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Ethnic inequality in choice- and performance-driven education systems: A longitudinal study of educational choices in England, Germany, the Netherlands, and Sweden

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Abstract

The motivation for this article was the main finding of an earlier study, which concludes that choice-driven education systems—in the study represented by England and Sweden—are particularly beneficial for immigrants in that they provide them with many opportunities to pursue their generally high educational ambitions. We extend this analysis by including two countries with performance-driven education systems: Germany and the Netherlands. Our study specifically aims to explore whether it is true that choice-driven systems are more beneficial for immigrants or whether immigrants can also succeed in more stratified and selective education systems. Using longitudinal data from the Children of Immigrants Longitudinal Survey in Four European Countries (CILS4EU), we show that there are no differences in (gross) transition rates between immigrants and natives in Germany, the Netherlands, and Sweden, but immigrants' optimistic choices are more pronounced in England. However, these differences diminish once we account for achievement and students' socioeconomic background in the analyses. Regarding the underlying mechanisms, we find that educational aspirations have an (equally) strong, universal impact, while anticipated discrimination plays a minor role.

KEYWORDS
aspirations, educational systems, ethnic choice effects, Europe, expected discrimination

1 | INTRODUCTION

In their 2012 article "Ethnic Inequality in Choice-driven Education Systems: A Longitudinal Study of Performance and Choice in England and Sweden," Michelle Jackson, Jan O. Jonsson and Frida Rudolphi (JJR) conclude that "choice-driven, mass educational systems are of great value for ethnic minority students" (Jackson et al., 2012, p. 175). According to the authors, education systems with "large secondary and tertiary sectors [...] where choice has come to be vital for progression within the system" help immigrants translate their high aspirations and optimistic educational goals into actual educational decisions (Jackson et al., 2012, p. 159). Indeed, these education systems have proved to contribute to what in recent years has been known as ethnic choice effects (Jonsson & Rudolphi, 2011) or positive secondary effects of ethnicity or ethnic origin (Fernández-Reino, 2016; Kristen & Dollmann, 2010): if prior performance and the socioeconomic status is taken into account, students with an immigrant background are more likely than their native counterparts to choose the more demanding pathways (Fekjær und Birkelund, 2007; Jackson, 2012; Jackson et al., 2012; Jonsson & Rudolphi, 2011).

However, the authors point to two important caveats: The first concerns the question of whether immigrants' optimistic choices later actually translate into favorable educational outcomes or rather into higher dropout rates. In fact, two recent studies in Denmark and Germany demonstrate that children of immigrants have a higher risk of dropping out after making ambitious choices than the non-immigrant population (Birkelund, 2020; Dollmann & Weißmann, 2020). The second caveat addresses the question of whether making ambitious educational decisions is a universal behavior and less dependent on the education system, that is, whether immigrants may equally succeed also in more selective, performance-driven education systems and transform their high educational aspirations into beneficial educational choices at the different branching points. Given the finding that positive choice effects also exist in countries with more selective education systems, in which achievement is a determining factor in educational transitions, such as Germany (Dollmann, 2017; Kristen & Dollmann, 2010), the Netherlands (van de Werfhorst & van Tubergen, 2007) or Switzerland (Tjaden & Scharenberg, 2017), this caveat raises the important question what possibilities immigrants have in different education systems to make optimistic educational decisions.

This paper addresses this issue and asks whether immigrants and their descendants are more likely to make ambitious decisions in choice-driven than in selective education systems or whether there are similar ethnic choice effects in both systems. Using representative samples of immigrant students and students without an immigrant background in England, Germany, the Netherlands, and Sweden, the study focusses on the transition to upper secondary education after lower secondary/compulsory education. These countries' education systems differ in their level of stratification and the role students' choices play in educational transitions, that is, in their level of selectivity.

Furthermore, we investigate whether the mechanisms underlying ambitious educational decisions differ between these countries. In line with previous research, we concentrate on high educational aspirations as a driver of ambitious choices as well as on anticipated discrimination in vocational education and training (VET) and the labor market, which may contribute to immigrants' decisions to continue education with the aim of avoiding these alternatives pathways. The countries under study and their different education and VET systems offer the possibility to investigate the differential effects of these mechanisms. While the choice-driven system in England can be expected to give immigrants' aspirations more weight, in selective education systems such as in Germany or the Netherlands educational achievement might play a more important role and might strongly influence students' further educational pathways at the different branching points. As immigrants usually tend to fall behind

their native counterparts with respect to their achievement levels in these countries, in these selective education systems aspirations are less likely to be transformed into ambitious educational choices. In Sweden, aspirations and achievement can be expected to play a similar role, because the level of selectivity of the Swedish education system lies somewhere in between these two countries. With regard to (anticipated) discrimination, immigrants in Germany might be more affected when entering upper secondary education due to the prominent role of company-based vocational training, for which discriminatory behavior of employers is well documented (e.g., Tjaden, 2017). In England and Sweden, moreover, the risk of being discriminated against when entering upper secondary education is expected to be lower because students usually choose between different school-based training options.[1]

This paper makes at least two important contributions. First, following JJR's call for further research comparing immigrants' educational decision-making in different education systems, we provide evidence on this issue, using strictly comparative data. Second, by focussing on the underlying mechanisms and possible differential effects in the various education systems, we provide further evidence on the causes of ethnic choice effects and thus contribute to understanding how ethnic educational inequalities may be further reduced.

In the following, we first discuss some theoretical considerations concerning educational decision-making before outlining how specific characteristics of education systems may influence choice effects. Furthermore, we explain why we expect systematic differences in the mechanisms contributing to these effects in the different systems. These assumptions are then tested in the empirical part of the paper, after having introduced the data and the measures used. Before conducting strictly comparative analyses in which we contrast the transition behavior of immigrant students and students without an immigrant background in the different countries, we replicate one of the JJR's main findings, that is, positive choice effects among ethnic minorities in England and Sweden, extending our analyses also to Germany and the Netherlands.

2 | EDUCATIONAL DECISION-MAKING AND POSITIVE CHOICE EFFECTS AMONG IMMIGRANTS

When examining differences in educational attainment, differences in *educational achievement* and disparities in *educational choices* are the main issues. Originally used to explain social disparities in educational attainment, *primary effects* describe the influence of individual and family characteristics on educational achievement. *Secondary effects*, in turn, refer to group-specific cost–benefit calculations of different educational pathways that lead to different educational decisions even at given performance levels (Boudon, 1974). Following Boudon's arguments, students with a less favorable social background, therefore, are not only disadvantaged due to generally lower performance levels but also more likely to choose the less demanding tracks even with performance levels that are comparable to those of students from a more favorable social background (for an overview of the results on primary and secondary effects in the European context, see Jackson, 2013).

The distinction between primary and secondary effects can in principle be applied to explain various kinds of group differences in educational attainment. Besides social disparities, *ethnic inequalities* have increasingly gained attention in recent years (e.g., Dollmann, 2016, 2017; Jackson et al., 2012; Jonsson & Rudolphi, 2011; Kristen et al., 2008). Research on ethnic differences in educational achievement has shown that immigrants are disadvantaged mainly due to their on average lower social background. In addition, specific primary effects of ethnic origin that go beyond the impact of social origin on school performance are primarily associated with differences in host-country language skills (Dollmann, 2019; however, see also Simoes Lourêiro et al., 2019).

In contrast, the findings on immigrants' educational decision-making do not necessarily align with the pattern of ethnic disadvantages usually found when studying educational performance. Previous studies have found that (children of) immigrants are more likely to choose the more demanding tracks at educational transitions, especially when considering their prior academic performance (primary effects) and their socioeconomic

background (secondary effects of social origin) (Brinbaum & Cebolla-Boado, 2007; Kristen & Dollmann, 2010; van de Werfhorst & van Tubergen, 2007). At later transitions, we sometimes even find gross positive choice effects or positive secondary effects of ethnic origin for specific groups (for the transition after compulsory education in England and Sweden see, for example, Jackson et al., 2012; for the transition to tertiary education in Germany see Kristen et al., 2008). Accordingly, while secondary effects of social origin are often regarded as a "bad thing" (Jackson, 2012, p. 204), reinforcing social inequalities in education beyond the disparities that are observable on the achievement level, secondary effects of ethnic origin may be considered a "good thing," contributing to the reduction of the ethnic gap that is due to achievement disadvantages.

To sum up, positive choice effects among immigrants have been found in very different countries with a variety of different education systems, such as in England, France, Germany, the Netherlands, Norway, Sweden, and Switzerland. However, less is known about whether some systems encourage the emergence of such an immigrant advantage more than others. In the following, we outline whether we can expect differences in the extent of positive choice effects between the different countries.

3 | EDUCATION SYSTEMS AND THEIR IMPACT ON EDUCATIONAL DECISION-MAKING

In this section, we focus on two characteristics of education systems that are supposed to contribute most to (social and ethnic) differences in educational decision-making: *stratification* and *selectivity* (Jackson & Jonsson, 2013). For example, Germany and the Netherlands have highly stratified education systems. Students are sorted into different tracks at an early age, between 10 and 12. These tracks differ considerably regarding the curricula taught. Therefore, in highly stratified systems, choosing the "right" track at this young age is highly consequential for later life chances, meaning that the parental influence on these decisions—the secondary effects—should be most pronounced in these systems (Jackson & Jonsson, 2013). However, changes between the tracks are still possible further along the educational path. Especially in Germany, the transition from lower to upper secondary education (from vocational tracks to academic tracks) at the age of around 16 has become more and more important in recent years (Buchholz & Schier, 2015; Dollmann, 2017). In contrast to highly stratified systems, there are hardly any educational choices to make at early ages in comprehensive systems, which thus reduces the possibilities of secondary effects. Furthermore, these later transitions in the educational career are made on a rather high level, leading to high levels of tertiary education.

The stratification of education systems is strongly connected to the way the different transitions are organized (Jackson & Jonsson, 2013). Educational transitions in highly stratified systems are generally based on performance and thus aim to reduce the impact of parental background on these transition processes. In comprehensive systems, in contrast, with the late educational transitions, students have more leeway to decide which track to continue, and prior performance is not overemphasized.

Consequently, as originally argued by Jackson and Jonsson (2013), selectivity and stratification are not independent of each other but rather work in opposite directions in the generation of secondary effects. Stratification—emphasizing the diverse transitions and alternatives—should help immigrants realize their high aspirations, but selectivity—emphasizing achievement—should lower their possibilities of obtaining these goals. Moreover, comprehensive systems offer fewer opportunities for educational transitions, and the tracks after compulsory education are less hierarchically structured, which may reduce the emergence of secondary effects. However, in comprehensive and weakly selective systems, (the few) choices can be made (almost) irrespective of prior achievement, giving students and families many opportunities to realize their high aspirations, which thus contributes to the generation of secondary effects (Griga & Hadjar, 2014).

It is, therefore, an empirical question whether there are stronger *positive* effects of immigrants' educational decisions in stratified systems compared to *negative* effects of the restriction due to achievement standards

to obtain these goals. Formulating a clear hypothesis regarding the merits of the different systems is further complicated by the heterogeneity *within* the different systems (cf. Jackson & Jonsson, 2013 for a more detailed overview focussing on secondary effects of social origin). Performance may also play a role in choice-driven systems, for example when teachers strongly recommend a less academic track because school achievement is very poor. Furthermore, the importance of performance may vary greatly even within performance-driven systems. In Germany, for example, the secondary school track recommendation is binding in some federal states but non-binding in others, causing differences in students' and parents' flexibility at this transition point. The same applies to the criteria that allow for continuing education at the upper secondary level, which are more restrictive in some federal states and less in others and which differ even between different school types in upper secondary education.

4 | EXPLANATIONS OF POSITIVE CHOICE EFFECTS AND THE INFLUENCE OF THE EDUCATION SYSTEM

Stratification and selectivity are part of the institutional arrangement of education systems, contributing to the framework in which secondary effects can emerge. Within these frameworks, however, individual characteristics have to be considered that may account for differences in educational decisions between students with and without an immigrant background (Jackson & Jonsson, 2013). In the following, we outline different explanations for the emergence of positive choice effects among immigrants, which focus on different key factors in this process. Furthermore, we discuss whether and why we expect these factors to be more or less relevant in the different countries, contributing to differing absolute levels of positive ethnic choice effects and/or to differences in the degree to which these factors account for the findings.

In general, three factors are used to explain positive choice effects among immigrants and their descendants: information deficits, perceived discrimination, and differences in aspirations. In the following, we focus only on the latter two, as these are assumed to be the main contributors to positive choice effects. First, perceived as well as actual discrimination on the labor market may be a reason for immigrants to aspire to the more demanding tracks, because high educational qualifications are often regarded as a means to overcome disadvantages on the labor market caused by discrimination. Furthermore, the opportunity costs of continuing education are smaller because the alternative might be unemployment due to blocked opportunities on the labor market (Heath & Brinbaum, 2007; Jonsson & Rudolphi, 2011). This particularly applies to later transitions, at which students must decide between continuing the career or entering vocational training/the labor market.

Anticipated discrimination as a mechanism in the emergence of positive choice effects among immigrants should be especially important in countries and education systems in which the alternative to more ambitious tracks and further academic training are pathways on which possible gatekeepers could exploit their discriminatory behavior. For example, immigrants may assume that recruitment decisions for firm-based vocational training (as it is often found in Germany and also partly in the Netherlands) are more likely to be biased by discriminating views of the decision-makers, which may lead them to avoid these alternatives in the first place. In contrast, anticipated discrimination can be expected to play a minor role in systems with a large sector of school-based vocational training, in which gatekeepers at the transition into school-based vocational training play no or only a minor role, such as in the Swedish system.

Second, ambitious educational aspirations may not only be driven by actual or anticipated discrimination in the labor market. Instead, they may be part of the migration process itself. It is often argued that immigrants are positively selected with respect to their motive of upward mobility. In other words, individuals who leave their home countries to achieve a better life somewhere else can be expected to show higher educational and occupational aspirations than “stayers” (Feliciano, 2006). As the first generation is often not able to achieve such upward

mobility, for example, due to lower language skills or educational qualifications, these high aspirations probably are then transferred to the children (Kao & Tienda, 1995).

Differences in aspirations between immigrant groups and in their geographical distribution may be one reason why we can expect differences in educational choice effects between different countries. For example, Asian immigrants generally have high educational ambitions compared to other immigrants or natives. The higher level of ethnic choice effects in England could, therefore, be attributable to the large community of immigrants with an Asian background there. In Germany, however, the Asian immigrant group is small and therefore unlikely to account for high ethnic choice effects—if any.

Furthermore, the type of education system may be responsible for differences in the aspiration level. The aspirations of students in stratified systems tend to be more closely aligned with the track students attend (Buchmann & Dalton, 2002; Buchmann & Park, 2009). In line with this finding, students' aspiration levels are generally lower in stratified systems than in comprehensive systems (Buchmann & Dalton, 2002), in which we find high aspiration levels overall and therefore some kind of ceiling effect anyway. However, these system-specific variations in aspirations should not affect differences in the extent of ethnic choice effects between different systems if immigrants and non-immigrants respond equally to the opportunities and constraints offered. Given that immigrants usually show less realistic aspirations, which are not in line with their usually lower achievement levels, and that the above-mentioned ceiling effect of high aspirations can be found in comprehensive systems for immigrants and non-immigrants alike, it may be argued that immigrants in more stratified systems are less likely to respond to the cues given by the tracks they are attending. This would lead to larger aspiration gaps between immigrants and natives and increase the importance of aspirations in the generation of positive choice effects in stratified systems.

In addition to the influence of educational tracking on aspirations *prior* to the decision, the value of the different alternatives *after* lower secondary education may also shape the decision process. For example, the benefit of vocational education may differ between the countries, consequently leading to more or less incentives for students to follow this pathway after lower secondary education. Busemeyer and Jensen (2012) find that the impact of parental educational background on individual aspirations is higher in countries with a larger share of vocational education. Consequently, in countries in which vocational education is more important, such as Germany, the Netherlands, and Sweden, (ibid., p. 535), students with a lower social background (and consequently in most Western societies immigrant students) may be more likely to enter vocational education even at given aspirational levels, as these programs are more appreciated and offer good opportunities for a decent occupation.

In the following, we introduce the data and measures that will be used to test these theoretical considerations empirically.

5 | DATA AND MEASURES

5.1 | Data

The study uses information from the Children of Immigrants Longitudinal Survey in Four European Countries CILS4EU (Kalter et al., 2016), focussing on the countries England, Germany, the Netherlands, and Sweden as examples of education systems that differ in their level of stratification and selectivity. Table 1 illustrates how these countries can be classified on the two dimensions stratification and selectivity, as outlined by Jackson and Jonsson (2013, p. 310): the English education system has a very low level of stratification and a very low level of selectivity, the German and the Dutch education system are both highly stratified and have a high level of selectivity, and the Swedish education system may be placed between these two extremes.

The representative samples were selected using a three-stage stratified sampling approach. First, schools enrolling the relevant age group (i.e., schools with grade levels in which most students are aged 14) were selected from nationwide and comprehensive school lists, with higher inclusion probabilities of schools with high

TABLE 1 The relationship between stratification and selectivity at the secondary or upper secondary level (Jackson & Jonsson, 2013, p. 310)

	Selectivity		
Stratification	**High**	**Intermediate**	**Low**
High	Germany The Netherlands		
Intermediate		Sweden	
Low			England

proportions of immigrants to ensure a sufficient number of immigrant respondents for each country. Within the sampled schools, two school classes in which all students were asked to participate in the survey were chosen at random. Following this strategy, a total number of 18,716 respondents were surveyed in the first wave in the four countries, nested within 958 school classes and 480 schools (cf. CILS4EU, 2016a; Kalter et al., 2019).

CILS4EU is a three-wave panel study that started in 2010/11 with an in-school survey, followed by a second wave one year later using the same mode. In Germany, however, for students who had attended the few lower secondary school tracks that ended after the first wave (after 9th grade), the second wave had to be conducted outside the school context, using web, postal and telephone interviews. Such outside-school surveys were conducted during the third wave in 2012/13 in all countries but the Netherlands, where school-based surveys were conducted whenever possible. In addition to student interviews, parents were interviewed by means of paper-and-pencil questionnaires or telephone surveys during the first wave.[2]

5.2 | Measures

The differences between the education systems of the four countries under study offer the opportunity to study the influence of institutional settings on the participation rates in upper secondary education. The different systems can be located on a continuum ranging from Germany and the Netherlands as highly selective and stratified systems to England as a weakly selective, choice-based comprehensive system, with Sweden in between (cf. Jackson, 2013, p. 21; see also Table 1). As can be seen in Figure 1, one important commonality between all countries irrespective of the system is the age at which the transition to the track leading to a university-qualifying degree is made. At the age of around 16, and therefore 2 years after the first wave of CILS4EU was conducted, most students in all four countries either attended academic tracks or vocationally oriented tracks and courses or pursued other activities.

These different alternatives constitute the categories of our study's dependent variable (cf. also Figure 1, the row on the right of "age 16"). For Germany, we differentiate between upper secondary schools (i.e., the *Gymnasium*), vocational training or doing something different, such as voluntary services or internships, and the labor market. For the Netherlands, we distinguish between VWO (preparation for general university education), HAVO (leading to an entry qualification for universities of applied or [more advanced] vocational education) and MBO (general vocational education) or other activities. For Sweden, we differentiate between the general educational track, vocationally oriented programs, and preparatory courses. For England, we distinguish between A-levels, work- or job-related courses in school, and apprenticeships. We subsume all non-academic alternatives (i.e., vocational training, apprenticeships, job- or work-related courses, preparatory courses, voluntary services, participation in the labor market, etc.) and contrast them with the more advanced, academic educational alternatives ("advanced studies"; that is, upper secondary education, VWO, general education and A-levels). The binary variable, therefore, contrasts the tracks that—after successful completion—provide an entrance qualification to

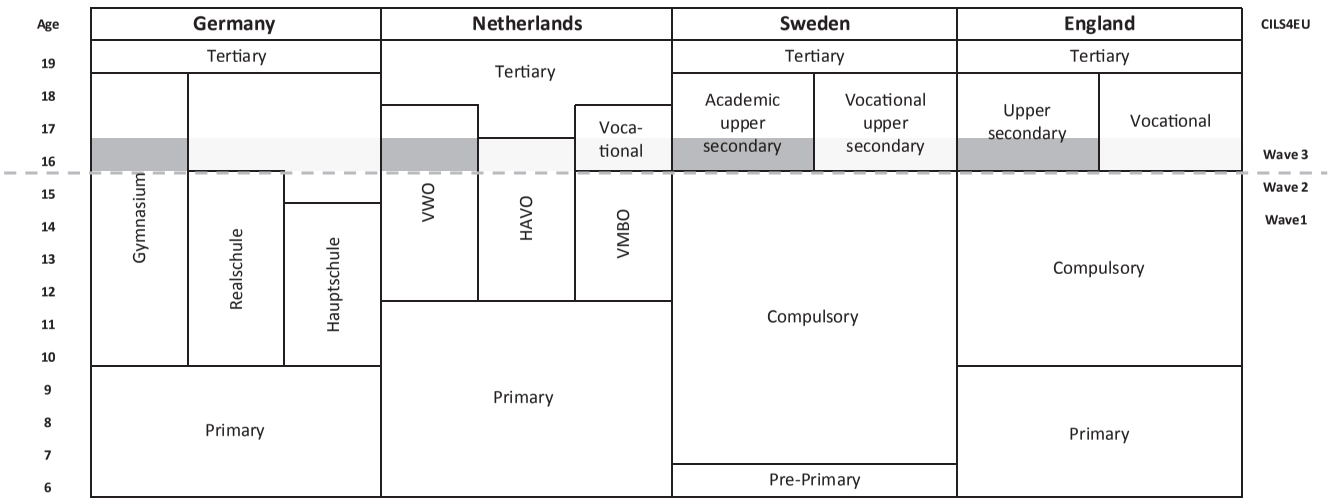

FIGURE 1 Simplified overview of the different education systems in the Germany, the Netherlands, Sweden and England.
Note: Original figure taken from Rudolphi and Salikutluk (2021) and slightly adapted. The dependent variable in this paper contrasts the dark grey alternatives against the light grey alternatives. In this latter category, alternatives like labour market entry, preparatory courses etc are also included, although not displayed here

(general) tertiary education with all other alternatives, thus offering the most feasible and comprehensible cross-country comparison.

As can be seen in Figure 1, for England and Sweden we focus on choices between an academic track and other alternatives, and for Germany and the Netherlands, we compare participation patterns regarding the different alternatives after lower secondary education. These are only partly due to choices after lower secondary education but sometimes too early choices after primary education (for those who changed to an upper secondary track or VWO already then). However, this approach allows us to focus on the influence of different education systems on academic track attendance rates after lower/compulsory education and therefore seems to be best suited to answering our research question.

Running country-specific analyses, we study ethnic-specific choice effects between these different alternatives and focus on the largest ethnic groups in the survey in each country. For England and Sweden, we follow JJR's classification as closely as possible and rely on the same logic in our distinction between different ethnic groups in Germany and the Netherlands. Respondents were classified according to their own, their parents' or their grandparents' country of birth (for a detailed description of this procedure see Dollmann et al., 2014). The reference group for the analyses is the population without an immigrant background. For the pooled analyses with a strict comparative approach we use—in addition to a general variable "immigrant status: yes/no"—the generational status of respondents, distinguishing between five groups: children without an immigrant background (including children of the third generation), children of the *first generation*, children of the *second generation*, children from *transnational partnerships* (one parent is of the second or third generation and the other parent of the first generation) and children from *interethnic partnerships* (one parent without an immigrant background, the other parent with immigrant background; cf. Dollmann et al., 2014).

Choice effects in Boudon's sense can be identified only if we consider prior achievement and make sure that differences in educational decisions are not due to prior performance differences. To use comparable achievement measures between the different countries, we use Grade Point Averages (GPA) in different subjects. For Germany, the Netherlands, and Sweden, we use the subjects Mathematics, survey country language (German, Dutch or Swedish), and English, and for England, we only use Mathematics and English (i.e., survey country language). These GPAs were measured in the second wave of CILS4EU (i.e., before the transition) and standardized (on country level) with a mean of zero and a standard deviation of 1 for the analyses. Given that GPAs in stratified systems correspond to different achievement levels in the different school types (a grade 2 in a lower secondary track is worth less than a grade 2 in an upper secondary track), we also include test scores measured in Wave 1, assessing verbal as well as general cognitive skills (Heller & Perleth, 2000; Weiß, 2006).

As we are interested in *ethnic-specific* choice effects, it is also necessary to include students' socioeconomic background. In many Western societies, ethnic minorities or immigrants usually stem from groups with lower social background on average, which may be one cause of less favorable educational outcomes. We, therefore, consider the highest ISEI score within the respondents' families as well as the highest educational degree of the respondents' parents ("Degree below university education" vs. "University degree").

Theoretical explanations attribute ethnic choice effects to two major factors: immigrants' usually higher aspiration level and anticipated discrimination in the labor market. Both factors may contribute to students opting for academic secondary education instead of starting vocational training, pursuing non-academic tracks in upper secondary education or directly entering the labor market. Educational aspirations were measured in Wave 1, asking respondents about the educational degree they aim to achieve (answer categories: "University education," "Upper secondary education degree vs. lower or intermediate secondary education degree," "Don't know"). Occupational aspirations were measured in Wave 2, resulting in an ISEI score of the desired occupation. Furthermore, as some students chose the answer "Don't know," we also use this category in the analyses. Anticipated discrimination was measured in Wave 2 with the following question: "An immigrant in [survey country] needs a university education in order to get a good job" (answer categories: "Strongly agree," "Agree," "Neither agree nor disagree," "Disagree," "Strongly disagree"; in the analyses, we combine the categories "Strongly agree" and "Agree"). It,

therefore, measures whether immigrants consider it necessary to be highly qualified in order to obtain a good labor market position. As a robustness check, we also use information about perceived discrimination in different contexts, as measured in Wave 1 with four questions about whether students felt discriminated or treated unfairly (a) in school, (b) in trains, buses, trams or subways, (c) in shops, stores, cafés, restaurants or nightclubs and (d) by the police or security guards (answer options were "Always," "Often," "Sometimes," and "Never"). The answers are combined on one scale. As control variables, we include student's age in years and sex. To account for possible negative age effects through students who have repeated a school class previously, we also include age squared.

To account for item non-response and unit non-response due to panel attrition, missing values are multiply imputed by chained equations (mi-command in Stata SE 16.1), resulting in a total of 30 imputed data sets as the basis for the subsequent analyses. Following the "just-another-variable" approach (White et al., 2011), we standardise students' GPAs as well as—due to the estimated interaction effects—the quasi-metric treated variable about expected discrimination before multiple imputation and impute the standardized values (both standardized on the country level). Age squared is also imputed after calculation. Due to perfect prediction issues in the multiple imputation models, we delete missing values on the general migration background variable so that we have 18,631 cases for the main comparative analyses.[3]

6 | RESULTS

In the following analyses, which include all clustered standard errors on the school level and are weighted using the adjusted design weight, we first replicate one of the JJR's main findings—positive choice effects among different ethnic groups—by conducting country-specific analyses. In contrast to JJR's study, we extend our analyses also to Germany and the Netherlands, as examples for countries with highly stratified and selective education systems, and compare the results between the different countries. Subsequently, we focus on pooled models and estimate interaction effects between immigrant status and education systems/countries. Furthermore, we investigate whether stratified and selective systems are more or less detrimental to immigrants' ambitions than comprehensive, choice-driven systems. Finally, we investigate whether the possibility to transform high educational aspirations into beneficial educational decisions differs between the countries and whether anticipated discrimination is more relevant in stratified education systems.

The following analyses study transition rates into upper secondary education in more detail. Using linear probability models, we estimate differences in transition rates between different ethnic groups and the majority population gross (left bar), additionally controlling for social background (middle bar) and social background and achievement (right bar). The bars in Figure 2 represent percentage differences in transition rates of ethnic minorities as compared to the majority population, which is set to zero as the reference category (complete regression tables in Appendix A2).[4]

In line with JJR's findings, a rather heterogeneous picture emerges with regard to gross transition rates, with disadvantages for some few groups and advantages for most others. Once controlling for social background and achievement, however, it becomes evident that "bars reflect minority advantage rather than disadvantage" (Jackson et al., 2012, p. 167) in transition rates to upper secondary education. Interestingly, this holds true not only for England and Sweden but also for Germany and the Netherlands.

These analyses provide evidence that is consistent with previous research on immigrants' educational decision-making: Ethnic minorities tend to make optimistic educational decisions, in many cases already gross, and these choice effects even increase for some immigrant groups in some countries once we consider social origin and prior educational achievement. The increase is mainly due to the disadvantages that these ethnic groups have regarding these characteristics compared with native groups. When taking a comparative perspective, it seems that ethnic minority students are most advantaged in England's choice-driven system. Moreover, we do not see much difference in Sweden, which has a similarly choice-driven system, as compared to Germany and the Netherlands, with

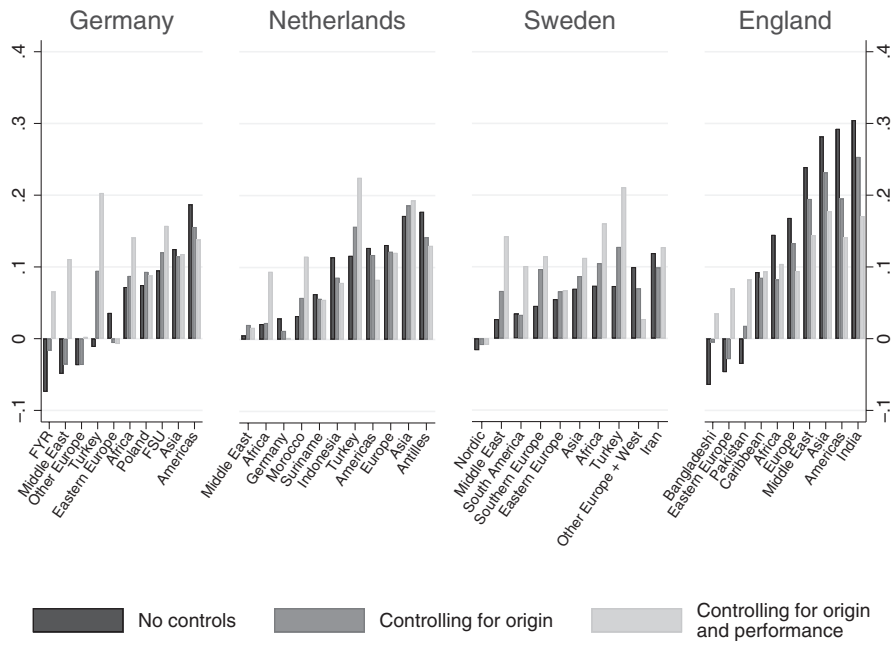

FIGURE 2 Ethnic differences in transition rates to upper secondary track, results from linear probability models, majority population in the different countries reference category and set to zero.
Note: Complete results of the linear probability models can be found in Tables A1–A4 in Appendix A2

selective systems. In the following analyses, we try to get an in-depth view on this matter, extending JJR's analyses and running pooled models which introduce interaction effects between immigrant status and the respective country variables. To compare students with an immigrant background between the countries, we use an overall variable "immigrant: yes/no" and also distinguish between different generational status groups.[5]

Figure 3 displays percentage differences between different immigrant and generational groups and their native counterparts (set to zero as the reference category) in the four different countries. As can be seen, immigrants generally are more likely to change to an upper secondary track in England than in Germany and Sweden (significant interaction effect for immigrants in England as compared to Germany, marginal significant interaction effect for immigrants in England as compared to Sweden; results for all regression models in Appendix A4). However, immigrants' choices do not differ significantly between the Netherlands and all other countries, and there is also no significant interaction effect between immigrants in Sweden and Germany—although we observe positive choice effects among immigrants already gross in Sweden, but not in Germany. However, when looking at different generational groups, a larger heterogeneity emerges: While children from interethnic partnerships (one parent with immigrant origin, one parent without) are advantaged in England, the second generation is doing rather well in England, Sweden and the Netherlands. In contrast, the first generation shows higher transition rates in England and the Netherlands already gross, while the same group shows disadvantages in Germany—although this finding is statistically not significant.[6,7]

Once controlling for social background and achievement, we observe overall positive choice effects in all countries, with the largest effect in England and the smallest in Germany (although these small between-country differences are not significant). In this last model, immigrants from the second generation show positive ethnic choice effects in all countries, but especially in Sweden and the Netherlands. Furthermore, we find additional advantages for immigrants from the first generation in England and Sweden, but not in the Netherlands and

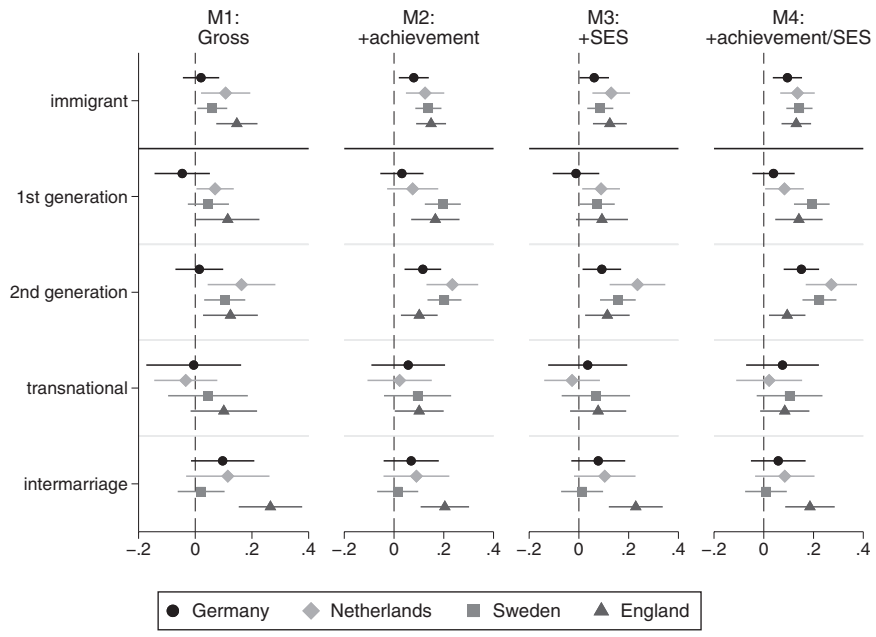

FIGURE 3 Ethnic differences in transition rates to upper secondary tracks, comparative perspective, marginal effects obtained from linear probability models (with 95%-CIs).
Note: Complete results of the linear probability models can be found in Tables A5 and A6 in Appendix A4

Germany. For this generational group, we observe the pattern that we expected on the basis of previous findings, that is, larger choice effects among immigrants in more comprehensive systems.

To get a deeper understanding of the differences between the countries in the underlying mechanisms leading to immigrants' optimistic choices, we first introduce the main effects of educational aspirations and anticipated discrimination and investigate how and to which degree the optimistic choices found in Figure 3 are reduced once considering these two possible mechanisms. The first row in Figure 4 (ethnic choice effects) simply repeats the net effects (controlling for social background and academic achievement), as also found in Figure 3. The effect of educational aspirations is an overall marginal effect for all four countries and shows the change in transition probabilities to an upper secondary track for students who stated that their educational goal was a university degree. As can be seen, these students show a more than 15 per cent higher transition probability than those with lower educational aspirations. Looking at the extent of optimistic choices once controlling for aspirations, it becomes evident that in all countries a large part of ethnic choice effects is due to the high level of aspirations among immigrant students, although the remaining choice effect is non-significant only in Germany (ethnic choice effects +aspiration).[8]

In contrast, the overall effect of anticipated discrimination is remarkably smaller, even when considering that the effect size displayed here represents an increase in transition probabilities for a change of one standard deviation on the standardized scale measuring anticipated discrimination. The probabilities of transitioning to more advanced tracks increase for students who perceive discrimination on the labor market and think that achieving a high educational degree can help avoid discrimination. Regarding ethnic choice effects, we observe a much less pronounced decrease in positive choice effects once controlling for this possible mechanism, with the largest but still rather small drop for England (ethnic choice effects +ant. disc.). To summarize, ethnic choice effects, which are evident in all four countries, can mainly be explained by the systematic higher educational aspirations of immigrants but not by the level of perceived discrimination, a finding that is in line with previous research (e.g., Fernández-Reino, 2016).

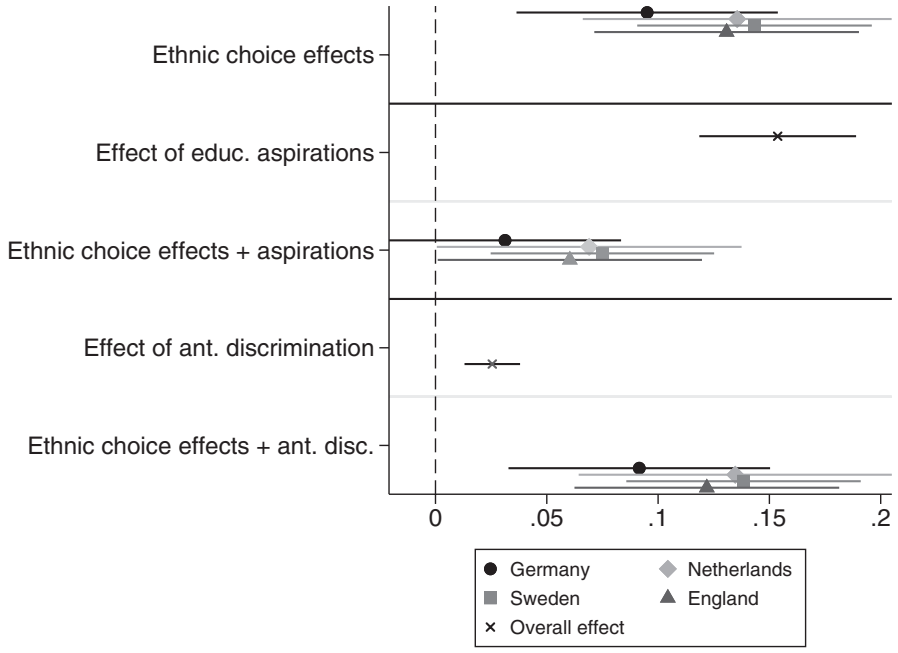

FIGURE 4 Transition to upper secondary track and the role of aspirations and anticipated discrimination, marginal effects obtained from linear probability models (with 95%-CIs).
Note: Complete results of the linear probability models can be found in Table A7 in Appendix A4

However, it could well be that these mechanisms have specific effects within a country and for different ethnic groups. To investigate the question of whether the effect of educational aspirations and perceived discrimination differs between students with and without an immigrant background and between the different countries, we introduce three-way interactions between immigrant status, country, and educational aspirations and perceived discrimination, respectively. In Figure 5, we plot the marginal effects of high educational aspirations and the anticipation of discrimination for students with and without an immigrant background in the different countries.

We observe a significant effect of anticipated discrimination only in Germany, where it is also in the expected direction: Students reporting higher levels of anticipated discrimination are more likely to change to the more demanding tracks. However, and in contrast to the theoretical considerations, students *without* an immigrant background who agree to the statement that immigrants require a high educational degree in order to help to avoid discrimination are more likely to change to an upper secondary school. A similar pattern can be found in the Netherlands, where the effect is significant and positive only for non-immigrant students. In England, we observe effects that are in line with those found in Germany and the Netherlands: non-immigrants who agree to the statement that discrimination can be reduced or avoided by obtaining a high educational degree show *higher* transition rates than immigrants. However, an opposite effect is visible in Sweden, where we observe that the differential effects are in the expected direction, that is, especially immigrants who agree to this statement are more likely to choose more demanding tracks (marginal significant three-way interaction). It is unclear why we observe these unexpected larger effect sizes for non-immigrants as compared to immigrants in three of the four countries. Although the measure used to assess expected discrimination explicitly refers to the population with an immigrant background ("An immigrant in [survey country] needs a university education in order to get a good job"), it is possible that this question captures the general value of education and non-immigrants may relate this question to their own situation. Nevertheless, and regardless of the specific effects for respondents without an immigrant background, the effects for the population with an immigrant background are rather small and significant only in Germany, indicating a rather subordinate role of anticipated discrimination in generating the positive choice effects.

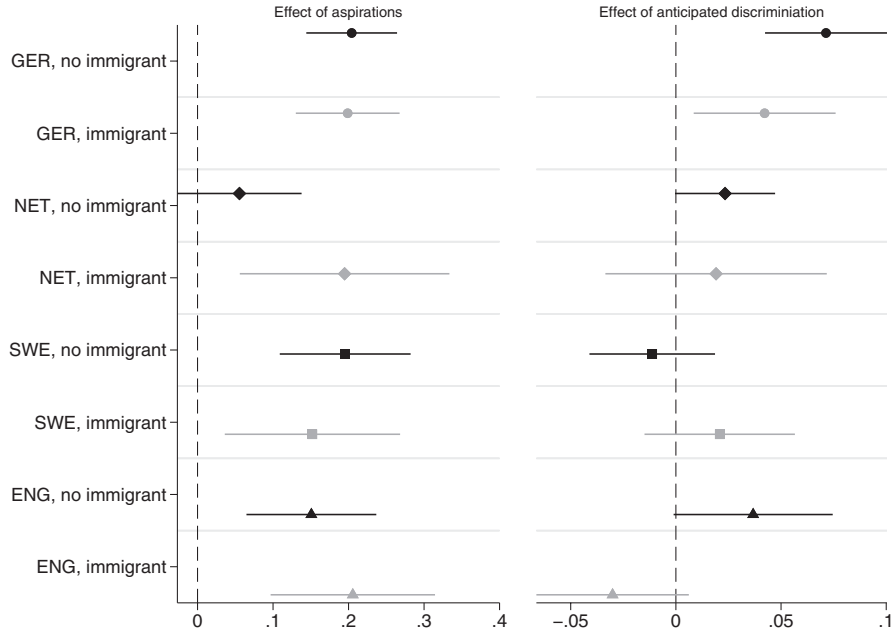

FIGURE 5 Transition to upper secondary track and the role of aspirations and anticipated discrimination, differentiated effects applying three-way interactions, marginal effects obtained from linear probability models (with 95%-CIs).
Note: Complete results of the linear probability models can be found in Table A8 in Appendix A4

Regarding the effect of educational aspirations, the results tend to be universal, with non-immigrants in the Netherlands as the only exception. Students who show high educational aspirations before the end of lower secondary education 15–20 percentage points more likely to change to an upper secondary school than those with low educational aspirations, irrespective of the country they are living, and the education system they are studying in. Although we observe some heterogeneity in effect sizes, the results are universal and point to the importance of educational aspirations in all education systems (with the exception of non-immigrants in the Netherlands, as already mentioned).

7 | DISCUSSION

In this article, we asked whether there are differences in educational decision-making processes at the end of lower secondary education between students with and without an immigrant background and between different education systems. We focussed on four countries whose education systems differ markedly in their level of stratification and selectivity: England, Germany, the Netherlands, and Sweden. We observed optimistic educational decisions in England, the Netherlands and Sweden (gross), and we demonstrated such positive choice effects among immigrants in all four countries once we controlled for prior achievement and social background. Irrespective of these findings, in the gross model the pattern of ethnic choice effects did not differ significantly between Germany, the Netherlands, and Sweden, that is, between three countries that differ in their level of stratification and selectivity. Furthermore, we have shown that country differences in possible mechanisms underlying these choice effects are smaller than expected. Educational aspirations prior to the transition are the main drivers of ambitious educational decisions, contributing to positive choice effects especially among immigrants. Anticipated discrimination seems to be more important in Germany, although—against the expectations—this is especially relevant for students without an immigrant background.

As can be seen from our results, an optimistic picture emerges in all countries with regard to educational choices, especially when controlling for prior achievement and social background. But why do Germany, the Netherlands, and Sweden differ so little in the gross model? Why do we not find more pronounced disadvantages for immigrant students in the German system, and why do we even find advantages for immigrants in the Netherlands, whose education system has a high level of selectivity and stratification? In the German education system, the high stratification and selectivity mainly apply to the first transition, but possibly not so much to the later transition. Consequently, immigrant students, although being mainly selected into lower and intermediate tracks after the first educational transition following primary school, may compensate for these less beneficial transitions at a later stage and achieve similar participation patterns in academic upper secondary education as students in Sweden, where this transition is the first in the educational career. Furthermore, vocational education is of similar importance in Germany, the Netherlands, and Sweden (Busemeyer & Jensen, 2012), which may explain the lower degree of positive ethnic choice effects we observe in these countries as compared to England, where vocational education is less important and appreciated.

To conclude, we agree with JJR's notion that the choice-driven systems of England and Sweden offer advantages to immigrant students. However, when looking at actual participation rates of immigrant students after the transition from lower to (academic) upper secondary education at the age of around 16 and especially when considering their prior achievement and social background, it becomes evident that they are also advantaged (or at least not disadvantaged) in more selective education systems. Accordingly, although the pathways to upper secondary education attendance may differ between countries and education systems, the influence education systems have on participation patterns in upper secondary education is neglectable. These findings are in line with a recent publication from the *edu*LIFE project (Triventi et al., 2020), which concludes that the impact of education systems on the generation (or reduction) of social inequalities may be overrated.

However, as the results show, the educational attainment of first-generation immigrants merits further consideration. First-generation immigrants in the Netherlands and Germany show a transition pattern that is in line with JJR's considerations, as they are performing considerably worse than new arrivals in England and Sweden (cf. Cobb-Clark et al., 2012; Ruhose & Schwerdt, 2016 for results of school starting age and early tracking on first-generation students' performance). An obvious explanation would be that immigrants from the first generation are not familiar with the education system, which could hinder them from pursuing more ambitious transitions. This should even be more pronounced in stratified systems, in which the navigation is more difficult. Therefore, we would expect especially the latest arrivals (at age 10 or even later) to be most disadvantaged, and first-generation immigrants who entered the receiving countries before starting school should show attainment levels that are comparable to those of second-generation immigrants. Additional analyses, however, do not confirm this assumption (Appendix A7).

Regarding the importance of aspirations, we might underestimate their importance in the generation of positive choice effects, especially in the countries in which immigrants usually show lower levels of academic performance. Controlling for achievement in our models means that we control like with like, but it is likely that immigrant students need more ambition to achieve the same level of educational performance in the first place. This means that parts of the effect of academic ambition are already represented in the performance measure. However, a recent paper using longitudinal information on aspirations and academic performance development challenges this clear association between ambitions and performance (Dochow & Neumeyer, 2021).

Another limitation concerns the measure of anticipated discrimination, which is rather indirect and could conceal potential effects that would be visible with a more direct measure of anticipated discrimination on the labor market. Furthermore, it is questionable whether this question can also be applied to non-immigrants, but there are no better measures for anticipated discrimination in future labor market outcomes available in CILS4EU. As outlined earlier, the question may possibly measure the general value of education for the respondents rather than anticipated discrimination. However, when running the same analyses with a more direct measure of perceived

discrimination or perceived unfair treatment (as a possible predictor of future discrimination), the results are virtually the same, with even smaller effect sizes for Germany and no significant interactions at all (Appendix A8).

One explanation for the good attainment of immigrant students in the Netherlands (also already gross) could be the phenomenon of "over-advising," which is widely documented in the Netherlands (Timmermans et al., 2018). Here, teachers provide immigrant students with better track recommendations than their native counterparts, given the same achievement level. However, these formal track recommendations are, as in the German context, relevant for the transition after primary education and not at this later transition studied here. Nevertheless, even at later transitions without formal track recommendations, teachers encouraging especially immigrant students to extend their education could still be influential. However, given that the trend of over-advising has been decreasing in the last years (ibid.), we do not assume that this phenomenon is of major importance for our results. Neither do we assume this to be the case in the German context, given that the phenomenon of (ethnic) over-advising after primary education is almost irrelevant here (for an overview: Diehl & Fick, 2016).

Nevertheless, attending upper secondary school does not necessarily imply completing it. We, therefore, need further comparative data on dropout in upper secondary education to investigate whether the opportunities for the different population groups to complete upper secondary education differ according to the education system. As outlined in the introduction, immigrants in Germany's stratified system who made ambitious educational decisions after lower secondary education have a higher risk of dropping out in upper secondary education (Dollmann & Weißmann, 2020). The question is, therefore, whether similar patterns can be observed in comprehensive systems, as suggested by the results of a study by Birkelund (2020) for Denmark. Further comparative research is needed to address this question in more detail. In such comparative analyses, however, it is important to consider that it is difficult to attribute differences (or similarities) in educational outcomes between different groups in different countries to specific characteristics of education systems, such as their level of stratification or selectivity. This study is no exception in this respect. There is so much variation between different countries in many other attributes besides the educational system (not to mention the differences between the educational systems beyond stratification and selectivity) that it is challenging to draw causal conclusions about educational systems from a rather broad macro-level comparison of only a few countries.

CONFLICTS OF INTEREST

The author declares no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data is available at the GESIS data archive for the social sciences, Cologne, Germany. Study number ZA5353 https://doi.org/10.4232/cils4eu.5353.3.3.0.

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ENDNOTES

[1] In contrast to the different alternatives after lower secondary education, anticipated discrimination at the entry to the labour market may play a role in all countries.

[2] For an overview of the different survey modes used in the different waves and countries and the respective response rates, see CILS4EU (2016a), CILS4EU (2016b), CILS4EU (2016c).

[3] For a comparison of the results with unimputed data, imputed data with and without deletion of cases on the dependent variable, see Appendix A1.

[4] We use ethnic origin as defined by students' or their parents' and grandparents' country of birth. For England, we have information on self-described ethnicity. Analyses using this group variable that are comparable to those presented in Figure 2 can be found in Appendix A3; they yield similar results.

[5] Within generations, however, the composition of the immigrant group is still likely to differ between the various countries, e.g., as a result of different migration waves from different sending countries. Therefore, the first generation in one country may comprise rather positively selected migrants, while in another country the first generation may rather consist of negatively selected immigrants.

[6] We are rather restrictive in our coding and include the Dutch HAVO in the reference category, although this diploma enables entering universities of applied sciences. Additional analyses with a less restrictive dependent variable show similar results (cf. Appendix A5).

[7] So far, we have treated Germany as a country with one education system, neglecting the differences between the different federal states. The analyses in Appendix A6 try to close this gap and provide more a more detailed picture.

[8] Although we only report the main effect for *educational* aspirations, we also control for *occupational* aspirations in this model.

REFERENCES

Birkelund, J. F. (2020). Aiming high and missing the mark? Educational choice, dropout risk, and achievement in upper secondary education among children of immigrants in Denmark. *European Sociological Review*, *36*(3), 395–412.

Boudon, R. (1974). *Education, opportunity, and social inequality. Changing prospects in western society*. Wiley.

Brinbaum, Y., & Cebolla-Boado, H. (2007). The school careers of ethnic minority youth in France. Success or disillusion? *Ethnicities*, *7*, 445–474.

Buchholz, S., & Schier, A. (2015). New game, new chance? Social inequalities and upgrading secondary school qualifications in West Germany. *European Sociological Review*, *31*(5), 603–615.

Buchmann, C., & Dalton, B. (2002). Interpersonal influences and educational aspirations in 12 countries: The importance of institutional context. *Sociology of Education*, *75*(2), 99–122.

Buchmann, C., & Park, H. (2009). Stratification and the formation of expectations in highly differentiated educational systems. *Research in Social Stratification and Mobility*, *27*(4), 245–267.

Busemeyer, M. R., & Jensen, C. (2012). The impact of economic coordination and educational institutions on individual-level preferences for academic and vocational education. *Socio-Economic Review*, *10*(3), 525–547.

CILS4EU. (2016a). *Children of immigrants longitudinal survey in four European countries. Technical report. Wave 1 – 2010/2011, v1.2.0.* : Mannheim University.

CILS4EU. (2016b). *Children of immigrants longitudinal survey in four European countries. Technical report. Wave 2 – 2011/2012, v2.3.0.* : Mannheim University.

CILS4EU. (2016c). *Children of immigrants longitudinal survey in four European countries. Technical report. Wave 3 – 2012/2013, v3.2.0.* : Mannheim University.

Cobb-Clark, D. A., Sinning, M., & Stillman, S. (2012). Migrant youths' educational achievement: The role of institutions. *The Annals of the American Academy of Political and Social Science*, *643*(1), 18–45.

Diehl, C., & Fick, P. (2016). Ethnische Diskriminierung im deutschen Bildungssystem. In C. Diehl, C. Hunkler, & C. Kristen (Eds.), *Ethnische Ungleichheiten im Bildungsverlauf* (pp. 243–286). Springer VS.

Dochow, S., & Neumeyer, S. (2021). An investigation of the causal effect of educational expectations on school performance. Behavioral consequences, time-stable confounding, or reciprocal causality? *Research in Social Stratification and Mobility*, *71*, 1–19.

Dollmann, J. (2016). Less choice, less inequality? A natural experiment on social and ethnic differences in educational decision-making. *European Sociological Review*, *32*(2), 203–215.

Dollmann, J. (2017). Positive choices for all? SES- and gender-specific premia of immigrants at educational transitions. *Research in Social Stratification and Mobility*, *49*, 20–31.

Dollmann, J. (2019). Educational institutions and inequalities in educational opportunities. In R. Becker (Ed.), *Research handbook on the sociology of education* (pp. 268–283). Edward Elgar Publishing.

Dollmann, J., Jacob, K., & Kalter, F. (2014). *Examining the diversity of youth in Europe. A classification of generations and ethnic origins using CILS4EU data* (Mannheimer Zentrum für Europäische Sozialforschung: Working Paper 156). : Universität Mannheim.

Dollmann, J., & Weißmann, M. (2020). The story after immigrants' ambitious educational choices: Real improvement or back to square one? *European Sociological Review*, *36*(1), 32–47.

Fekjær, S. N., & Birkelund, G. E. (2007). Does the ethnic composition of upper secondary schools influence educational achievement and attainment? A multilevel analysis of the Norwegian case. *European Sociological Review*, *23*, 309–323.

Feliciano, C. (2006). Beyond the family: The influence of pre-migration group status on the educational expectations of immigrants' children. *Sociology of Education*, *79*, 281–303.

Fernández-Reino, M. (2016). Immigrant optimism or anticipated discrimination? Explaining the first educational transition of ethnic minorities in England. *Research in Social Stratification and Mobility*, *46*, 141–156.

Griga, D., & Hadjar, A. (2014). Migrant background and higher education participation in Europe: The effect of the educational systems. *European Sociological Review*, *30*, 275–286.
Heath, A. F., & Brinbaum, Y. (2007). Explaining ethnic inequalities in educational attainment. *Ethnicities*, *7*, 291–305.
Heller, K. A., & Perleth, C. (2000). *Kognitiver Fähigkeits-Test (Revision) für 4. – 12. Klassen (KFT 4-12+ R)*. Beltz-Testgesellschaft.
Jackson, M. (2012). Bold choices: How ethnic inequalities in educational attainment are suppressed. *Oxford Review of Education*, *38*, 189–208.
Jackson, M. (Ed.). (2013). *Determined to succeed? Performance versus choice in educational attainment*. Stanford University Press.
Jackson, M., & Jonsson, J. O. (2013). Why does inequality of educational opportunity vary across countries? Primary and secondary effects in comparative context. In M. Jackson (Ed.), *Determined to succeed? Performance versus choice in educational attainment* (pp. 306–338). Stanford University Press.
Jackson, M., Jonsson, J. O., & Rudolphi, F. (2012). Ethnic inequality in choice-driven education systems a longitudinal study of performance and choice in England and Sweden. *Sociology of Education*, *85*, 158–178.
Jonsson, J. O., & Rudolphi, F. (2011). Weak performance – strong determination: School achievement and educational choice among children of immigrants in Sweden. *European Sociological Review*, *27*, 487–508.
Kalter, F., Heath, A. F., Hewstone, M., Jonsson, J. O., Kalmijn, M., Kogan, I., & van Tubergen, F. (2016). *Children of immigrants longitudinal survey in four European countries (CILS4EU) – Full version. Data file for on-site use*. GESIS Data Archive, Cologne, ZA5353 Data file Version 1.2.0.
Kalter, F., Kogan, I., & Dollmann, J. (2019). Studying integration from adolescence to early adulthood: Design, content, and research potential of the CILS4EU-DE data. *European Sociological Review*, *35*, 280–297.
Kao, G., & Tienda, M. (1995). Optimism and achievement: The educational performance of immigrant youth. *Social Science Quarterly*, *76*, 1–19.
Kristen, C., & Dollmann, J. (2010). Sekundäre Effekte der ethnischen Herkunft: Kinder aus türkischen Familien am ersten Bildungsübergang. *Zeitschrift für Erziehungswissenschaft*, *Special Issue*, *12*, 205–229.
Kristen, C., Reimer, D., & Kogan, I. (2008). Higher education entry of Turkish immigrant youth in Germany. *International Journal of Comparative Sociology*, *49*, 127–151.
Rudolphi, F., & Salikutluk, Z. (2021). Aiming high, no matter what?: Educational aspirations of ethnic minority and ethnic majority youth in England, Germany, the Netherlands and Sweden. *Comparative Sociology*, *20*(1), 70–100.
Ruhose, J., & Schwerdt, G. (2016). Does early educational tracking increase migrant-native achievement gaps? Differences-in-differences evidence across countries. *Economics of Education Review*, *52*, 134–154.
Simoes Lourêiro, K., Hadjar, A., Scharf, J., & Grecu, A. L. (2019). Do students' language backgrounds explain achievement differences in the Luxembourgish education system? *Ethnicities*, *19*, 1202–1228.
Timmermans, A. C., de Boer, H., Amsing, H. T. A., & van der Werf, M. P. C. (2018). Track recommendation bias: Gender, migration background and SES bias over a 20-year period in the Dutch context. *British Educational Research Journal*, *44*(5), 847–874.
Tjaden, J. D. (2017). Migrant background and access to vocational education in Germany: Self-selection, discrimination, or both? *Zeitschrift für Soziologie*, *46*, 107–123.
Tjaden, J. D., & Scharenberg, K. (2017). Ethnic choice effects at the transition into up-per-secondary education in Switzerland. *Acta Sociologica*, *60*, 309–324.
Triventi, M., Skopek, J., Kulic, N., Buchholz, S., & Blossfeld, H. P. (2020). Advantage 'finds its way': How privileged families exploit opportunities in different systems of secondary education. *Sociology*, *54*(2), 237–257.
Van de Werfhorst, H. G., & van Tubergen, F. (2007). Ethnicity, schooling, and merit in the Netherlands. *Ethnicities*, *7*, 416–444.
Weiß, R. H. (2006). *Grundintelligenztest Skala 2 (CFT 20)*. Hogrefe.
White, I. R., Royston, R., & Wood, A. M. (2011). Multiple imputation using chained equations: Issues and guidance for practice. *Statistics in Medicine*, *30*(4), 377–399.

SUPPORTING INFORMATION

Additional Supporting Information may be found online in the Supporting Information section.

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