

School Social Segregation and Social Inequalities in Political Engagement among 16 to 20 year olds in Fourteen Countries

Abstract. This paper assesses the explanatory power of a perspective arguing that school social segregation enhances social inequalities in political engagement because of the distinct effects that concentrations of adolescents of disadvantaged backgrounds in educational settings generate. It tests this argument with data of the 2000 Civic Education Study among Upper Secondary students and uses intentions to participate and political competences as outcomes to represent political engagement. Social inequalities in political competences turn out to be greater in states with the most segregated systems, but social disparities in intentions to participate are unrelated to the level of segregation. The paper argues that policy makers should consider creating a more integrated school system if they seek to reduce social inequalities in *informed* political participation.

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Introduction

The belief is widespread that a socially segregated school system is undesirable and has negative consequences. Various scholars have pointed out that social segregation, i.e. a situation where children of a particular social background are concentrated in particular schools, widens social inequalities in achievement and constrains the educational opportunities of disadvantaged groups. The argument, in brief, is that a concentration of children of disadvantaged backgrounds in an educational setting (such as class or school) gives rise to certain peer effects and school responses that negatively affect achievement (e.g. van Ewijk and Sleegers 2010; Willms 2010). The effect of this concentration complements that of pupils' individual social background and thereby enhances differences in achievement between children of disadvantaged and privileged backgrounds.

Although this argument has mainly focused on achievement as outcome of interest, the perspectives and findings of a number of studies suggest that it applies to political engagement as well (e.g. McFarland and Starmanns 2004; Condon 2007; van der Werfhorst 2007; Kahne and Middaugh 2008; Janmaat and Mons 2011). The next section explains the lines of reasoning and findings of these studies in greater detail. As children from disadvantaged families tend to be less engaged from the start (Beck & Jennings, 1982; Verba et al., 1995), concentrating them in particular schools will have the effect of dampening their engagement levels still further (Wilkenfeld 2009a). In this way, an uneven distribution of children of different social backgrounds will exacerbate pre-existing social disparities in political engagement, much in the way that it does for achievement. Thus, the argument that I distil from the reviewed

literature is that social segregation between schools undermines *equity* in political engagement, i.e. equal levels of political engagement across different social groups.

This paper seeks to test this argument for a number of political engagement outcomes. It examines whether social gaps in political engagement depend on the level of social segregation in a country and whether segregation exerts this influence through the social composition of classrooms.

In view of the pronounced social segregation in metropolitan contexts (Oberti 2012), exploring the consequences of a segregated versus an integrated school system for social inequalities in political engagement is clearly relevant and topical, all the more so as the reproduction of such inequalities across generations is a persistent problem affecting Western democracies (Dalton 2017). These disparities, moreover, appear to have increased in many Western countries over the last five decades Armingeon and Schaedel (2015). If school social segregation enhances these disparities, reforms bringing about a more integrated system are likely to achieve greater equity in political engagement as well.

Previous research has addressed the argument that school social segregation yields inequalities of political engagement but has either focused on a single country (Jacobsen et al 2012; Wilkenfeld 2009b), explored social segregation in lower secondary (Janmaat 2011) or has drawn on this argument to examine the link between the age of first selection in a system and inequalities of political engagement across education pathways (van de Werfhorst 2017). Distinctive about the present study is its focus on *16-19 year olds* (or upper secondary in educational terms). This is precisely the life stage that scholars identified as a key formative period for political engagement: young people become interested in political matters, a disposition to participate is taking shape and political preferences are crystallizing (Flanagan and

Sherrod 1998; Hooghe and Wilkenfeld 2008). This means that education and other experiences are likely to have a considerable influence on political dispositions during this stage and a lasting one once these dispositions start to take on a definite shape (Flanagan & Levine, 2010; Jennings & Stoker, 2004).

Another feature of this stage that makes it particularly relevant for the current study is that education systems are tracked, typically offering an academic and one or several vocational routes. Track allocation usually happens on the basis of prior achievement, with entry into the prestigious academic track requiring higher levels of achievement. Given the close link between social background and achievement, allocation based on achievement invariably amounts to social sorting (Hallinan 1994; Loveless 1999). By implication upper secondary should be more segregated than lower secondary, particularly if the latter is comprehensive with mixed ability classes. In sum, this study looks at the link between segregation and political engagement at a stage when education systems show pronounced levels of social segregation and young people are most receptive to educational experiences influencing their political dispositions.

As almost all national education systems are tracked at the upper secondary stage one would, at first sight, expect countries to differ little in levels of social segregation at this stage. However, lower secondary could well have a significant impact on upper secondary if the trajectories that students start in the former predispose them to make a choice for (or to be allocated to) a certain track in upper secondary. At the lower secondary level, countries *do* show significant institutional variation, not only (and most conspicuously so) in the age of first selection but also in subject specialisation, parental choice, school autonomy and the presence of fee-charging private schools (Green et al 2006). All these characteristics can have social

sorting effects (cf. Lauglo 2010; Allen and West 2009; Brandén and Bygren 2018), and one comparative study indeed found a marked link between the age of first selection and the degree of social segregation in lower secondary across OECD countries (Jenkins et al 2008). If students in the more stratified systems (i.e. in those that select relatively early) enter certain pathways that predetermine track enrolment post 16, one would also expect to see a higher level of social segregation at the upper secondary stage in those countries.

The present study is further distinctive in understanding political engagement in a broad sense, i.e. as including not only participation but also aspects related to participation, such as political knowledge and the skills to participate (cf. Emler and Frazer 1999). I hence focus on two outcomes: (1) political participation and (2) political knowledge and skills (henceforth *political competences*). The latter refer to knowledge about the political system and to the ability to interpret and apply political information correctly and purposefully. They allow people to have a better understanding of their interests and of effective ways to pursue these interests through political actions. This better understanding promotes an identification with and a desire to participate in the political process (Delli Carpini and Keeter 1996; Niemi and Junn 1998; Galston 2001).

Social inequalities in either of these outcomes are problematic as they undermine the effectiveness and legitimacy of democracy (Bartels 2008). If the poor and least educated participate much less than the socially privileged, democratically elected governments will be less responsive to their needs, which in turn will contribute to the former's disenchantment with the democratic process (Verba et al 1995). This alienation will similarly be enhanced if disadvantaged groups do not

understand the world of politics and do not know how to participate effectively in it (Galston 2001; Gainous and Martens 2012).

The paper proceeds as follows. First I discuss social segregation and the argument that segregation leads to greater social disparities in political engagement in greater detail. I will extract three hypotheses from this argument. Thereafter I explain the data source, the variables and the analytical approach. In the findings section I show that the said argument only has explanatory power for political competences, as one of the two engagement outcomes. The concluding section sums up the main findings and offers a tentative explanation for why social segregation is not related to inequality in political participation.

Why would social segregation widen the engagement gap?

I start by clarifying the link between social segregation, which is a property of an education system, and social composition, which is a characteristic of a classroom, as a unit within such a system.¹ This is necessary to understand the implications of the argument explained below. I consider a system to be maximally segregated if all the variation in the social backgrounds of students is between classrooms and the classrooms are perfectly homogenous internally. The opposite is a perfectly integrated system where there should not be any differences between classrooms in their social composition and all classrooms should be maximally heterogeneous internally.

Let me now explain the argument that school social segregation enhances social inequalities in political engagement in greater detail (henceforth *the social inequalities argument*). Its point of departure is the strong link between social background and political engagement. As noted by many scholars, children from

disadvantaged backgrounds are less likely to be knowledgeable of and involved in politics than those from middle class families (Beck & Jennings, 1982; Verba et al., 1995; Achen, 2002; Schulz et al., 2010; Lauglo, 2016). The proposed mechanism driving this social class difference is differences in socialization, with middle class parents being more inclined to foster a sense of efficacy, inculcate a commitment to participate, and discuss politics at home than working class ones (Kam and Palmer, 2008; Lauglo, 2016).

The argument then proceeds by proposing that a concentration of children from disadvantaged backgrounds in a certain educational setting (i.e. low status schools or classrooms) reinforces the relative disengagement of such children in two ways. First, such a concentration gives rise to a particular group dynamic (or peer effect) socializing students in a counter culture marked by political alienation, alternative status symbols and a contempt for the educational process (Willis 1977; van der Werfhorst 2007; Janmaat and Mons 2011). This culture of resistance sanctions lack of efficacy, ignorance of politics and non-engagement (see Forsberg 2011, who identified such a culture in male-dominated vocational tracks). The flip side of a counter culture is a culture of alignment promoting the values of the school and democratic society more broadly. Such a culture emerges in settings with a stronger presence of children from middle class backgrounds (Langton 1969).

Secondly, concentrations of disadvantaged children bring about certain school and teaching practices that are not conducive for political engagement. According to Ben-Porath (2013) schools serving disadvantaged communities are generally so preoccupied with improving the academic achievements of their pupils that they enforce strict behavioural regulations (*ibid.*) and devote all resources to teaching the core subjects of language and maths (Bischoff 2016). A downside of strict

enforcement, however, is that it inhibits open discussions of political issues and other learning opportunities to become more engaged (Ben-Porath 2013). Indeed Ichilov (1991) and Condon (2007) found that teachers in schools serving deprived communities are less likely to promote debate. This may reflect low teacher expectations regarding the ability and willingness of these students to engage with politics and conduct civilised political discussions. Such students could internalise these expectations and thus come to believe that the world of politics is not for them (Sohl and Arensmeier 2015). In addition, McFarland and Starmanns (2004) and Kahne and Middaugh (2008) found schools enrolling mainly disadvantaged children to offer fewer opportunities for their students to practice political and political participation, such as organising mock elections, providing service learning possibilities and instituting a student council with meaningful powers.

The last step in the social inequalities argument is the contention that a setting's social composition complements the effect of individual social background: By suppressing the low engagement levels of disadvantaged children in low status settings still further and enhancing the already high engagement levels of middle class children in high status ones, a setting's social composition exacerbates overall social gaps in engagement (Wilkenfeld 2009a; Janmaat et al 2011). As there are both more high and more low status settings in segregated systems, the effect of social composition should be strongest in such systems and hence social inequalities in engagement should be largest there.

So far the explanation of the social inequalities argument suggests that it primarily applies to political participation. However, the reasoning of this argument is equally, if not more, relevant for political competences. This is because the latter has so much in common with educational achievement, which is the focal point of much

of the peer effects literature since the landmark study of Coleman (1966). Firstly, political competences and educational achievement are both cognitive outcomes, measured as a rule with tests. Political competences, including the ability to reason, persuade and organise, moreover, are heavily dependent on language skills (Brady et al 1995; Eidhof 2016), which is a key component of educational achievement. Lastly, findings have been very similar for the two outcomes. Thus, school socio-economic composition has been found to have both a strong positive effect on educational achievement (Belfi et al 2016; Liu et al 2015) and on political competences (Ehman 1980; Janmaat 2011), and one that complements that of individual social background. In other words, the achievements and political competences of pupils are better if they are surrounded by children from more privileged backgrounds, regardless of these pupils' own social backgrounds. Learning from peers equipped with richer vocabularies and with more positive attitudes towards education is the proposed mechanism driving this effect (Belfi et al 2016; Liu et al 2015).

I derive three hypotheses from the social inequalities argument. Firstly, it proposes that the influence of social segregation runs through a setting's social composition and that social composition has an independent positive effect on political engagement. Hence, *social composition should have a positive effect on political engagement and one that complements that of individual social background* (Hypothesis 1).

Secondly, as the social composition of educational settings varies strongly in relatively segregated countries and hardly varies in countries with more integrated systems, *social composition should have the strongest effect on political engagement in the most segregated systems* (Hypothesis 2).

Finally, as a setting's social composition has the strongest effect in the most segregated systems in terms of amplifying the social gap in political engagement arising from family socialization, *the overall social inequality in political engagement should be highest in countries with the highest level of social segregation* (Hypothesis 3).

The no effects argument

Aside from the argument that school social segregation enhances social inequalities in political engagement, the “no effects” argument deserves mentioning. In this view, educational conditions, such as the curriculum or a school's social composition, have little effect as the propensity to become engaged primarily results from family socialization and takes on a definite shape in early childhood. Any “effect” of education will merely represent self-selection, i.e. the propensity of students with higher levels of political engagement from the onset to enrol in particular schools or seek higher levels of education (Kam and Palmer 2008; Persson 2012). Following this logic one would expect that compositional variables such as school or classroom social status have no effect on the outcomes of interest once controls for social and ethnic background and other characteristics of upbringing are included in the model.

Data Source and Selection of Countries

I used data of the Civic Education Study among upper secondary students (Cived UpSec) to explore the proposed relationships. The International Association for the Evaluation of Educational Achievement (IEA) fielded this survey in 2000 in 16 countries worldwide. The survey amassed data among more than 50,000 students aged

between 15 and 20 using nationally representative samples. It collected data by means of a two-stage stratified cluster design. At the first stage, schools were sampled using a probability-proportional-to-size (PPS) technique. At the second stage, one intact classroom from Grade 11 (age 16), 12 (17) or 13 (18) per school was selected and all the students from this classroom were then surveyed (Amadeo et al 2002).

Apart from including appropriate items to measure the outcomes Cived UpSec has the advantage of sampling whole classrooms. This enables me to construct a good measure of the social composition of classrooms based on student background characteristics. It makes sense to explore the influence of *classroom* rather than school composition because the classroom, as the most proximate social setting in education, is the context in which students spend most of their time and thus the environment that is likely to be more influential than broader settings such as the grade or the school (cf. Vigdor and Nechyba 2007). A further advantage is that the study includes many questions on relevant family characteristics influencing both early political engagement and the choice of school. Including these characteristics as control variables in the model allows me to arrive at a more accurate estimation of the effect of classroom social composition.

A disadvantage is that the data is quite old and therefore may not capture the contemporary influence of 16-19 education on political attitudes. However, aside from the extension of the age of compulsory education, little has changed in the past 15 years affecting the basic structure and content of upper secondary education. In all countries the system has remained tracked (Brinbaum and Heath 2014). There is therefore little reason to assume that findings based on the 2000 data would not apply today. Lastly, it is a pity that the data do not include a variable on track attended as

this would have allowed me to assess whether the social composition of classrooms indeed differs markedly across academic and vocational tracks.

I selected the samples of all countries participating in Cived UpSec, except those of Colombia and Hong Kong. I omitted these countries because their data do not include appropriate weights (see Amadeo et al 2002). The fourteen countries included in the analytical sample are Chile, Cyprus, Czech Republic, Denmark, Estonia, Finland, Israel, Latvia, Norway, Poland, Portugal, Russia, Slovenia, Sweden and Switzerland. What these countries have in common is a tracked system of upper secondary education. They differ widely however in many other aspects, such as political tradition, ethnic make-up of the population, level of prosperity, age of first selection, and, as we shall see, school social segregation.

The analytical sample consists of 43,806 respondents nested in 2047 classrooms in 14 countries. There are thus on average 21.4 respondents per classroom, 3129 respondents per country and 146 classrooms per country. 54% of the sample are girls, 46% boys. The average age of the respondents is 18.04. I note that the sample may be smaller for the analyses presented below as I did not impute missing values for the outcome variables (see Endnote 4).

Variables

Addressing the hypotheses requires the development of variables at the individual, classroom and country level. This section explains the construction of these variables. Table 1 presents the basic descriptive statistics of all of them.

Individual level variables

Outcomes of interest

The study's focus on educational segregation implies that I will investigate political participation, as one of the two outcomes of interest, among school-going youth. As this age group is not yet eligible to vote, I look at intentions to participate rather than actual participation (see further below for its measurement). Of course, intentions to participate need not always result in actual participation and a study by Achen and Blais (2010) indeed found a gap between intentions to vote and validated voting. Yet, that study also found the two to be highly correlated, suggesting that intended voting is a good predictor of actual electoral participation later in life. Quintelier and Blais (2015) found the same close link between intentions and reported behaviour for other forms of political participation.

In order to capture the many ways in which young people can participate in politics as fully as possible, I develop a measure of political participation that includes no less than seven forms of participation (see further below). These forms represent a mix of conventional and alternative (Inglehart 1990; Lichterman 1996; Ekman and Amna 2012), more and less demanding (Quintelier 2007) and frequent and much rarer (Keating et al 2015) ways of taking part in politics. Although many have argued that conventional forms of participation, such as voting and joining a political party, are less popular among young people than among older generations (e.g. Inglehart 1990; Lichterman 1996), I include them in the measure because they are still amongst the most frequently reported activities, particularly voting (Keating et al 2015).

The seven items included in the *future participation* scale ask respondents whether, as adults, they would undertake a series of political activities including, among other things, voting in national elections, joining a political party, writing letters to a newspaper, collect signatures for a petition and partaking in non-violent protest (see Appendix A for the precise wording of the items). Reliability analysis shows that these items are highly interlinked in each country, indicating the existence of a similar, internally consistent dimension of political participation everywhere (the Cronbach Alphas are all higher than 0.7, except in Slovenia – 0.66; see Appendix A for the values in the other countries). I created the scale by averaging the responses across the seven items. Consequently, it has a minimum of 1 (certainly not do any of these activities) and a maximum of 4 (certainly will do all these activities). I preferred this simple and transparent construction over other ways of composing scales (such as factor scores) as it enables an assessment of both relative and absolute levels of political engagement. Mean levels of future participation are higher than the mid-point of the scale in only two countries, Cyprus (2.7) and Chile (2.6), and then only marginally so. Countries with the lowest mean scores are Switzerland, Russia and the Czech Republic (all 2.2). At first glance these figures suggest that 16-19 year olds are quite disengaged overall. However, we need to keep in mind that the scale includes activities that are quite demanding in terms of commitment and skills required, such as writing letters to newspapers and being a candidate for a local office. Such activities depress the scale's mean values as few people engage in them. In fact, considering the rare (and usually elitist) character of these activities it is positively surprising that still as many as 20% of all respondents indicate that they would (probably or certainly) do the former and 16% state they would do the latter as adults.

To measure *political competences*, I relied on a scale prepared by the Cived team. This scale incorporates 40 multiple-choice items that test students' political knowledge (14 items), skills in interpreting political information (12) and economic literacy (14) (Amadeo et al 2002: 47, 48) (the variable STOTCGML in the database). The scale has an international mean of 119 (see Table 1). Latvia shows the lowest mean score (108), followed by Russia (112) and Chile (112). Levels of political competences are highest in the Scandinavian countries (Sweden – 133, Denmark – 132 and Norway – 124).

Other individual-level variables

In this study, *social background* represents both a predictor of interest and a control variable. As it is a strong determinant of both political engagement (Ichilov, 1988) and track placement (Green et al., 2006), it is vital to add as a control variable in a model that assesses the effect of classroom social composition to ensure that the latter does not just reflect a selection effect (see the previous discussion of the “no effects” argument). I measured it by averaging mother's and father's highest qualification achieved. It has a minimum of 1 (both parents have not finished elementary school) and a maximum of 7 (both parents have bachelor degrees or higher). My measure of social background thus solely relies on parental education.

I also included four other individual-level control variables to assess whether the effect of classroom social composition is genuine. These controls represent family background characteristics that are likely to influence both political engagement and track enrolment (and thereby to shape classroom composition). They thus provide additional assurance that any effect of classroom social composition does not proxy

for other conditions. These are *home language* (as measured by an item on use of language of the test at home, which I turned into a dummy variable with the values 0 (“never” or “sometimes”) and 1 (“always or almost always”), *home resources* (as measured with the number of books at home, which has six categories ranging between “none” and “more than 200”), *discussion national politics* and *discussion international politics* in the analysis. The last two variables represent items on the frequency of discussing national and international politics with parents or other adult family members (with the response categories “never”, “rarely”, “sometimes” and “often”).² Lastly I added a control for *gender* [0 = male; 1 = female].

All the variables tapping family background are based on student reporting, which can be a problem if respondents do not know relevant socio-economic details of their parents or provide inaccurate information about them. For this reason, surveys among school going youth, such as Cived Upsec, usually only ask about resources at home (such as books) (Buchmann 2002). However, this problem is less salient for the current study as the respondents are in their late teenage years and therefore more knowledgeable about their parents. Indeed, missing values on parental education, while still numbering 11.6% (see Table 1), are at an acceptable level, and much lower than the more than 20% of missing values seen among younger age groups (*ibid*, p 181).

Classroom-level variables

In agreement with other studies seeking to explore the effect of school or classroom social composition (Kahne and Middaugh 2008; Palardy 2008; Wilkenfeld 2009b;

Janmaat 2011; Liu et al 2015), I used the classroom mean of *social background* as a measure of *classroom social status* (CSS), one of the predictors of interest.

Aside from its social composition, a classroom's ethnic composition is likely to influence political engagement and may be related to social composition as well in countries where the immigrant population is of relatively humble social backgrounds. It is therefore pertinent to control for this condition. The literature on the link between ethnic diversity and political participation proposes contrasting effects, with some scholars arguing that ethnic diversity contributes to political engagement (Delli Carpini and Keeter 1996; Hyland 2006; Bischoff 2016) and others claiming that it discourages participation and activism, particularly in proximate settings such as classrooms (Mutz 2002; Campbell 2007). I used the proportion of respondents saying they "always or almost always" spoke the language of the test at home as a measure of *classroom ethnic homogeneity* (with higher values thus denoting lower diversity).³

Country-level variables

Outcomes of interest

I relied on correlations between social background and the two individual-level outcomes to construct the variables *social inequality in future participation* and *social inequality in political competences*, as the outcomes of interest at the country level.⁴ I performed these correlations at the individual level for each country and used the resulting correlation coefficients as measures for these variables. The higher these coefficients, the wider the social gaps in future participation and political competences. Political competences turn out to be more unevenly distributed across

social groups than intentions to participate (Table 1). Countries vary considerably in the size of these gaps. Social inequality in political competences is most pronounced in Chile (0.48) and in Israel (0.39) and weakest in Estonia (0.19), Denmark (0.21) and Slovenia (0.22) (see also Figure 2). Social gaps in intentions to participate are largest in the Czech Republic (0.21) and Norway (0.19) and smallest in Latvia (0.00), Poland (0.04) and Slovenia (0.05).

Predictor of interest

As social segregation is a property of a system and not of a classroom or school, I created a variable at the country-level to capture this concept. I used the Intra-Class Correlation Coefficient (ICCC) of parental education (my indicator for social background) as a measure of *social segregation*.⁴ Applied to students nested in classrooms, this statistic captures the between classroom variance in parental education as a proportion of the total variance of parental education in a country. It ranges between 0, which means there are no differences between classrooms and all the variation is between students within classrooms, and 1, which denotes maximum differentiation between classrooms and zero variation within classrooms (see Green et al 2006). Thus, the higher the value, the more segregated the system is.

By capturing the between in relation to the within classroom variance, the ICCC perfectly matches the definition of segregation offered previously. It is suitable as a measure of segregation when the input variable is of a continuous or ordinal nature (Reardon 2008; Janmaat 2011), as is the case with parental education. Well-known measures of segregation, such as the dissimilarity index (Duncan and Duncan 1955) and the square root index (Hutchens 2004), rely on input variables that are

dichotomous and are thus inappropriate for the current study. I multiplied the ICC score by 100 to generate percentages. The countries appear to vary quite substantially in social segregation: while Chile has a highly segregated system with 61% of the variation in social background situated at the classroom level, the equivalent figure for Estonia is just 14% (see Figure 2 for the values of the other countries).

Table 1 about here

Methods

I will explore Hypotheses 1 and 2 with multilevel linear models as the outcome is at the individual level and the predictors are at the individual and classroom level. Multilevel analysis (MLA) is necessary to obtain accurate estimates of the effects of higher level predictors when data is nested and observations are not independent (Snijders and Bosker 1999), which is the case in the present study. Using Mplus (Muthen and Muthen 1998-2002), I will run a two-level random intercept multilevel model on the pooled data to investigate the first hypothesis.

At first sight, a three-level random slope model with a cross-level interaction between CSS and social segregation would seem to be the most appropriate strategy to explore whether the effect of CSS is strongest in the most segregated systems (i.e. Hypothesis 2). However, we have to keep in mind that the variance in the outcome is divided across the different levels of analysis in an MLA and that the proportion of this variance at the classroom level can be related to a country's degree of segregation. If a greater part of the total variance is at the classroom level in the more segregated states, similar estimates of CSS (as a classroom-level variable) across

states with varying levels of segregation can express different effect sizes because they explain different proportions of the total variance in the outcome. In other words, if the classroom takes up a greater proportion of the total variance in the more segregated states, a CSS estimate of say 0.3 explains more of the total variance in the outcome in such states than a similar sized estimate in states with more integrated systems. Hence, I will use the proportion of the total variance explained by CSS as an indicator of effect size. The greater this proportion, the stronger the effect. I will calculate this proportion by running two MLA models for each country and by noting the difference in the explained variance between a model with all the predictors included except CSS and a model with all predictors included. This difference represents the proportion of the variance explained by CSS. Subsequently I will run a correlation at the country level to see whether higher levels of segregation are linked with stronger effects of CSS.

Finally, I will run correlations at the country level to assess whether social segregation is related to social inequalities in future participation and political competences (i.e. Hypothesis 3).

In view of the considerable number of missing values on some of the variables included in the analysis (notably on political efficacy – 25%, future participation – 22% and social background – 12%; see Table 1), I imputed missing data of the independent variables using the Bayesian estimation technique of multiple imputation (MI) in Mplus (see Muthen and Muthen 1998-2012) to prevent data loss.⁵ This procedure has the advantage of using all the variables in the model (both independent and dependent ones) to impute the missing values; it creates 10 datasets with imputed values and averages out the parameter estimates of the analyses on these datasets. MI is able to address non-random missingness by using the observed values for a given

individual and the relations between variables observed in the data (Schafer and Graham 2002). I weighted the data using the variable *Total Weight* prepared by the Cived experts to ensure that the results are representative of the national population. This variable represents the product of school, classroom and student weights and accounts for the different probabilities that students are selected in the sample (Sibberns and Foy 2004). I centred all independent variables around their grand-mean before including them in the analyses.

Results

I proceed by testing the hypotheses in the listed order. To begin with Hypothesis 1, I first run a two-level multilevel analysis without any predictors (the so-called empty model) on the two outcomes as this shows what part of the variance in these outcomes is at the individual and the classroom level. It turns out that 7.6 and 35.7 percent of the variance is at the classroom level for future participation and political competences, respectively. These percentages are sufficiently large to expect classroom level predictors, such CSS and classroom ethnic homogeneity, to be related to the outcomes (cf. Duncan and Raudenbusch 1999). Nonetheless, the difference between the two outcomes in the classroom-level variation is stark and suggests that political competences, as a cognitive outcome, is more susceptible to contextual conditions than future participation, as an attitudinal one.

Is CSS showing a positive effect and does it complement that of social background, as postulated by Hypothesis 1? It appears that neither CSS nor classroom ethnic homogeneity, as the other classroom-level condition, is significantly related to

future participation (see Table 2). Instead, the family background variables, such as social background, home resources and political discussions with parents, all show strong positive links with this outcome (see the high t-ratios). This pattern of results suggests that future participation is entirely shaped by socialization within the family and that the school context has little influence. Thus, the findings on this outcome support the no effects thesis rather than the social inequalities argument.

Table 2 about here

In contrast, the two classroom-level conditions are strongly related to political competences, which makes sense in view of the large proportion of the variance situated at the classroom level for this outcome. The effect of CSS is positive, meaning that the higher the social status of a classroom, the higher the students' political knowledge and skills levels, controlling for individual level conditions including social background and classroom ethnic homogeneity. With a t-ratio of 9.9 this is a very strong effect: a one unit increase of CSS leads, on average, to a rise of 8.3 points in political competences on a scale ranging between 21.2 and 165.4. This result is fully in line with Hypothesis 1. In view of the equally strong positive link between social background and political competences at the individual level (.64, significant at the .001 level), the strong positive effect of CSS means that the low political competence levels of students of low SES backgrounds decrease even further when they find themselves surrounded by peers of equally disadvantaged backgrounds. In contrast, the high political competence levels of middle class students increase still further when all their classmates share that background.

Is the effect of CSS on political engagement stronger in states with the most segregated school systems (Hypothesis 2)? I first investigate whether the proportion of the variance at the classroom level varies systematically with the level of segregation across countries, as suggested earlier. To do so I first calculated this proportion for each country and then correlated this data with the level of segregation. The results show a positive correlation of 0.39 ($p=.16$) for political competences and a negative one of -0.51 ($p=.06$) for future participation ($N=14$). Thus, in the most segregated states classrooms indeed capture a greater part of the variance in political competences. The reverse is true for future participation: the higher the level of segregation, the smaller the proportion at the classroom level. However, neither of these relationships are significant at the 5 percent level so they indicate a certain tendency at best.

Let us now examine whether CSS explains a greater percentage of the variance in the two outcomes in the more segregated systems using the procedure outlined in the methods section. The percentage of the variance in future participation explained by CSS appears unrelated to the level segregation ($r=-0.12$; $p=0.67$). In contrast, I find a marked positive association of 0.60, significant at the 5 % level ($p=0.23$), for political competences ($N=14$). In other words, CSS explains a significantly higher proportion of the total variance in political competences in states with the most segregated systems (as also illustrated by the scatterplot of Figure 1), which is in agreement with Hypothesis 2. Figure 1 further shows that CSS explains more than 15 percent of the variance in Israel, Poland and the Czech and these countries also have relatively segregated systems. CSS has the weakest effect in Denmark and Estonia where segregation is lowest. Of course, correlations on such a low number of observations always run the risk of outliers determining the

relationship. However, removing outlier Chile (see Figure 1) from the analysis actually increases this correlation to 0.74, significant at the 1 % level ($p=0.004$). Moreover, to further check the robustness of this correlation, I ran a regression analysis on the percentage of the variance in political competences explained by CSS using economic prosperity and democratic tradition as control variables alongside social segregation as the main predictor variable. The relation between social segregation and the percentage of the variance explained remained positive and significant despite the inclusion of these controls.⁶

Figure 1 about here

Finally, I correlate social segregation with social inequalities in the two outcomes to address Hypothesis 3. Once again, the pattern on future participation does not conform to the hypothesis as we find practically no correlation between social segregation and social gaps in future participation ($r=0.07$; $p=0.81$; $N=14$). However, the social gaps in political competences *are* significantly larger in the most segregated states (the coefficient is an impressive 0.94, significant at the 0.001 level ($p=0.000$); $N = 14$). Figure 2 shows that the countries are almost perfectly clustered alongside the regression line. Removing outlier Chile from the analysis reduces the correlation only slightly (to .791, $p=0.000$) indicating that the relation is fairly robust. Applying the same regression analysis as mentioned before, I moreover find that the relation between social segregation and social inequalities in political competences remains highly significant ($b = .01$ at a 0.001 level of significance) when controlled for economic prosperity and democratic tradition.⁷

Figure 2 about here

Discussion

This paper aimed to explore the explanatory power of the argument that social segregation in educational settings increases social inequalities in political engagement and that social segregation exerts this influence through classroom social status (CSS). More specifically, this argument proposed that CSS has an effect complementing that of social background (Hypothesis 1) and thereby causes social inequalities in engagement to widen. It further proposed that CSS has the strongest effect on political engagement in countries with the highest level of social segregation (Hypothesis 2), and that, consequently, social inequalities in political engagement should be most pronounced in these countries (Hypothesis 3).

The paper sought to test these propositions with survey data collected among students of upper secondary education in 14 countries. It captured political engagement with two outcomes: intentions to participate in political activities (henceforth: future participation) and political knowledge and skills (henceforth: political competences). Only the findings on *political competences* were fully in line with the propositions of the aforementioned argument. Social inequalities in *future participation* appeared not to be greater in states with the most segregated systems and CSS showed no relationship to this outcome.

How can we make sense of this mixed bag of findings? The pattern suggests that the effect of CSS as proposed by the social inequalities argument primarily applies to cognitive outcomes and not to attitudinal ones, such as future participation. As family background features *did* prove to be powerful predictors of future

participation, the no effects thesis, which claims that an inclination to participate is formed primarily through family socialization and that educational conditions, including CSS, have little impact, receives most support at first sight for this outcome. I add the words “at first sight” since one cannot rule out that educational conditions do have some impact. The fact that a considerable part of the variance in future participation is at the classroom level suggests that they do. The findings of previous studies (e.g. Hoskins and Janmaat 2016; van de Werfhorst 2017) indicate that educational track is one of those conditions. However, since the database used does not have information on track, I could not explore the effect of this condition.

Nonetheless the findings for this outcome are quite surprising for a number of reasons. They are so, firstly, because previous studies have demonstrated the influence of contextual factors such as CSS and ethnic composition on intentions to participate (e.g. Campbell 2007; Wilkenfeld 2009a; Janmaat 2011; Eidhof 2016). Secondly, the results are unexpected because the respondents were at an age that the school system in each country is relatively segregated due to educational tracking and its social sorting effects. Greater segregation means larger variation between classrooms in their social composition and one would thus expect CSS to have a stronger effect on outcomes in upper secondary than in earlier phases of education when classrooms vary less in their social make-up.

Third, they are surprising as late adolescence is a crucial formative period for the development of political identities and the disposition to participate, as noted before. One would thus expect young people to be receptive to any contextual conditions influencing their political outlooks, including conditions relating to educational contexts.

Finally, they are unexpected in view of studies focussing on lower secondary that did find contextual factors such as CSS and ethnic composition to have an effect on intentions to participate (e.g. Campbell 2007; Wilkenfeld 2009a; Jacobsen et al 2012; Eidhof 2016). Among these studies, the one by Wilkenfeld (2009a) is particularly interesting as it used practically the same measures for future political participation and CSS as this paper. The difference in findings is therefore less likely to be related to a difference in measurement.

What might account for the lack of an effect of CSS on future political participation is a growing insensitivity to peer group views and pressures during late adolescence. Indeed, documenting the research on engaging in anti-social behaviour and the willingness to do so, Steinberg and Monahan (2007) observe that susceptibility to peer influences is highest at age 14 and declines rapidly afterwards. They state that “middle adolescence is an especially significant period for the development of the capacity to stand up for what one believes and resist the pressures of one’s peers to do otherwise” (ibid. p. 1531). In offering an explanation for this trend, they cite Steinberg & Silverberg (1986), who suggested that the dependence on peers in early adolescence represents an intermediate stage between becoming emotionally detached from parents and becoming an adult with a capacity for forming independent judgements. If the findings on anti-social behaviour are generalizable to other behavioural and attitudinal outcomes such as intentions to participate, growing insensitivity to peer group pressure would seem to be the most plausible explanation for the patterns found. Indeed, it could explain why the aforementioned studies focussing on lower secondary did find an effect of an educational setting’s social status on political engagement. Longitudinal research tracking the influence of school

contextual conditions across adolescence and examining the interrelations of different behavioural and attitudinal outcomes could provide more definitive answers.

As noted earlier, the findings on political competences align closely with the propositions of the social inequalities argument. Not only are social inequalities in political competences larger in the more segregated systems, CSS, as the mechanism postulated to bring these inequalities about, also shows a positive effect on political competences, and one that reinforces the effect of social background. The first-named finding tallies with an OECD study on reading literacy skills, an outcome with which political competences has much in common (as noted before). This study found social background to have the greatest effect on reading skills in countries with the highest level of social segregation (OECD 2001: 199, 308). In other words, social inequalities in reading skills were largest in the most segregated settings. The findings on political competences are thus fully in agreement with the social inequalities argument and suggests that creating a more integrated system (which would entail reducing the social differentiation between schools and classrooms) would help in reducing cross-classroom disparities in these outcomes.

In terms of implications for policy and practice, the findings of the present study suggest that policy makers should not expect social disparities in political participation as such to diminish by reducing levels of school social segregation. However, if they care about suppressing social gaps in *informed* and *effective* participation, i.e. in modes of participation by citizens with accurate knowledge of the political world and with the skills to participate successfully, then they should consider developing a more integrated system of upper secondary education. Well-informed and effective participation is important as it is likely to help citizens in having more accurate and realistic expectations of political actors and thereby to

prevent disillusionment with the political process. Reducing social gaps in informed and effective participation might thus help to curb political alienation and/or protest voting among socially disadvantaged groups. As discussed earlier, school social segregation depends on several institutional characteristics. Measures that are likely to be effective in bringing about a more integrated system include postponing the age of first selection, curbing parental choice, reducing school autonomy (particularly concerning admissions), and diminishing the role of private fee-charging schools.

A limitation of this study is that some of the activities composing the future participation scale are unlikely to be considered by today's adolescents as actions they expect to be engaged in as adults (such as writing letters to newspapers). In this regard it is a pity that the Cived study did not pioneer items to tap online forms of participation when it was collected in 2000. However, most of the scale's items queried forms of participation that young people continue to undertake or expect to undertake as adults, even some that seemed to have fallen out of fashion. Becoming a member of a political party, for instance, has made a come-back as a popular form of participation among young people at least in some countries (e.g. in Britain where the Labour Party witnessed a surge in membership numbers after Jeremy Corbyn became leader in 2015). The findings on the future participation outcome are therefore likely to still be relevant for the present times.

A second important limitation is that the data source used is cross-sectional, meaning that I could not conclusively establish the causal direction in the relationships found. Consequently, it cannot be ruled out that the impact of compositional conditions, such as CSS, partly or wholly reflect a selection effect. In this paper I sought to address this problem by controlling for as many conditions as possible that influence both political engagement and school/track choice. As I

applied these controls when assessing the influence of the compositional conditions, I can be fairly certain this influence does not merely represent a selection effect.

Endnotes

¹ I focus on classrooms as it represents the lowest level of aggregation. Segregation at that level is difficult to imagine. In contrast, at higher levels of aggregation, such as that of the school, it is quite possible that a heterogeneous make-up hides considerable homogeneity at a lower level – in which case the school could be characterised as internally segregated. This is likely to happen, for instance, in schools that offer various tracks and that admit students to these tracks on the basis of ability (which, as already mentioned, always has social sorting effects). Thus, school that are equally heterogeneous in their social make-up can differ greatly in levels of internal segregation. This complicates comparisons between schools and is the reason why I measure social composition at the level of classrooms.

² Although the last three variables are ordinal, I included them as continuous variables in the analyses rather than as a series of dummy variables to save space (see Table 2). Analyses with these variables included as dummies produced identical results (obtainable upon request).

³ Unfortunately classroom ethnic diversity could not be measured more directly because the survey did not query ethnic identity in the majority of the participating countries. However, for the countries where ethnic identity was available (Cyprus, Latvia, Sweden and Switzerland), I could calculate the ethnic fractionalisation index (for the calculation of the EFI, see Posner 2004). This index showed a significant negative correlation at the classroom-level with classroom ethnic homogeneity (-.24*

in Cyprus; $-.34^{***}$ in Latvia; $-.68^{***}$ in Sweden and $.56^{***}$ in Switzerland), suggesting that the latter is a good (inverse) proxy of ethnic diversity.

⁴ The attentive reader will have noticed that I aggregated from the individual-level variable parental education to construct a measure for both classroom social status (at the classroom level) and social segregation (at the country level). There are no other sources available to develop measures for these concepts (OECD PISA data, for instance, could not be used as this data concerns lower secondary). To the knowledge of the author, drawing on the same data source to develop these higher level variables is not producing any specific bias. To the contrary, doing so ensures that the social context variables thus constructed are more valid measures of educational environments because they are directly linked to the respondents. If I had used a measure of school social composition based on, say, the percentage entitled to free school meals from some external data source (if that had been available), then the link with the study's respondents would have been much more tenuous in view of the one classroom per school sample and the possibility that this classroom would not be representative of the school. Perhaps for this reason, many studies aggregate from individual-level measures of social background to develop measures of school social status (e.g. Kahne and Middaugh 2008; Palardy 2008; Liu et al 2015) or country-level social segregation (e.g. Jenkins et al 2008).

⁵ I did not impute missing values on the dependent variables as this can add unnecessary random variation into the imputed values (Allison 2012).

⁶ Economic prosperity was measured with statistics on GDP per capita 2000 from the World Bank while democratic tradition was tapped with the number of years of uninterrupted democracy since the introduction of universal suffrage. The b coefficient of social segregation was $.34$ and significant at the $.05$ level. Economic

prosperity and democratic tradition were not significantly related to the outcome (full results of this model can be obtained from the author upon request).

⁷ The coefficients of economic prosperity and democratic tradition are not significant (full results obtainable upon request).

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