in electoral processes is an important civic competence that affects students’ political power because voting is the most direct way by which citizens can affect the implementation of policies and the selection of the people who make the policies (Verba et al, 1995). In this regard, the lower internal sense of political efficacy and lower interest to participate in future electoral processes put low SES students at risk of not being able to make their voices heard and of having little influence in political processes.

Justice-oriented citizens take a critical stand about the uses and abuses of power and the actions needed to transform society in ways that eliminate inequality and injustice
(Westheimer & Kahne, 2004). Results show that students from high SES backgrounds in Chile, Colombia and Mexico are more likely to see themselves as participating in future legal protests to express disagreement with the things they consider unfair, and they expressed greater disagreement with practices of corruption and authoritarianism in the government than students from low SES backgrounds. Given that competent, justice-oriented citizens are able to challenge injustices and resist undemocratic practices and abuses of power (MEN, 2004) it is important that young people learn to use legal protests as a way to transform society and actively reject corruption and authoritarianism in the government. Unfortunately, results indicate that low SES students are at risk of failing to protect democratic values and of remaining indifferent to the issues of social justice that negatively affect their wellbeing and society. And given that low SES students typically have less access to positions of power, they are also undermining their ability to gain influence in society by endorsing practices of authoritarianism and corruption in the government.

Interestingly, findings did not show differences between high and low SES students in their attitudes toward civil disobedience. And yet, civil disobedience is a powerful way to resist and challenge unfair social systems and to raise awareness and transform society. The lack of differences between high and low SES students’ attitudes toward civil disobedience contrasts with the marked divide we observed in relationship to their attitudes toward breaking the law -the key difference between these outcomes being that while the former reflects an interest in disobeying the law as the last resort to transform unfair social systems in non-violent ways for the benefit of the public, the latter reflects a variety of motivations, including self-serving ones, which do not aim to resist injustices and
transform social structures and are not necessarily used as a last resort. In this regard, civil disobedience can be regarded as the paramount symbol of good citizenship, because it merges the qualities of the personally-responsible, participatory and justice-oriented citizens, combining in one outcome the orientation toward using non-violent mechanisms of participation to challenge unfair laws for the benefit of the larger society. The lack of differences between students of high and low SES backgrounds may signal an absence of a culture of civil disobedience among young people in the participant countries.

Overall, the differences in the civic knowledge, civic attitudes and civic identities that we find between students from high and low SES backgrounds in Chile, Colombia and Mexico reinforce the power and privileges that high SES youth already have, and undermine the future opportunities that low SES students will have in society. In fact, their lower civic knowledge and less democratic attitudes and civic identities put them at risk of making decisions that are not well informed, breaking the law, disengaging from civic and political participation, and becoming indifferent to undemocratic practices that are detrimental to social justice and society.

Findings show that in the three countries, the civic knowledge gaps between students from different SES backgrounds are significantly larger than the gaps in their civic attitudes and identities. Differences in the size of the gaps may be due to the fact that the ICCS uses a performance-based measure to capture civic knowledge, but self-reports to capture civic identities and attitudes, and the latter are known to be subject to social desirability bias (Diazgranados et al., 2015). In this regard, there is a growing awareness of the need to develop performance-based measures to capture students’ civic identities, attitudes and skills and considerable investments are being made to develop, validate and
make these types of measures available to researchers in the field of civic education (Spencer Foundation, 2015). Future studies can document civic competence gaps in all dimensions of civic learning using performance-based measures as opposed to self-reports. In doing so, researchers can gain insights about the degree to which differences in the size of the civic competence gaps are due to differences in the nature of the measures used to capture civic constructs or to actual differences in the nature of civic competencies observed.

With regard to country comparisons, results show that Chilean students exhibit the highest levels of civic knowledge but the lowest levels of civic attitudes and identities. By contrast, Colombia exhibits the lowest levels of civic knowledge, but the highest levels of democratic attitudes and identities. These findings may be the result of the different approaches to civic education that have been adopted by these countries. While Colombia and Mexico have given high priority to civic education using national policies that are consistent with the New Civics (Cox et al., 2005; Patty & Cepeda, 2005, Spencer Foundation, 2010), Chile has given medium priority and allows schools to design their own civic education programs without national guidance, which means that each school can adopt any approach of their own choosing, in ways that may or may not be consistent with the New Civics. In this regard, it is worth considering that when countries do not suffer from high levels of inequality, policies that allow schools to choose their own approaches to civic education may benefit students as school can choose to focus on areas that best fit the needs of the students in their given context, but when inequity is as high as it is in Chile, the lack of national policies may actually contribute to the reproduction of inequality. In fact, without clear national policies of civic and citizenship education,
schools that serve low SES students may end up implementing traditional top-down approaches of citizenship education that emphasize the acquisition of civic knowledge, while schools serving high SES students are more likely to provide students with bottom-up interactive methods of civic learning, which give equal importance to the development of democratic attitudes, and civic skills and behaviors. (Carretero et al, 2016). Future studies can use experimental or regression discontinuity designs to identity the causal effect of national policies on the civic competence of students from different SES backgrounds in the region.

Finally, results also show that Chile exhibits the largest civic competence gaps in all civic outcomes considered in the analyses, which are likely due to the high levels of socioeconomic segregation that exist within the Chilean education system (Elacqua & Santos, 2013; Flores & Carrasco, 2013; Valenzuela et al, 2013). In fact, it is a well-known fact that the use of vouchers and highly selective practices of admission in Chilean schools have negatively impacted the education outcomes of students from low SES backgrounds. Specifically, socioeconomic segregation is thought to reduce the access that low SES students have to the learning supports that are available to privileged students -such as school resources, positive school climates and interactive civic learning opportunities- and to also decrease the chance they could have otherwise to benefit from interacting with peers from more privileged backgrounds, who often have the social, cultural and political capital valued by democratic societies.

*The Composition of the Civic Knowledge Gaps in Chile, Colombia and Mexico*

Given that the civic knowledge gaps observed in Chile, Colombia and Mexico were between two to six times the sizes of the other civic competence gaps considered, I
conducted further analysis on this one outcome. A review of research literature showed that school resources (Borman & Kimball, 2005; Levine & Marcus, 2007; OECD, 2014; Orfield, 2000; Reimers, 2006, Rossetti, 2014; Rothstein, 2004), school climate (Becker & Luthar, 2002; Claes, Hooghe & Resskens, 2009; Diazgranados, 2015; Diazgranados & Noonan, 2014; Diazgranados et al, 2012; Diazgranados & Selman, 2014; Treviño, et al., 2010) and civic learning opportunities (CIRCLE & Carnegie Corporation of New York, 2003; Gibson & Levine, 2003; Hess, 2009; Hess & McAvoy, 2014; Kahne & Middaugh, 2008; Kahne & Sporte, 2008; Torney-Purta, 2002) have an effect on students’ civic competence, and that these learning supports are not distributed equally among students of different SES backgrounds. Therefore, I accounted for the civic knowledge gaps observed in the participant countries using variables that operationalized different aspects of those dimensions. In doing so, I first used traditional regression analysis and I then took a step beyond them to employ the Oaxaca-Blinder test (Oaxaca, 1973; Blinder, 1973), which allowed me to decompose the civic knowledge gaps that exist between students of high and low SES backgrounds into their explained and unexplained components. In the analysis I identified the civic knowledge low SES students would have exhibited 1) had they had access to the same school resources, school climate and civic learning opportunities as high SES students, and 2) had they been able to obtain the same civic knowledge gains from those school resources, school climate and civic learning opportunities as their high SES counterparts. While traditional regressions helped me to identify the association that exists between civic knowledge and SES, after holding other individual and school-level variables constant, the Oaxaca-Blinder decomposition method allowed me to decompose the civic knowledge gaps we observed between students from different SES backgrounds.
into components that are due to differences in characteristics, and components that are due to differences in the civic knowledge gains that students from different SES backgrounds obtain when they exhibit equal characteristics and have access to equal learning supports (Barrera-Osorio et al, 2011, Sheperd, 2013). Both approaches have different advantages and disadvantages. The traditional regression analysis allowed me to use SES (NISB) as a continuous variable to identify how its relationship with civic knowledge changed as I progressively included different covariates, but it did not allow me to decompose the civic knowledge gaps into their explained and unexplained sources of variance. Using the Oaxaca-Blinder method I had to artificially divide each one of my national samples into groups of high and low SES students, but in doing so, I gained access to the Beta coefficients that I needed to decompose the civic knowledge gaps into explained and unexplained components.

Results from the Oaxaca-Blinder decomposition show that students from high SES backgrounds in the three countries have more access to the school resources, school climate and civic learning opportunities they need to be civically knowledgeable. Results also indicate that while school climate and school civic learning opportunities account for small portions of the civic knowledge gap, most explained variance in the three countries is due to differences in access to school resources, and specifically, to differences in the school SES level, a measure that reflects that aggregated SES of students and which is related to socioeconomic segregation within schools. Additionally, we learned that, given equal characteristics and equal access to school supports, high SES Chilean students learn more civic knowledge than low SES students, but in Colombia and Mexico, low SES students gain more civic knowledge than high SES students when they all have equal access to
school resources, positive school climates and interactive civic learning opportunities. Below I discuss the main findings in more detail.

*High SES students have significantly more access to school resources, positive school climates and interactive civic learning opportunities than their low SES counterparts, but the school SES level accounts for the largest portion of the explained civic knowledge gaps in Chile, Colombia and Mexico*

Consistent with the literature, the results of the decomposition confirm that in the three countries, students from high SES backgrounds have significantly more access to school resources, (OECD, 2014; Orfield, 2000, Reimers, 2006; Rossetti, 2014), school climate (Battistich et al, 1997; Brantlinger, 1999; Drakeford, 2004; Gregory et al, 2010; Jain et al, 2015; Noguera, 2005; Rudasill et al., 2010; Paganini, 1999; Skinner & Belmont, 1993) and interactive civic learning opportunities (Condon, 2007; Khane, 2009; Oakes, 2005) they need to be civically knowledgeable than students from low SES backgrounds. Specifically, in Chile, Colombia and Mexico students from privileged SES backgrounds come from families that spend more time talking about civic and social issues with them. They are more likely to attend schools where they are surrounded by peers who come from socio-economically privileged backgrounds. They enjoy more positive school climates. Their classrooms are more open to discussions and provide them with more opportunities to talk about civic and social issues at school and to engage in civic activities. In every dimension that matters, students from high SES backgrounds have more access than students from low SES backgrounds to the supports they need to become civically knowledgeable. Not surprisingly, they exhibit significantly better scores in the civic
knowledge tests of the 2009 ICCS test than their counterparts, and it is likely that they will be more prepared to live and act as competent citizens in their society.

Interestingly, we learned that access to some school supports consistently matter more than others across the three countries. First, the data indicates that differences in the school resources – which are driven by differences in the SES of the school - account for the bulk of the explained variance of the civic knowledge gaps in Chile, Colombia and Mexico. Differences in other characteristics, such as individual/family background, school climate and civic learning opportunities also account for portions of the civic knowledge gap, but in ways that are significantly smaller when compared to the portion accounted for by the school SES.

The finding that the aggregated SES of the school drives most of the explained variance of the civic knowledge gaps in Chile, Colombia and Mexico - is consistent with studies showing that socioeconomic segregation in Latin America is one of the key factors that account for differences in academic and civic competence in the region (Rosseti, 2014; Valenzuela, Bellei & De los Ríos, 2013; Valenzuela et al., 2013). In this regard, the effects of socioeconomic segregation has been explained in terms of peer effects and differences in the quality of the school inputs. Some scholars think that socioeconomic segregation is not inherently bad, as long as education systems provide students from all with a high quality education that does not discriminate along the lines of their SES backgrounds. The problem, they argue, is that socioeconomically segregated schools often suffer from a variety of challenges that negatively affect students, such as less resources, more negative school climates, less interactive civic education opportunities, and other problems such as higher teacher rotation and difficulties attracting high quality teachers (Hanushek, Kain &
Rivkin, 2004). Other scholars think that socioeconomic segregation is inherently bad for the promotion of civic competence because it concentrates social and cultural capital in schools serving high SES students, at the same time that it prevents low SES students from benefiting from the peer and spill-over effects that take place in integrated environments. By reducing opportunities for interaction between students of different SES backgrounds, low SES students cannot benefit from being socialized in the culture of civic engagement and civic empowerment that students from affluent families with richer civic learning experiences create in schools, and high SES students cannot develop the social empathy they need to understand the importance of taking action to transform the system and support the poor overcome the challenges they face in life given the unequal access they have to learning opportunities (Kahlenberg, 2012). From this perspective, socioeconomic integration enriches the civic competencies of all students as it enables everyone to interact with peers from diverse backgrounds who have different sources of knowledge, perspectives and experiences (Rothstein, 2004; Howell, Wolf & Campbell, 2002).

In summary, findings from this study suggest that while unequal access to school climate and civic learning opportunities account for small percentages of the civic knowledge gaps in Chile, Colombia and Mexico, unequal access to school resources—and specifically, differences in the schools SES- account for the greatest portion of the explained civic knowledge gaps in these countries. These findings provide support to the idea that socioeconomically integrated environments are critical for the development of low SES students’ civic knowledge and that the concentration of social and cultural capital that occurs in schools that serve high SES students in socioeconomically segregated environments contributes to social reproduction of inequality in society. Specifically, the
data suggests that low SES students in socioeconomically segregated schools end up being less civically knowledgeable because they not only have less access to school resources, positive school climates and interactive civic learning opportunities, but because their learning and development takes place among peers who often come from civically poor family backgrounds, who create subcultures of civic disengagement and distrust of political systems (Bedolla, 2005; Middaugh & Kahne, 2008). By contrast, high SES students in socioeconomically segregated schools may end up being highly civically knowledgeable, not only because they have more access to school resources, positive school climates and interactive civic learning opportunities, but because they are surrounded by peers who come from families with rich civic experiences, who create subcultures of civic engagement and civic empowerment.

*Students from low SES backgrounds can gain higher civic knowledge than their high SES counterparts from having equal access to school resources, positive school climates and interactive civic learning opportunities with Open Classroom for Discussions being notably beneficial for low SES students in all countries.*

Differences in characteristics do not fully account for the civic knowledge gaps in Chile, Colombia and Mexico. In fact, great portions of the civic knowledge gaps in these three countries are due to differences in the civic knowledge gains that students from high and low SES backgrounds are able to obtain given equal access to school resources, positive school climate and interactive civic learning opportunities in their schools. Using the Oaxaca-Blinder, I identified the ways in which two students from high and low SES backgrounds who otherwise have the same characteristics, obtain different civic
knowledge gains from the same school resources, school climate and civic learning opportunities at school.

Findings indicate that in Colombia and Mexico, but not in Chile, low SES students can gain more civic knowledge than their high SES counterparts when they have equal access to school resources, school climate and civic learning opportunities. Specifically, high SES Chilean students consistently reap higher civic knowledge gain from school inputs than low SES students, but low SES Colombian and Mexican students obtain more civic knowledge than their socioeconomically advantaged counterparts when they have equal access to different school supports. In this regard, we observed that when Colombian students from low SES backgrounds have the same access to school resources and positive school climates as high SES students, they are able to gain more civic knowledge than their privileged counterparts. And when Mexican students from low SES backgrounds have equal access to positive school climates and civic learning opportunities as high SES students, they are also able to gain more civic knowledge than their counterparts.

Findings suggest that the school climate is the dimension from which students of all different SES backgrounds can reap more civic knowledge, followed by access to interactive civic learning opportunities. Differences in the civic knowledge gains that students from different SES backgrounds reap from the school resources are significantly smaller, when compared to these other two dimensions. Interestingly, across the different countries we did not observe that a group of students consistently benefitted more than the other group, as who benefited more varied in each country.

With regard to the school climate, we learned that differences in the gains that students from different SES backgrounds obtain from student-teacher relationships and
safe schools account for large parts of the unexplained portion of the civic knowledge gaps in all countries. Surprisingly, positive student-teacher relationships has a negative effect on the civic knowledge of students in Colombia and Mexico, which more negatively affect students from high SES backgrounds. Future research needs to shed light into this relationship and potentially illuminate how the quality of student-teacher relationships in Latin America may be interacting with other variables such as safety, order and discipline, to create different configurations of school climates that may affect students’ civic knowledge as well as other civic competencies in distinct ways. In this regard, it is possible that in Colombia and Mexico, authoritarian school climates –which are characterized by cold student-teacher relationships and high order with punitive approaches to discipline- may create learning environments that favor the acquisition of civic knowledge through memorization, but which could also contribute to the development of undemocratic attitudes and identities such as the endorsement of authoritarianism and corruption, etc. Democratic and permissive school environments –which are characterized by positive student-teacher relationships with high order for the former and low order for the later-, may create classroom environments that are less conducive to the acquisition of knowledge but more conducive to the acquisition of other important civic competencies such as democratic attitudes, civic skills and behaviors. In this regard, previous research with young students in Colombia suggest that while permissive and democratic school climates are associated with negative attitudes toward the use of violence, authoritarian and negligent school climates are associated with the development of supportive attitudes toward violence (Diazgranados, 2014; Diazgranados & Noonan, 2014). More research is
needed to clarify the negative relationship between student-teacher relationships and civic knowledge.

With regard to interactive civic learning opportunities, we learned that differences in the civic knowledge gains that students from different SES backgrounds obtain from participating in civic activities and from having open classrooms for discussion account for large portions of the civic knowledge gaps in Chile, Colombia and Mexico. Interestingly, in all three countries, students from high SES backgrounds are gaining more civic knowledge than low SES students from the opportunity to participate in civic activities at school, but in all three countries, students from low SES backgrounds are obtaining more civic knowledge than high SES students from having equal opportunities to learn in open classroom for discussion. This later finding supports the idea that students from low SES backgrounds can gain great civic knowledge from the opportunity to being exposed to different perspectives and ideas which they may have never encountered at home, through processes of deliberation which they may have not experienced either. In fact, open classrooms for discussion are uniquely fitted to help young people become civically knowledgeable and competent because they are inherently democratic in that they take advantage of the diversity of perspectives that often exist within a given classroom setting to promote forms of civic learning and understanding that would not occur in hierarchical settings where a teacher simply delivers content through top-down pedagogical approaches. Open classrooms for discussion may also be uniquely beneficial for low SES students in that they eliminate power inequalities which are so prevalent in the lives of low SES students, by giving equal importance to the perspectives and voices of all members of the classroom.
Findings related to differences in civic knowledge gains obtained by students of high and low SES backgrounds may have more than one interpretation, which do not necessarily preclude one another. First, it is possible that differences in gains reflect unobserved characteristics that are correlated with the outcome and which covary with students’ SES. Unobserved characteristics, such as differences in the quality of the resources, school climates and learning opportunities students from different SES backgrounds receive, may account for the differences in the civic knowledge gains. It is also possible that students from different SES backgrounds gain different amounts of civic knowledge given the same access to school resources, school climate and civic learning opportunities because they take different advantage of these characteristics. In this regard, it is possible that low SES students in Colombia and Mexico benefit more than their high SES counterparts from having access to school resources, positive school climates and civic learning opportunities because don’t typically have similar supports at home, and therefore, can benefit greatly from being exposed to them in school. However, in highly segregated contexts such as Chile students from high SES backgrounds may be able to reap higher civic knowledge gains from the same school inputs than their low SES counterparts because the school environment exposes them to a great accumulation of cultural capital that equips them with the background knowledge, attitudes and skills they need to take better advantage of the resources, environments and learning opportunities that come their way. In different contexts, according to the results of the decomposition, educators and policy-makers may need to test and assess the effect of different strategies when trying to improve the civic knowledge of students from different backgrounds.

*Implications for practitioners and policy-makers*
The existence of differences in civic competencies along the lines of SES backgrounds is an issue that needs to be addressed because civic competence gaps constitute a threat to the legitimacy of democracies (Levinson, 2004) and the protection of human rights in the region (United Nations, 1948). In the context of countries such as Chile, Colombia and Mexico, which have struggled with war, dictatorships and deep inequalities, they may disrupt further the stability, peace and economic growth of the region.

Comparatively speaking, findings indicate that despite the fact that Colombians showed the lowest levels of civic knowledge among students from the three countries, they also exhibited the highest levels of democratic attitudes and expected behaviors and the smallest performance gaps between high and low SES students in all outcomes. By contrast, Chilean students exhibited the highest level of civic knowledge, but also, the lowest levels of democratic attitudes and expected behaviors and the largest outcome gaps between high and low SES students in all dimensions of performance. Mexican students exhibited similar patterns than Colombians, but with lower levels of performance. Perhaps it is not a coincidence that, having embraced civic education approaches that are consistent with the New Civics (Spencer Foundation, 2010; MEN, 2004), students from Colombia and Mexico show more democratic attitudes and expected behaviors than students from Chile, but lower civic knowledge. Interestingly, the fact that in comparison with their performance in the 1999 CIVED study, Colombians continue to show in the 2009 ICCS low levels of civic knowledge, speak to the challenges educators and policy-makers face when designing and implementing a vision of civic education that recognizes the importance of promoting democratic attitudes and behaviors, while trying to educate students to be civically knowledgeable.
Understanding how civic knowledge gaps can be decomposed into portions that are due to unequal access to learning opportunities and unequal learning gains that students from different SES backgrounds obtain can inform educators and policy-makers in their efforts to close them. Specifically, they can consider three different strategies that vary in each context, according to the results of a given decomposition. First, they can pilot and assess the causal effect of interventions that aim to equalize access to the resources, school climate and civic learning opportunities that are currently favoring students from high SES backgrounds. Second, they can pilot and assess the effect of interventions that increase low SES students’ access to the resources, environments and opportunities from which they are obtaining more civic knowledge than high SES students. Finally, they can pilot and assess the effect of interventions that aim to help low SES students increase the civic knowledge they are obtaining from the school resources, school climates and civic learning opportunities they already have available, but from which they are not taking as much advantage as high SES students.

Limitations and Future Research

Concerns about internal validity address the question of whether the relationships tested in the models are causal (Shadish, Cook & Campbell, 2002). Given that the data is observational and not experimental, the estimations of this study only provide evidence of plausibility but we are not able to conclude that SES and other predictor variables have a causal effect on students' civic competencies. However, future research can identify causal effects of these relationships by conducting experimental evaluations of programs and interventions that aim to address unequal access to characteristics and unequal access in civic knowledge gains. In Colombia and Mexico, where the majority of the civic
knowledge gap is explained by differences in characteristics, policy-makers and educators can consider piloting and assessing the effect of interventions that aim to equalize access to resources, positive school climates and civic learning opportunities. In Chile, where three fourths of the gap are due to differences in the civic knowledge gains, it is worth conducting further research to assess the effect of interventions that aim to help students from low SES backgrounds obtain more civic knowledge from the school resources, school climate and civic learning opportunities they already have available. Efforts to evaluate the causal effect that policies and programs to increase socioeconomic integration within schools, improve the characteristics of the school climate and the availability and quality of civic learning opportunities such as open classrooms for discussion have on the civic competencies of students from different SES backgrounds would also be of high interest for the field.

External validity concerns the inference about the extent to which the relationships that we identify hold over variations in persons, settings, treatments and outcomes (Shadish et al, 2002). Given that I used three nationally representative samples from Chile, Colombia and Mexico in the year 2009, the results can be generalized to that cohort of eight grade students from these countries, but caution should be used when trying to extrapolate results to other populations, such as younger children or adults, students from other countries, and specially from developed nations or areas that are significantly different from the ones considered, such as countries outside of Latin America. Findings may not generalize to other cohorts of students as some time has passed since 2009 and many changes have occurred since the data from the ICCS dataset was collected. Findings may not generalize to other outcomes related to civic competence, such as students’ civic skills and civic
actions. Future studies can further explore the degree to which the other civic competence gaps identified in the present study –e.g.: attitudes toward authoritarianism, corruption and breaking the law, etc.-, can be accounted for by differences in access to school resources, school climate and civic learning opportunities and by differences in learning gains that students of high and low SES backgrounds obtain from equal characteristics. Of particular interest will be to learn whether the decomposition of other civic competence gaps map well or reflect similar relationship to the findings of the present study or not. Future studies can also identify other civic competence gaps not explored here, such as civic skills and civic actions, and the factors that account for them.

Construct validity refers to the validity of inference about the higher order constructs that represent sampling particulars (Shadish et al, 2002). In this regard, it is worth noting that the international civic knowledge scale was the only outcome that was captured by a performance-based test. Civic values, motivations and identity were measured using self-reports, which often suffer from social-desirability bias. In fact, what people report they think, feel or do does not always correspond with what they actually think, feel or do. Future studies can document the civic competence gaps that exists between high and low SES students in their civic attitudes, skills and behaviors, using performance-based assessments and not on self-reports (Diazgranados et al., 2015). To this end, it is necessary to develop valid and reliable measures that capture students’ civic competence along different dimensions of performance that are not based on self-reports but on performance on actual tasks. In order to do so, the field needs to develop performance-based tests that capture young people’s civic skills, such as their ability to
make informed social reflections about civic, ethical and historic issues in their society (Selman & Kwok, 2010).
References


de Ciencias Sociales, Departamento de Psicología y Centro de Estudios Sociales.
Ediciones Uniandes, Bogotá.


*Norwegian Social Research.* Research report


