Ethnicity and education in England: ethnic differentials in academic progress, expectations and choices

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Aos meus pais, por tantas cousas

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Abstract

This dissertation focuses on the ethnic inequalities in education in the English context. It is structured in three main thematic sections, each of which aims at answering different though highly connected research questions. Firstly, I analyse the ethnic differentials in academic progress during the last two years of compulsory education from a dynamic perspective. This way, I am able to identify the changes in relevant behaviours and attitudes linked to academic performance that take place during those years. Secondly, I pay attention to the differentials between ethnic minorities and the White British majority in the evolution of their expectations of applying to university. In particular, I analyse how students adapt their initial expectations reported at age 13/14 to the grades obtained at the end of compulsory schooling at age 15/16. Finally, the research goal of the last part of the dissertation is to examine the educational trajectories of ethnic-minority students in England, taking White-British natives as the reference group for comparison. In this regard, I focus on two key transition points: when students start post-compulsory secondary education and when they enter university.

Resumen

Esta tesis doctoral se centra en las desigualdades educativas entre grupos étnicos en el contexto inglés. En este sentido, está estructurada en tres grandes bloques temáticos, cada uno de los cuales intenta responder diferentes, aunque relacionadas, preguntas de investigación. En primer lugar, se analizan los diferenciales de progreso académico entre las minorías étnicas y la mayoría nativa blanca durante los dos últimos años de la educación obligatoria. Adoptando una perspectiva dinámica, se tratan de identificar los cambios en los comportamientos y actitudes relacionadas con el rendimiento académico que se tienen lugar durante estos años. En segundo lugar, se presta atención a las diferencias entre las minorías étnicas y la mayoría blanca en la evolución de sus expectativas de ir a la universidad. En este sentido, se analiza cómo las minorías étnicas tienden a mantener estables sus ambiciones educativas independientemente de su rendimiento

académico. Finalmente, el objetivo de la investigación de la última parte de la tesis es analizar las trayectorias y transiciones educativas de las minorías étnicas, tomando a los nativos blancos como grupo de referencia.

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CHAPTER 1

INTRODUCTION

1.1. Ethnic inequalities in education

The educational achievement of minorities of immigrant origin has received great attention in the sociological literature during the last two decades, both in Western Europe and in the US. Even though the theoretical perspectives developed to study the integration process of immigrant individuals and their offspring vary depending on the national context, most scholars have used the differentials in educational attainment with the native majority group as an indicator of the integration of immigrant minorities, particularly of the second-generation (Crul & Vermeulen, 2003; Anthony Heath & Brinbaum, 2007; A. F. Heath, Rothon, & Kilpi-Jakonen, 2008; Portes & Rumbaut, 2001, 1996). This is so because educational achievement is recognized as the most important mediating factor favouring the process of upward social mobility (Blau & Duncan, 1967; Erikson, Goldthorpe, Jackson, Yaish, & Cox, 2005; Platt, 2011). Therefore, if immigrant and/or ethnic-minority students lag behind the native majority in their educational achievement, it is likely that they will be disadvantaged in the labour market, reproducing or even worsening the subordinate labour market position that is usually occupied by the first-generation (Massey et al., 1993; Piore, 1979).

Classical assimilation theories had predicted that immigrants' educational attainment would increase over generations to the point of becoming indistinguishable to that of natives, meaning that the variables reflecting their immigrant status and ethnicity would become

irrelevant for explaining their academic performance and educational trajectories. However, recent studies have shown that the assimilation process in education has not taken place for all the minorities of immigrant origin. For example, second and even third-generation Black Caribbean students in England are still significantly disadvantaged in education compared to the White British group (Demack, Drew, & Grimsley, 2000; Haque & Bell, 2001; Strand, 2012). In contrast, other minorities perform on average considerably better than the native majority, as is the case of Indians in the UK or Chinese in the US, which are both considered 'model minorities' due to their economic and educational success. These differentials have led to a huge body of literature that have tried to disentangle the mechanisms behind the 'success' and 'failure' of immigrant minorities. In this respect, some scholars have found that most of the educational advantage or disadvantage of minority students compared to individuals of the native majority disappears once proper structural controls are introduced in the model (Brinbaum & Cebolla Boado, 2007; Kao & Thompson, 2003; van Ours & Veenman, 2003). In those cases, the mechanisms accounting for the educational performance and academic trajectories of ethnic minority students would be similar to those of native majority individuals from the same socio-economic background. That is, the structural position of immigrant/ethnic minorities would explain their advantage or disadvantage relative to the native majority. In the English case, the main ethnic minorities differ significantly in their socio-economic and demographic profiles, which reflect their diverse geographical origins and the specific characteristics of their migration flows (Peach, 1998). For example, the proportion of individuals with university degrees is extremely low in the Pakistani and the Bangladeshi minorities whereas it is higher than the average population among Black Africans or Indians. Therefore, it is clear that at least part of the observed differences between ethnic minorities and the native majority in several educational outcomes should be related to differences in structural conditions between them. In England, the ethnic differentials in academic performance as well as in educational trajectories cannot be entirely explained by the usual background variables that are considered in models of educational stratification, such as parental

social class or educational qualifications. In this respect, the main objective of my dissertation is to account for the ethnic minorities' differentials in education that are not accounted by their socio-economic status in the English society.

1.2. The research questions and their relevance

The dissertation is structured in three main thematic sections, each of which aims at answering different though highly connected research questions. The first section has as its starting point an empirical finding that has puzzled English scholars in recent years(D. Wilson, Burgess, & Briggs, 2005a), namely the fact that some ethnic minorities are able to close or, at least, to reduce the gap in educational attainment with the White British group during the last years of compulsory schooling. Ethnic inequalities in education are particularly wide in early childhood (Hansen, Joshi, & Dex, 2010) but these are, though still significant, notably reduced by the time students finish compulsory education at the age of 16. Why is that the case? In order to answer this question I focus on the academic progress in English and Maths that students of different ethnic backgrounds made from age 13/14, when they start the last stage of secondary education, until age 15/16, when they finish it. To do this, I use a longitudinal dataset, the *Longitudinal Study of Young People in England* (LSYPE), in order to identify the changes in behaviours and attitudes linked to academic performance that occur during those years. My research approach is, therefore, dynamic.

With regard to the second section of my dissertation, the research question that I seek to answer is linked to one the empirical findings of the first section, that is, the relevance of the high and stable educational expectations in understanding the strong academic progress of some ethnic minority students during the last stage of compulsory schooling. Indeed, the relationship between educational expectations and academic achievement has been a major issue in the literature of educational stratification since the development of the Wisconsin model of status attainment (Haller & Portes, 1973; Sewell, Haller, & Portes, 1969a). Moreover, the educational expectations of

immigrant minorities have received attention due to their ambitious academic plans, something that has been sometimes explained in terms of their 'immigrant optimism' (Kao & Tienda, 1995, 1998). The approach to the second section of the dissertation is, as in the first case, also dynamic, since the main goal is to explain differentials between ethnic minorities and the White British majority during adolescence in the evolution of the expectations of applying to university. In particular, I analyse how students adapt their initial expectations reported at age 13/14 to the grades obtained at the end of compulsory schooling at age 15/16. This question has hardly been tackled by other researchers, despite the relevance that expectations have for future educational inequalities. Indeed, very few studies have had students' educational expectations as their dependent variable for the empirical analysis, though there have been some recent exceptions (K. Alexander, Bozick, & Entwisle, 2008; Andrew & Hauser, 2011; Minello & Barban, 2012; Teney, Devleeshouwer, & Hanquinet, 2013). The findings of this part show that, on average, ethnic minority students conform to a lesser extent to rational action assumptions than White-British students, since their beliefs about their future educational trajectories are not as connected to their level of attainment as in the White-British group. In contrast, it appears that a socio-psychological approach is more able to explain the evolution of expectations of minority students.

Finally, the research goal of the last part of the dissertation is to examine the educational trajectories of ethnic-minority students in England, taking White-British natives as the reference group for comparison. In this regard, I focus on two key transition points: firstly, when students finish compulsory school at the age of 16 and they have to decide among three alternative options: either leaving full time education, enrolling in vocational education, or doing A-levels, which represents the traditional academic option. And secondly, when students finish post-compulsory secondary education at the age of 18 or 19 and have to decide whether to leave education, to continue in non-university Higher Education, or to go to university. In addition, I also differentiate between students that go to universities from the Russell Group (high-tier institutions) and those that go to other

universities. It is important to make the distinction between high and low tier universities given the high level of stratification of the English higher education system.

My research shows that not only ethnic minority students, particularly South-Asians and Black-Africans, are more likely to continue in education at age 16 compared to White-British students, but they are also more prone to choose the academic alternative than the reference group (controlling for prior attainment and family socioeconomic background). In addition, ethnic minority students are more likely to enrol in non-university higher education instead of dropping-out, and to go to university over other higher education diplomas. However, all ethnic minority groups are less likely to attend prestigious universities from the Russell Group than White-British students, controlling for the previous transition and relevant background factors.

CHAPTER 2

ENGLAND [1] AS THE CASE FOR THIS STUDY AND DATA USED FOR THE EMPIRICAL ANALYSIS

2.1. The debate on ethnicity and education in England

The academic achievement of individuals of immigrant origin started receiving considerable attention by both policymakers and academics in the late 1970s, when special committees were appointed by the government to look into the causes of disadvantage in education for non-White students. The *Rampton Report* (1981), 'West Indian children in our schools', which focused particularly on Black Caribbean children's disadvantage, was the interim report of the influential *Swann Report* (1985) 'Education for all'. The *Committee of Enquiry into the Education of Children from Ethnic Minority Groups*, appointed by the government, was in charge of the *Swann Report*, which had an enormous impact on the debate over the educational disadvantage of ethnic minority pupils. The policy recommendations of the report called for a change in the attitudes and behaviours of the whole of British society in order to take into account its ethnic pluralism (Swann Report, 1985). The report explicitly recognised the

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[1] The LSYPE, which is the main dataset used for the empirical analysis, follows a representative sample of students that were age 13/14 in 2004 and were living in England. That is, no students were sampled from Wales, Scotland and Northern Ireland. As a consequence, my case study is England and not Great Britain or the UK.

existence of racism and its role in hampering the educational success of ethnic minority students, particularly Black Caribbean children. In addition, the Committee urged all schools to embrace cultural diversity and to actively include it in the academic curriculum. Even though the Minister of Education at the time, the Conservative Sir Keith Joseph, gave little support to the conclusions of the Committee, the *Swann Report* had a great impact on the research in the sociology of education in England. As a matter of fact, since the late 1970s, a considerable amount of investigation has focused on the mechanisms through which racism operates at the school level and on how it affects the performance of ethnic minority children, particularly Black Caribbean boys, as they were the group experiencing most discrimination.

Until the 1980s and the beginning of the 1990s, the majority of scholars in this area tended to follow an ethnographic and interactionist approach, and in the main, were carrying out case studies (Stevens, 2007). The preference for qualitative small-scale research was not only based on purely ontological and epistemological reasons but also on pragmatic ones, since there were no large-scale datasets at the time that made the study of the educational trajectories of ethnic minorities possible. Moreover, researchers were mostly interested in the identification of mechanisms and microprocesses that could explain ethnic inequalities in education, and the possibilities of doing that type of research using large-scale representative data were extremely limited.

Since the mid-1990s, these qualitative case studies have been subject to important methodological critiques concerning the validity and reliability of their conclusions (Foster & Hammersley, 2000). In addition, the availability of new large-scale surveys from 2000 onwards, has made possible more refined analyses of the educational attainment of ethnic minorities using representative data of the English population.

2.2. Large-scale surveys and the study of ethnicity and education in England and/or in the UK

The first large-scale studies conducted to analyse the situation of ethnic minorities were those carried out by the *Political and Economic Planning Group*, which in 1978 became the *Policy Studies Institute* (PSI) (Modood & Berthoud, 1997). The first two PSI surveys, conducted in 1966 and 1974, were not representative of the whole population. The third one, from 1982, was fully representative of England and Wales but did not allow separate analyses for each ethnic group since all ethnic minority individuals were put together in the same 'non White' category. This reflected the dominant dualistic perspective of the time, which tended to ignore inter-ethnic differences by stressing their commonalities, such as their non-white skin colour and their immigrant background (Modood, 1994). The fourth PSI survey (1994) sampled individuals that were age 16 or older and was also representative for the English and Welsh population. The survey design was made up of two independent samples, one for the ethnic minority population and the other for the White population, with the former differentiating between three main minority groups: Caribbeans, South Asians (including African Asians), and Chinese (Smith, 1997). The Fourth PSI survey made a considerable effort to analyse separately the position of each ethnic minority in British society and to describe the commonalities and particularities of each of them. The survey covered multiple areas of interest such as housing, education, labour market, health, and identity issues. However, the picture, though informative, was inevitably static since individuals were only surveyed once.

In terms of educational achievement, the Fourth PSI survey provided new empirical evidence about the gaps in the level of education between ethnic minorities and the White British majority, as well as between age cohorts. Some of the observed variations could be related to differences in the average time of arrival of each ethnic group on the one hand, and/or to the human capital composition of each migration

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flow on the other; for example, a quarter of Indian and Chinese first-generation immigrants arrived to the UK with university qualifications, while less than 10% of immigrants coming from Pakistan and Bangladesh were similarly qualified. Nevertheless, the Fourth Survey evidenced the improvement of educational achievement across age cohorts for all ethnic groups. As expected, the main differences were found between first and second-generation individuals (Modood, 2005). Despite all the valuable information that the Fourth PSI survey provided about the ethnic differentials in educational qualifications, it could not really tell much about why and how inequalities still remained for the second or third generations.

At the start of the twenty-first century, the *Youth Cohort Survey* (YCS) first, and the *Millennium Cohort Study* (MCS) and the *Longitudinal Study of Young People in England* (LSYPE) later, made the study of life-course events of ethnic minority children and adolescents possible for the first time. More recently, the ambitious household longitudinal study *Understanding Society* has started collecting data on a wide range of issues affecting ethnic minority families, including their migration history.

In addition, from 2002, the Department of Education started an annual census to collect information about all English state schools and their student's performance as they progress through the four key stages of compulsory education. These new sources of data are The *Pupil Level Annual School Census* (PLASC) and the *National Pupil Database* (NPD). The two datasets are linked and represent a unique source of information for sociologists of education and policy practioners[2]. The PLASC used to provide yearly data on a great variety of school characteristics such as socio-economic and ethnic composition or average performance at each key stage of the student body, among others. The NPD tracks all students during all stages of compulsory education, collecting detailed information about their performance, making the measurement of academic progress from age 6 to 16

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[2] Since 2007 a new School Census dataset replaced the PLASC. The reason for this name change was related to the decision to collect the data three–times-a-year instead of only once (Administrative Data Liaison Service, 2013).

possible for the first time. The NPD also gives some basic individual information about students' socio-demographic characteristics such as their sex, ethnicity, language, disability or entitlement to Free School Meals (FSM). Moreover, there is scope for linking in the NPD/PLASC with other datasets or surveys like the YCS, the MCS, or the LSYPE. To sum up, the possibilities of researching into the causes of ethnic minorities' disadvantage in education have increased considerably with the availability of these new longitudinal surveys and schools' administrative census data.

2.3. Immigrants or ethnic minorities?

Since the beginning of the 1980s, following the recommendations of the *Race Relations Act of 1976* (amended in 2000), public authorities have progressively started collecting statistical data on ethnicity in order to monitor the living conditions of ethnic minorities and to measure the impact of various public policies on them. In fact, information about ethnicity has regularly been collected from all kinds of administrative and survey data since 1991, when a question about the ethnicity of the respondent was included in the census for the first time [3]. In this respect, UK scholars and public authorities have generally preferred to use the term 'ethnic groups' to refer to the communities formed by individuals sharing a similar migration background.

As pointed out by Simpson and Akinwale, current official statistics and the Census use a single classification to measure a varying combination of racial, ethnic and country of origin characteristics to classify individuals into ethnic groups, such as 'Black Caribbean' or 'Indian' (Simpson & Akinwale, 2006). However, religion has not been considered as another dimension in the categorisation of ethnicity. This exclusion could be important only if religion is the most relevant identity trait for some minorities instead of their country of origin,

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[3] The censuses of 1971 and 1981 only included a question about the respondent's country of birth. In 2001 the number of ethnicity categories increased with the addition of the 'Mixed' and new 'White' categories.

their language or their racial features. This exclusion means that religious minorities are not overrepresented in surveys, which tend to choose ethnicity as one of the main criterion for the sampling design. While some ethnicities are homogenous in terms of religion, such as Pakistanis or Bangladeshis, this is not the case for others such as Indians, who identify themselves as Hindus, Sikhs or Muslims, or Black Africans, most of whom are Christians or Muslims.

The within-ethnic-group heterogeneity in terms of country of origin also varies widely across minorities. For example, the 'Black African' ethnicity label is applied to all black individuals born (or whose parents were born) in any of sub-Saharan country, though the largest national groups are those coming from Nigeria, Ghana, Zimbabwe, Somalia and Kenya (Owen, 2008).

The tendency to stress ethnicity over migration is related to the way in which British scholars and government authorities have historically framed the inequalities between minorities of immigrant origin and the White British population in various areas of interest (e.g. education, labour market, health). Even though the theoretical approaches have been very diverse, most of the studies have concentrated on ethnicity or race, and not on migration-related variables in order to understand the roots of ethnic inequalities. That has been so because the existence of ethnic inequalities have been regarded as a consequence of the racial discrimination that non-White immigrants faced once they settled in England. Indeed, the negative effects of institutional racism on the educational achievement of ethnic minority students have been one of the main concerns of sociologists of education in England (D. Gillborn & Mirza, 2000a; D. Gillborn, 1998; David Gillborn, 1997). Discrimination has certainly been an important factor in understanding the life chances of ethnic minorities, but the impact of other variables that are not necessarily related to their ethnicity or their race, understood in terms of culture, religion or physical traits, have been overlooked. For example, theories about immigrant selection and immigrant incorporation have been quite marginal and, as a consequence, most surveys have not collected detailed data on these

issues until very recently[4]. In this regard, basic questions that would permit the identification of respondents as immigrants from the second, third, or fourth generation are not always included, even though empirical research has given evidence of the impact of the immigrant generation in several outcomes; for example, LSYPE includes a question about the students' country of birth but not about their parents' country of birth or their year of arrival in the UK. In addition, ethnicity and not immigrant generation is always the criteria used for oversampling minorities in English and/or UK surveys and, therefore, the usually low numbers of first-generation individuals among some ethnic groups do not allow detailed statistical analyses.

2.3.1. Ethnic minorities analysed in the dissertation

The empirical analyses of this dissertation consider five of the six ethnic minorities that were oversampled in the LSYPE (Indians, Pakistanis, Bangladeshis, Black Caribbeans and Black Africans). That is, I do not focus on other minorities such as the Chinese, the Polish or the White Irish since the number of these cases is very low. In addition, a sub-group of the Mixed ethnicity minority (those with a white and a black parent) were included in the analysis as an additional ethnic group, though they were not oversampled as such. Students that were labelled in the PLASC 2004 as Mixed are heterogeneous in terms of their parents' ethnicity, the largest groups being those with a white and a black parent on the one hand, and those with a white and an Asian parent on the other. In this regard, half of the students born to a white and a black parent in the LSYPE are children of white single mothers who have no (or hardly any) contact with their biological black fathers. In contrast, most students born to a white and an Asian parent live in intact families. With regard to students' educational

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[4] Currently, the European project *Children of Immigrants Longitudinal Survey in Four European Countries* (CILS4EU), including the United Kingdom, has collected information to build measures of educational selectivity of the migration flow similarly to those proposed by Feliciano for the US (Feliciano, 2005). In addition, the new household longitudinal study *Understanding Society* includes multiple questions aimed at capturing the migration history of household members and their relationships with other migrants.

attainment, the two Mixed ethnicity groups perform significantly different, with Mixed Black students underperforming and Mixed Asian students overperforming during compulsory education compared to White British students. For these reasons, I have decided not to use the usual Mixed ethnicity category that includes all students with parents of different ethnicities. In contrast, I have built a new category that only includes Mixed students born to a white and a black parent, since they are the largest group among the Mixed ethnicity minority. As a consequence, I use the terms 'Mixed' or 'Mixed Black' indistinctively to refer to this particular group in the Mixed ethnicity category.

I have mainly relied on parents' self-placement on the sixteen-point ethnicity scale to assign students to each ethnic category, though students' self-placement has also been used for validation purposes. In this respect, having both sources of information has reduced the number of missing values in the final variable on students' ethnicity, as parents' answers were used when those of students were missing and vice versa. Therefore, for the construction of students' ethnicity, I built a variable solely based on parents' ethnic self-identification. Afterwards, the resulting variable was compared with the answers given by students in the same question. The comparison revealed few inconsistencies between parents and students answers and almost all them were found in the Mixed Black and the Black Caribbean group. For example, students with a white and a black parent sometimes identify themselves as Black and not as Mixed ethnicity. Those cases were assigned to the Mixed (white and black) category. In addition, few students identified themselves as 'Other Black background' but they were reassigned to the Black Caribbean category if they had at least one Black Caribbean parent.

The White British ethnic majority is the reference group in the empirical analyses. In this respect, White British students are only those whose parents identify themselves as White British. Therefore, white students with different origins, mainly from Ireland or continental Europe, are excluded from the reference group and they are included in the 'other ethnicity' category.

With regard to the terminology, I use the terms 'ethnic minorities' and 'immigrant minorities' indistinctively. Nevertheless, it is important to bear in mind that, although the main ethnic minorities in England all have an immigrant background, the timing of their arrival varies considerably and, consequently, the percentage represented by the first generation within each minority also varies (Dustmann, Frattini, & Theodoropoulos, 2011).

2.4. Migration to England after the Second World War

As pointed out by Castles and Miller, international migrations have grown in volume and changed in character since the end of the Second World War (Castles & Miller, 1993, p. 67). While in many European countries the migration flows started with the implementation of guest worker systems, the post-war migration to the UK[5] was dominated by the arrival of immigrants from former colonies (Pakistan, India, Jamaica and other Caribbean countries). In contrast to the guest-worker system, very few of these migrants were recruited through government or employers (Hatton, 2005).

The authorities tried to restrict non-white migration coming from the New Commonwealth[6] countries even though the British Nationality Act 1948 give the right of migration to all subjects of the Crown (Hatton & Wheatley Price, 2005). Indeed, there was an increasing concern among politicians about the negative impact of non-white migration on the British 'national identity' (Schain, 2008). As a

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[5] Even though my case study is England and not the UK, the whole immigration policy is the competence of the UK government.
[6] The term New Commonwealth was used in the UK to refer to the countries that gained independence from the British Empire after the Second World War and included India and Pakistan, and all the former colonies from the Caribbean and from sub-Saharan Africa except South Africa. In contrast, the Old Commonwealth refers to former British colonies gaining independence at the end of the nineteenth century and beginning of the twentieth century, such as Canada, Australia, New Zealand, South Africa or Ireland.

consequence, migration from the former colonies was finally restricted with the Commonwealth Immigrants Act of 1962[7], though migration continued mainly through family reunification (Hatton & Wheatley Price, 2005). The Commonwealth Immigrants Act of 1968 and the Immigration Act of 1971 maintained the restrictions on non-white migration and the free-to-enter of white immigrants from the Old Commonwealth. Nevertheless, non-white migrants from the former colonies that managed to enter the UK still had preferential treatment compared to those coming from other foreign countries. Finally, the British Nationality Act of 1981 defined a unique category of British citizens with free entry to the UK, which was mainly restricted to those born in the UK. Even though there was no mention of race, the legislation it made much easier to enter and to acquire citizenship for those born in the Old Commonwealth and it made it more difficult for citizens of the New Commonwealth, who were mainly non-white (Schain, 2008).

[table 2.1 about here]

Table 2.1 shows estimations of the percentages that Old Commonwealth, New Commonwealth and foreign country migrants represented in the UK population in 1931, 1951, 1961 and 1966. It can be seen how the presence of foreign and New Commonwealth immigrants, mostly coming from South Asia and the Caribbean, increases considerably across those decades. In contrast, the presence of white migrants from the Old Commonwealth remained quite stable. Most of the Caribbean migration occurred between 1955 and 1964, while the migration flows from India and Pakistan were concentrated between 1965 and 1974 (Dustmann et al., 2011). It is important to note that Bangladesh was, until the civil war of 1971, part of Pakistan and therefore, it is likely that a fraction of Pakistani migrants arriving to UK before that year were from the region that is now Bangladesh.

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[7] The Commonwealth Immigrants Act 1962 denied free access to the UK to British subjects with passports issued under the authority of the Colonial Government in any of the colonies. They were still considered British citizens but their admission became dependent on labour skills and labour shortages (Schain, 2008).

The migration flows coming from India from the 1950s until the 1970s included a large percentage of doctors. After the Second World War, British medical schools were unable to fill all the positions in the recently created National Health Service (NHS). As a consequence, public authorities allowed the recruitment of doctors from the New Commonwealth countries, most of whom came from India (Robinson & Carey, 2000). In fact, some authors estimated that 40% of work permits issued to migrants from the New Commonwealth went to doctors (Gish, 1971). The fact that most doctors came from urban areas in India and not from Pakistan or Bangladesh reflected the different levels of development of those countries. Indeed, most Pakistani and Bangladeshi migrants fitted the profile of low-skilled guest workers in continental Europe. The same can be said about the migration flows from the Caribbean countries, mainly from Jamaica.

With regard to the Black African minority, the main flows took place at the end of the 1990s and the beginning of the 2000s, though Black African migration flows started after the independence of African colonies in the 60s. Currently the largest national groups among Black Africans are from Nigeria, Ghana, Somalia and Zimbabwe. Asylum was a major cause of recent Black African migration, with a total of 171,500 asylum applications from African applicants over the period 1998-2007. The largest individual source of applications came from Somalia, Zimbabwe, Congo and Democratic Republic of Congo and Nigeria (Owen, 2008). In addition to asylum applications, many African migrants arrived with work permits, reflecting the increase in recruitment of African nurses and doctors during these years. This fact explains, as in the case of Indians, why the percentage of graduates among Black Africans in England is higher than among the White British population.

[table 2.2 about here]

In 2011, immigrants from the new EU countries, grouped under the ethnicity category 'White Other' constituted the largest minority in England (see table 2.2). Indeed, the migration flows from the new EU

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countries have increased rapidly after the enlargement of the EU in 2004, particularly those from Poland and Lithuania (Blanchflower, Saleheen, & Shadforth, 2007). Therefore, it is not surprising that 85% of these individuals are first-generation immigrants, compared to 57% of Indians, 48% of Bangladeshis, 44% of Pakistanis and 40% of Black Caribbean.

2.5. Demographic and socio-economic profile of the main ethnic minorities in England[8]

In this section I describe the demographic and socio-economic profile of the households of children of different ethnicities age 13/14 living in England. Even though this description reflects the different profiles of the main ethnic groups, the numbers do not necessarily match those of the Census, since the LSYPE sample is not representative of all English households.

[table 2.3 about here]

As shown in table 2.3, the proportion of first-generation immigrants in the cohort of students born in 1989/90 varies significantly across ethnic minorities. The percentages differ from those of table 2.1., since the latter refer to the whole English population in 2011 and those in table 2.3. are representative of the population of individuals age 13/14 in 2004. The Black African group has the largest group of immigrant children (55%). This is expected, since the main migration flows from the sub-Saharan countries occurred at the end of the 1990s and beginning of the 2000s (Owen, 2008). For the other ethnic minorities, the percentage of first generation immigrants is comparatively low: 16% among Bangladeshis, 13% among Pakistanis, 12% among Black Caribbean, and 9% among the Indian and Mixed groups. Unfortunately, it is not possible to distinguish between the second and higher generations, as the LSYPE does not provide data about the parents' place of birth or year of migration.

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[8] The estimations of the demographic and socio-economic indicators that are described in this section have been calculated by the LSYPE sample, taking into account the survey design.

As seen in table 2.3, there are significant differences in the average living conditions of students of different ethnicities. Firstly, in terms of the *Income deprivation affecting children* index (IDACI), ethnic minority students tend to live in geographical areas with a higher percentage of children under the age of 16 living in low-income households compared to White British students[9]. This is particularly so for Bangladeshis and Black Africans, both with an average IDACI score of 0.4 compared to an average score of 0.2 for White British students. In terms of the area of residence, some ethnic minorities are particularly concentrated in the London metropolitan area, especially Black Africans, with 70% of students living there. In addition, there are many students living in Greater London - Black Caribbean, with 61%, Bangladeshis, with 51%, Indians, with 42%, and Mixed Black, with 29%. In contrast, 83% of Pakistanis students live outside the capital, particularly in the urban areas of north-western England, the Midlands and Yorkshire and the Humber such as Birmingham, Manchester or Bradford (Peach, 1998) The percentage of White British living in Greater London is significantly lower (8%), as the White British population is more evenly distributed across England than ethnic minorities. Within the urban areas, ethnic minorities also tend to be concentrated in deprived neighbourhoods (Hatton & Wheatley Price, 2005).

In terms of household structure, a high percentage of Black Caribbean (59%), Mixed (46%) and Black African (35%) students live in single-parent households. In addition, more than half of these students in the Mixed and Caribbean group have been living in living in single-parent households since they were born. In most cases, these children do not have any contact with their biological fathers. It is likely that these fathers did not plan their parenthood and they did not participate, or

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[9] The *income deprivation affecting children* index gives the proportion of children living in income deprivation in a certain area. According to the Department for Communities and Local Government, deprived households are those receiving either Income Support, income-based Jobseeker's Allowance or Pension Credit (Guarantee) or those not in receipt of these benefits but in receipt of Child Tax Credit with an equalized income (excluding housing benefits) below 60% of the national median before housing costs.

only very marginally, in their offspring's upbringing. In contrast, very few South Asian students live in single-parent households (14% of Pakistanis, 11% of Indians and 6% of Bangladeshis), while the White British group is in a middle position (18%).

The average number of dependent children living in the household, defined as those under the age of 16 or those of 17 or 18 that do not work, also varies significantly across ethnicities. Bangladeshis, Pakistanis and Black Africans stand out for being the ethnic minorities with the highest average number of dependent children per household (3.5, 3.1 and 3), compared to an average of 2.2 for the White British majority. For the other minorities, the average number resembles more that of White British households.

There is also great variation across ethnicities in the distribution of educational qualifications of students' mothers[10]. In this respect, the distribution for Mixed and Caribbean mothers resembles that of White British mothers, with the mode being those with intermediate education (A levels or 5 A*-C GCSEs). Nevertheless, the percentage of educated mothers is higher among the Black Caribbean group (34%) compared to the reference group (25%). The distribution of qualifications for Indian mothers is more skewed towards the non-educated (40% with no formal qualifications) though it is not as extreme as for Pakistani or Bangladeshi mothers, the majority of whom have no formal education. The case of the Black African group is different to the rest, as the distribution of qualifications is bimodal, with an extremely high percentage of educated mothers (36%) and of mothers with no qualifications (41%). As mentioned in the previous section, this is likely to reflect the different migration flows coming

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[10] The categories of the original variable measuring educational qualifications have been simplified into the following four categories: the first one includes individuals with a university degree and/or higher education below degree level. The second category are those with A levels and/or 5 A*-C GCSEs or equivalents. The third category includes individuals with level 1 qualifications and below or other vocational qualifications. And finally, the last category only includes those with no qualifications. Overseas qualifications have also been translated into equivalent English qualifications in the categorisation even if they are not officially recognised by the government.

from sub-Saharan African countries, composed mainly of asylum seekers and highly qualified professionals.

In terms of labour force status, Pakistanis and Bangladeshis stand out for being the minorities with the highest percentages of mothers that are looking after the household and are not in paid work (80% and 90%). In contrast, the Caribbean minority has the highest percentage of mothers working in full-time jobs (51%), compared to only 35% of White British mothers. This is expected, as 34% of Caribbean mothers consciously decided to be single-parents and, therefore, they are the *de facto* head of the household. In addition, some authors have pointed to a tradition of female independence in Afro-Caribbean societies that might explain both phenomena (single-parenthood and female participation in the labour market) (Peach, 1998). With regard to the fathers' labour force status, it is worth mentioning the case of the Pakistani and Bangladeshi minorities, both with a high percentage of fathers that do not work due to their limiting disability (17% of Pakistani fathers and 31% of Bangladeshi fathers).

With regard to educational homogamy, the ethnic minorities with the highest percentage of students with parents with the same level of education are the Pakistani, the Bangladeshi and the Black African. However, this homogamy is concentrated among the highly educated for Black Africans while for Pakistanis and Bangladeshis, it takes place among those with no qualifications, as the proportion of non-educated adults is extremely high among these two South Asian communities, especially the Bangladeshi. The case of the Black Caribbean minority is, again, different to the rest, as 34% of students have mothers that are more educated than their fathers, while this is only 24% in the White British majority.

In terms of students' household socio-economic status[11], I have used the dominance method to assign to the household the social class of

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[11] In most surveys since 2001, including the LSYPE, the socio-economic status of individuals is operationalised using the *National Statistics Socio-economic Classification* (NS-SEC), which follows the Goldthorpe social class schema

the member with the highest socio-economic status. For most ethnicities, including the White British, this is usually the social class of the father, except for the Black Caribbean and the Mixed minorities. In this respect, 44% of Mixed, Black Caribbean and Black African students live in households where at least one of the parents is in a managerial or professional occupation. This percentage is slightly lower among Indian students (37%). In contrast, only 18% of Pakistani and 9% of Bangladeshi students live in households where at least one member is in a managerial or professional occupation. Moreover, 18% of Pakistanis and 26% of Bangladeshis live in households where the adult members are unemployed or do not work, a significantly higher percentage than among White British (2%), Indian (4%) or Black Caribbean households (5%).

The extremely skewed distributions of parental educational qualifications and household socio-economic status of the Pakistani and Bangladeshi minorities could have been a problem when attempting to control for these factors in the statistical analyses. Nevertheless, both minorities have cases in the top categories of the distributions[12]. Unfortunately, the qualifications and socio-economic status of ethnic minority parents that are first generation immigrants might not be entirely comparable to those the White British. In these cases, the reference group would be the non-immigrant individuals in their country of origin and not White British natives. It is for this

(Erikson & Goldthorpe, 1992). The eight analytical social classes from the original scale have been collapsed into the following five categories:
- Classes I and II: higher/lower managerial, administrative and professional occupations.
- Classes III and IV: intermediate occupations, small employers and own account workers.
- Class V: Lower supervisory and technical occupations.
- Classes VI and VII: semi-routine and routine occupations.
- Class VIII: never worked and long-term unemployed.

[12] With respect to parental level of education, there are 138 Pakistani and 37 Bangladeshi households (18% and 6.5% of the households within each ethnic group) where at least one parent has a degree or a higher education qualification below degree level. In terms of socio-economic status, 141 Pakistani and 52 Bangladeshi households (15% and 8% of the households within each ethnic group) have at least one parent in the classes I or II according to the NS-SEC scheme.

reason that standard measures of social background used in surveys do not appear to have the same explanatory power for immigrants as they have for natives (A. F. Heath et al., 2008). The ideal would be to have an indicator of the educational selectivity of each migration flow, since immigrants tend to be more qualified than the average in their country of origin even if their qualifications are below the average in the destination country. Unfortunately, the LSYPE does not give information about parents' year of arrival to the UK and, therefore, it is not possible to calculate any measure of selectivity for each minority.

2.6. Data used for the empirical analysis

This dissertation uses the LSYPE and the NPD/PLASC as the two main sources of data for the empirical analyses.

2.6.1. The Longitudinal Study of Young People in England (LSYPE)

The LSYPE is a major longitudinal study that follows a cohort of 15,770 students born between 01/09/1989 and 31/08/1990. They were sampled in February 2004, at the age of 13/14 and they were followed until the year 2010, when they were age 19/20[13].

A two-stage probability proportional to size (PPS) sampling procedure with a disproportionate stratification sector was adopted for the state (public) school sector. Schools were the primary sampling units (PSUs), and they were stratified in deprivation stratums. Those in stratums with high levels of deprivation were oversampled by a factor of 1.5 (Department for Education, 2011a, p. 7). In the second stage, students were sampled within schools. Those from the main ethnic minority groups were oversampled to achieve a number of 1000 in each group. According to the Department of Education, all students of

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[13] Grade retention is almost non-existent in England and, therefore, all the sampled students had the same age and were in the same academic year.

the same ethnicity within each deprivation stratum had an equal chance of selection (Department for Education, 2011a).

Therefore, sample boosts took place for deprivation factors and for ethnicity, making cross-ethnic comparisons possible. From wave 1 to wave 4, that is, until students reach age 17/18, parents were also interviewed on a yearly basis. From wave 5 to wave 7, only the students were interviewed. The LSYPE also allows the linkage with census and schooling data of the NPD/PLASC.

The Department for Education commissioned the LSYPE and, therefore, most of the questionnaire covers issues that relate more or less directly to school experiences and education in general.

2.6.1.1. Sample attrition and survey weights

Similarly to other longitudinal datasets, the LSYPE has suffered from sample attrition across their waves.

[table 2.4. about here]

The response rate for each wave is presented in table 2.4. The lowest response rate was that for wave 1 (74%), as some of the sampled schools did not participate in the survey and, within the responding schools, there were also non-responses among students (Department for Education, 2011a). The team of statisticians working in the LSYPE constructed the weights for wave 1 in three steps: firstly, weights for school-non response were calculated; then pupil non-response was modelled within responding schools; and finally, design weights were combined with school non-response and student non-response weights to calculate combined weights that were calibrated based on the distribution of students in terms of ethnicity, region, sex and qualifications sourced from the NPD (Department for Education, 2011a). The same strategy was followed to calculate the longitudinal weights for waves 2, 3 and 4.

[table 2.5. about here]

The levels of attrition of each ethnic group across waves are presented in table 2.5. Unfortunately, the response rate in the first wave is not included, as I do not have information about the cases of the issued sample that were not finally interviewed. The response rate of the two Black minorities was the lowest and, for this reason, a refreshment sample of Black Caribbean and Black African students was issued in the fourth wave. The response rates of the Mixed, Indian, Pakistani and Bangladeshi minorities were slightly below that of White British in waves 2, 3 and 4. However, the attrition was much lower compared to the Caribbean and African groups and, therefore, no refreshment sample for these minorities was issued.

For the following waves, the weights used to account for non-responses from certain groups between one wave and the following were calculated in two stages: firstly, the design weights were selected to account for the probability of being in the sample. With these weights applied, the profile of the issued cases was then compared to that of the achieved cases, with regard to a range of variables from wave 1 (Department for Education, 2011a)[14].

All my statistical analyses take into account the final weights included in the dataset, which take into account the survey design and the sample attrition. In addition, I only work with the population of students from the maintained sample (public schools), which constitute 93% of the total sample. I have taken this decision because the proportion of ethnic minority students in independent (private) schools is extremely low or non-existent. While 7.5% of White British students study in independent schools at age 13/14, this percentage reduces up to 6% for Indians, 5% for Pakistanis, 2% for Black Caribbean, 1% for Black African and Mixed Black students, and 0% for Bangladeshis.

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[14] For more detailed information about the construction of the LSYPE longitudinal and cross-sectional weights, please check the LSYPE User Guides (Department for Education, 2011a; Ward & D'Souza, 2008), which can be downloaded at the following address https://www.education.gov.uk/ilsype/workspaces/public/wiki/UserGuide.

2.6.2. The National Pupil Database and the Pupil Level Annual School Census (NPD/PLASC)

The National Pupil Database (NPD) is a pupil-level database that matches pupil and school data to pupil-level attainment. The fact that it is a census dataset containing the population of all pupils in state schools makes it more informative than a dataset based only on a sample of schools. For example, pupils can be tracked across schools. It is longitudinal, and pupils can now be followed throughout their school careers. It also provides a very rich set of data on school characteristics. As it is a census, it includes details of the student school cohort of any particular child.

In 2007, the School Census replaced the PLASC as the key source of data for individual pupil characteristics and the data started to be collected three times a year. This dataset includes variables previously unavailable in other datasets such as ethnicity, a low-income marker (entitlement to FSM), special educational needs (SEN), attendance, exclusions and a history of schools attended.

I have linked the NPD/PLASC datasets with the LSYPE. This linkage allows me to analyse the attainment and academic progress of the sampled students from age 10/11 to age 15/16, as the NPD collects information about achievement in national examinations at the end of KS2 (age 10/11), KS3 (age 13/14) and KS4 (age 15/16). In addition, information about grades obtained in post-compulsory qualifications below university level is also collected. Moreover, the NPD/PLASC contains indicators of school ethnic and socio-economic composition, which are also included in some of my empirical analyses.

2.7. Structure of the English educational system

In this final section of the chapter, I review the main features of the educational system in England during compulsory and post-

compulsory education. This description will help the reader to follow more easily the remaining chapters of the dissertation.

2.7.1. Compulsory education

Education is compulsory from age 5 to age 16, and students cannot be exempt from school before taking the *General Certificate of Secondary Education* (GCSE) examinations at the end of Year 11 (age 15/16). England used to have a three-tier tracking system which allocated students into three different tracks according to the their performance in a national examination at the age of 11. However, the *Education Act* of 1976 formally abolished the tripartite tracking system, generalizing the comprehensivisation of compulsory education to all Local Educational Authorities (LEAs). This abolition is still in force today, meaning that there is no process of selection taking place during the period of compulsory education comparable to that of Germany or the Netherlands. Students are not formally separated into different educational tracks based on their ability, and hence they all share a common curriculum until they reach the school leaving age at 16. Even though, in the last two years, when they are 14 and 15 (Key Stage 4), students are offered the possibility of doing some optional vocational or academic courses in certain areas of their interest, though the availability depends on the school. It is also important to note that during these two years the core GCSE courses are taught at two different levels: Foundation Tier and Higher Tier. Students doing Foundation Tier can only achieve a maximum grade of C.

[table 2.6 about here]

Students sit GCSE national examinations in the subjects they have taken during the last two years of compulsory secondary education, that is, during Key Stage 4. The number of subjects they sit and the grades obtained in these examinations will define their range of choices for post-compulsory education. Achieving an A*-C in the core subjects is usually necessary to continue to academic post-secondary education, which is the most common route to university. The

threshold for continuing to academic post-compulsory education (A levels) used to be set at 5 A*-C GCSEs. However, since 2005 the benchmark of 5 A*-C GCSE including English and Maths has become the common measure of achievement and has started to appear as such in all the schools' performance tables (Hodgson & Spours, 2008). Therefore, GCSE examinations are very important for students' future educational ambitions and labour market prospects. Indeed, those failing to achieve 5 A*-C GCSE have fewer chances of following the academic path and their available options for vocational studies are also more limited. Finally, there are also some students who leave compulsory education with no level at all, namely those who did not get either 5 A*-C GCSE or 5 A*-G GCSE. In the LSYPE cohort the drop out rate is 10%, which is representative of the actual drop out rate in England[15].

Even though GCSE tests are by far the most important examinations in compulsory education, students also sit national examinations at the end of KS2 (age 11) and KS3 (age 14), though the latter were abolished in 2008. In the national tests at the end of these two stages, students only take exams in English, Maths and Science. However, at the age of 15/16, students sit exams in all the GCSE courses they have taken during KS4 , which always includes GCSE English and GCSE Maths.

In contrast to GCSE examinations, those taking place at the age of 11 and 14 were only established for information purposes and have no consequences in terms of tracking. These examinations have been mainly used by public authorities to produce school league tables, which are released annually showing, among other measures, how students perform in national tests.

[table 2.7. about here]

As shown in table 2.7, the grades that students obtained at KS2 and KS3 national examinations are expressed in a continuous point scale,

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[15] 11% in the year 2009 according to the Office for National Statistics.

which can be also translated into different qualitative levels of performance defined by the National Curriculum. In English and Maths, the minimum and maximum values of these scales change from one stage to another and they also depend on the subject. Unfortunately, the grading system is totally different for GCSE examinations, since grades are no longer expressed in a continuous point scale but in a nominal one, ranging from A* (maximum) to G (minimum). As a consequence, it is not possible to make direct comparisons between the grades obtained at KS4 and those at KS3 and KS2.

2.7.2. Post-compulsory education

After sitting GCSE examinations at the age of 15/16, students are no longer obliged to continue in education. The range of available options for post-compulsory secondary education has increased with the educational reforms that have taken place since the 1990s. The objective of these reforms was to make the system less tracked by making the combination of academic and vocational qualifications easier and creating more paths to access higher education (Hodgson, Spours, & Waring, 2005). In fact, the grades obtained in post-compulsory secondary qualifications can be translated into UCAS points, a system that allocates points to almost all qualifications to make them comparable[16]. Nevertheless, top-tier universities from the Russell Group still use A level grades as the main criteria of admission.

The qualifications framework after compulsory education is notably diverse and, moreover, it has changed several times during the last two decades. Nevertheless, the main alternatives for post-compulsory education can be organized as follows:

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[16] The scores obtained by students in their post-compulsory secondary education, expressed in UCAS points, will be used in the last chapter as an indicator of achievement.

- *Academic qualifications: A levels/AS levels*

Advanced levels (A levels) represent the traditional academic route to enter university education in England, Wales and Northern Ireland. They require students to study an A level subject for two years. Since the reform of 2000, which revised the old A level curriculum, the former were split into two modules: the first one, the Advanced Subsidiary (AS level) is taken in the first year and became a qualification in its own right. The second year students could study A2 levels. The completion of AS and A2 modules in the same subject makes up a full A level. Usually students pursue 3 full A levels and 1 or 2 AS levelss in their first year. The specific A levels taken by students as well as the qualifications obtained in them (A*-E) are still used by most universities as the main assessment criteria for decision-making during the admission process. The reform of 2000 also increased the offer of A/AS levels creating A levels for vocational subjects (AVCEs).

- *Vocational qualifications: General National Vocational Qualifications (GNVQs), Advanced Vocational Certificate of Education (AVCEs), BTEC and National Vocational Qualifications (NVQs)*

GNVQs last one year and they can be taken at Foundation or Intermediate levels, usually depending on the level of achievement at GCSE examinations. In contrast, AVCEs or Vocational A levels usually require four A*-C GCSEs and last for two years. Students can take AVCEs and A/AS levels simultaneously. In fact, AVCEs are graded from A* to E to make them comparable with A/AS levels. In this regard, an AVCE single award is equivalent to 1 A level and a double award corresponds to 2 A levels.

BTECs are work-related qualifications and can also be taken at different levels, which can be equivalent to 5 A-C GCSEs or to one, two or three A levels.

NVQs are also work-related qualifications and have different levels, the lowest corresponding to 5 D-E GCSEs and the highest corresponding to university level.

- *Other qualifications: Diploma of Higher Education (DHE) and Foundation Degrees*

The DHE corresponds to the first two years of a BA/BSc honors degree and students can actually make a direct transition from DHE to the final year of an honours degree. Foundation degrees are equivalent to DHE and focus on a vocational subject. They are not the same as the University Foundation Programs, which are one-year intensive courses where students prepare to enter into most British universities. Foreign students that have not sat A level courses are usually the main takers of University Foundation Programmes.

Table 2.1. Percentage of UK population born abroad, by origin

	Foreign countries %	Old Commonwealth %	New Commonwealth %	Ireland %
1931	0.8	0.2	0.3	0.8
1951	1.5	0.2	0.4	1.1
1961	1.6	0.2	1.1	1.4
1966	1.7	0.2	1.6	1.4

Source: adapted from (Schain, 2008, p. 123)

Table 2.2. Main ethnic groups by country of birth (only for England) in 2011

	Residents in the UK %	Born in UK %	Born outside the UK %
White British	79.8	97.8	2.2
White Irish	1.0	33.6	66.4
White Other	4.6	14.5	85.5
Mixed (black and white)	1.1	86.6	13.4
Other Mixed	1.2	74.4	25.6
Indian	2.6	43.1	56.9
Pakistani	2.1	56.2	43.8
Bangladeshi	0.8	51.9	48.1
Black Caribbean	1.1	60.2	39.8
Black African	1.8	32.8	67.2
Chinese	0.7	23.7	76.3

Source: Census 2011

Table 2.3. Socio-economic and demographic indicators of LSYPE students and their families, by ethnicity, controlling for survey design

	White British	Mixed	Indian	Pakist.	Bangl.	Bl. Car.	Bl. Afr.
Student is first generation immigrant	2.1	8.8	9.3	13.0	16.3	12.2	54.7
	(.1694)	(2.387)	(1.42)	(1.503)	(1.785)	(1.75)	(3.482)
Student living in London	8.3	28.9	42.2	16.6	51.5	61.5	70.3
	(.6018)	(3.104)	(3.827)	(2.547)	(4.853)	(3.453)	(3.252)
IDACI index average score	0.18	0.31	0.23	0.34	0.44	0.38	0.39
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Single-parent household	18	46.3	10.9	13.6	6.4	58.8	35.3
	(.0049)	(.0316)	(.0121)	(.0149)	(.018)	(.0266)	(.0259)
Single-parent since child's birth	8.5	30.6	4.9	2.9	0.9	34.2	16.0
	(.3531)	(2.922)	(.7828)	(.6306)	(.4197)	(2.607)	(1.889)
Single-parent due to divorce/separation	9.5	15.7	6.0	10.7	5.5	24.6	19.3
	(.3463)	(2.537)	(1.054)	(1.329)	(1.114)	(2.843)	(2.133)
Father information missing	18.7	46.8	11.9	15.7	14.4	59.3	37.7
	(.4981)	(3.255)	(1.281)	(1.541)	(2.032)	(2.769)	(2.664)
Average number of dependent children in the household	2.21	2.46	2.35	3.09	3.55	2.13	2.94
	0.01	0.09	0.05	0.06	0.11	0.06	0.08
Average age of mother at first child	25.6	24.2	24.2	23.4	22.7	24.3	24.5
	(0.1)	(0.3)	(0.2)	(0.3)	(0.3)	(0.3)	(0.3)
At least one grandparent went to university	12.1	15.5	20.0	13.4	13.0	7.5	27.5
	(.467)	(2.466)	(2.114)	(3.155)	(2.423)	(1.445)	(2.643)
MOTHER'S QUALIFICATIONS							
Degree/HE below degree level	25.3	22.3	16.3	9.9	1.6	34.7	35.6
	(.0071)	(.0286)	(.0178)	(.0189)	(.0055)	(.0273)	(.034)
GCE A level/ GCSE grades A*-C	46.9	44.1	34.5	14.2	7.9	41.8	19.3
	(.0059)	(.0328)	(.0254)	(.0198)	(.017)	(.0277)	(.0228)
Level 1 and below/Other qualifications	12.1	12.2	9.0	4.1	3.1	12.6	4.5
	(.004)	(.0229)	(.0105)	(.0078)	(.0074)	(.0221)	(.0105)
No qualification	15.7	21.4	40.2	71.8	87.4	11.0	40.7
	(.0057)	(.0286)	(.0246)	(.032)	(.0186)	(.0173)	(.0336)
MOTHER'S OCCUPATIONAL STATUS							
Doing paid work for 30h/week	35.0	39.4	40.1	8.0	2.7	51.2	41.8
	(.6333)	(3.36)	(2.326)	(1.871)	(.7312)	(2.89)	(3.352)
Doing paid work for fewer than 30h/week	40.5	21.4	24.3	8.0	3.1	21.5	14.3
	(.5967)	(2.733)	(1.844)	(.9893)	(.7326)	(2.686)	(1.555)
Looking after the family/household	20.0	28.4	30.8	79.7	90.3	17.0	34.4
	(.571)	(3.05)	(2.587)	(2.05)	(1.278)	(2.134)	(2.875)
Other	4.5	10.8	4.8	4.3	3.9	10.3	9.5
	(.2414)	(2.125)	(.9444)	(.8511)	(.7932)	(1.382)	(1.551)

FATHER'S QUALIFICATIONS							
Degree/Higher education below degree level	27.1	32.5	23.1	11.5	6.1	25.3	54.5
	(.7685)	(4.274)	(2.438)	(1.497)	(1.674)	(3.892)	(4.219)
GCE A level. GCSE grades A*-C	47.8	42.0	33.1	21.0	10.9	45.5	17.1
	(.7017)	(4.532)	(2.319)	(1.897)	(2.268)	(3.964)	(2.613)
Level 1 and below/Other qualifications	9.0	10.7	6.8	5.8	4.6	5.8	5.1
	(.3875)	(2.867)	(.8949)	(1.126)	(1.049)	(1.649)	(1.317)
No qualification	16.1	14.8	37.1	61.7	78.4	23.3	23.2
	(.539)	(3.037)	(2.35)	(2.03)	(2.671)	(3.262)	(3.322)
FATHER'S OCCUPATIONAL STATUS							
Doing paid work for 30h/week	89.0	77.4	80.3	58.2	31.3	80.9	68.9
	(.4511)	(3.76)	(1.899)	(2.392)	(2.849)	(3.032)	(3.603)
Doing paid work for fewer than 30h/week	2.4	4.1	6.0	11.1	14.8	6.2	7.3
	(.1964)	(1.358)	(1.083)	(1.362)	(2.541)	(1.782)	(2.161)
Unemployed/looking for a job	2.2	12.8	4.5	8.3	16.8	3.9	11.8
	(.1945)	(3.38)	(.9169)	(1.261)	(1.969)	(1.331)	(2.211)
Retired/sick/disabled	4.7	2.3	7.8	16.9	31.4	4.8	4.8
	(.2832)	(.9315)	(1.145)	(1.945)	(2.751)	(1.88)	(1.304)
Father has a limiting disability	9.5	3.7	13.8	23.1	30.2	2.2	5.0
	(.3612)	(.9734)	(1.413)	(1.899)	(2.38)	(.6572)	(1.071)
EDUCATIONAL HOMOGAMY (only when both parents present)							
Both parents are highly educated	14.8	12.8	8.4	2.6	0.5	14.3	36.5
	(.6337)	(3.056)	(1.453)	(.666)	(.3566)	(3.689)	(4.84)
Both parents no qualifications	5.9	4.2	24.2	50.8	74.4	4.7	18.6
	(.3433)	(1.345)	(2.219)	(3.091)	(2.926)	(1.451)	(3.142)
Mother has higher qualification than father	24.1	24.3	20.6	15.2	7.7	37.2	10.6
	(.5448)	(3.876)	(2.07)	(2.435)	(1.941)	(3.558)	(2.001)
HOUSEHOLD SOCIOECONOMIC STATUS (dominance method)							
Higher-lower managerial and professional	49.5	43.6	37.3	17.6	9.3	44.0	44.6
	(.8556)	(3.107)	(2.501)	(1.999)	(1.816)	(2.752)	(3.567)
Intermediate, small employers and own account workers	20.8	19.9	27.4	32.3	15.8	22.1	12.8
	(.475)	(2.589)	(1.841)	(1.83)	(1.747)	(2.589)	(1.909)
Lower supervisory and technical	10.0	10.2	10.2	5.4	15.5	7.2	5.8
	(.4001)	(2.192)	(1.155)	(.8455)	(2.524)	(1.166)	(1.117)
Semi-routine and routine	17.3	18.9	20.9	25.7	32.9	20.0	17.0
	(.566)	(2.451)	(1.792)	(2.132)	(3.181)	(2.337)	(2.249)
Never worked/Long term unemployed	2.0	7.0	4.1	18.5	26.5	5.5	18.0
	(.1814)	(1.643)	(.8894)	(1.666)	(2.446)	(.9574)	(2.165)
N	**8753**	**344**	**931**	**763**	**569**	**442**	**433**

Source: LSYPE wave 1 and Census 2001
N=12730
Standard errors in parentheses

Table 2.4. *Response rates of the LSYPE across waves*

	Wave 1	Wave 2	Wave 3	Wave 4	*Refreshment sample*	Wave 5	Wave 6	Wave 7
Issued sample	21000	15678	13525	12468	600	11793	11225	9791
Achieved sample	15770	13539	12439	11449	352	10430	9799	8682
Response rate	74%	86%	92%	92%	59%	88%	87%	90%

Source: Department of Education 2011

Table 2.5. *Response rates of the LSYPE for each ethnic group across waves*

	Wave 2	Wave 3	Wave 4	*Refreshment sample*	Wave 5	Wave 6	Wave 7
Issued sample	15678	13525	12468	600	11793	11225	9791
Achieved sample	13539	12439	11449	352	10430	9799	8682
Response rate Wh. Brit.	88%	93%	93%	-	89%	90%	89%
Response rate Mixed	83%	90%	89%		88%	85%	83%
Response rate Indian	86%	93%	94%	-	92%	95%	92%
Response rate Pakistani	85%	91%	90%	-	89%	91%	90%
Response rate Bangl.	84%	94%	90%	-	89%	91%	88%
Response rate Bl. Car.	79%	84%	87%	100%	83%	88%	83%
Response rate Bl. Afr.	75%	84%	84%	100%	78%	89%	84%

Source: LSYPE all waves (own elaboration)

Table 2.6. *Structure of the compulsory educational system in England*

Key Stage	KS1			KS2				KS3			KS4	
Year group	Reception	1	2	3	4	5	6[a]	7	8	9[b]	10	11[c]
Age at the end of the year	4/5	5/6	6/7	7/8	8/9	9/10	10/11	11/12	12/13	13/14	14/15	15/16

[a] National examinations at the end of KS2 (age 11). No tracking consequences
[b] National examinations at the end of KS3 until 2008 (age 14). No tracking consequences
[c] GCSE national examinations at the end of KS4 (age 16)

Table 2.7. Grading and level scales used in English and Maths national examinations at the end of KS2, KS3 and KS4

| KEY STAGE 2 ENGLISH/MATHS | | KEY STAGE 3 | | | | KEY STAGE 4 ENGLISH/MATHS | |
| | | MATHS | | ENGLISH | | | |
Level	Point score	Level	Point score	Level	Point score	Grade	Level
Below test level/No level awarded	15	Below test level/No level awarded	15	Below test level/ No level awarded	21	Unclassified/ Below test level	No level awarded
2	15.1-17.9	2	15.1-17.9	Below test level/ No level awarded	21	G	Level 1
3	18-23.9	3	18-23.9	3	21.1-23.9	F	
4	24-29.9	4	24-29.9	4	24-29.9	E	
5	30-35.9	5	30-35.9	5	30-35.9	D	
6	36	6	36-41.9	6	36-41.9	C	Level 2
		7	42-47.9	7	42-47.9	B	
		8	48-53.9	-	-	A	
						A*	

Ource: own elaboration

CHAPTER 3

ETHNIC DIFFERENTIALS IN ACADEMIC PROGRESS FROM AGE 13/14 TO AGE 15/16

3.1. Introduction: reasons to study academic progress instead of achievement

Very few empirical works have paid attention to the differentials in academic progress between ethnic minorities. Those that have analysed them have frequently operationalised progress in terms of grade retention (Harker Tillman, Guang, & Mullan Harris, 2006), which might be relevant in countries like the US but not in England, where retention is almost non-existent. The scarcity of data to measure academic progress in a proper way has most likely been the main reason explaining this gap in the literature on educational inequalities. Indeed, there are still very few datasets that provide longitudinal and reliable measures of performance at different stages of students' educational careers. As a consequence, most researchers have only focused on final educational achievement or on the outcomes of one or more cohorts of individuals at one point in time; that is, they have used a cross-sectional perspective without taking into account individuals' past academic performance. The English case is, in this regard, an exception, as the Department of Education collects yearly data on students' performance during compulsory education at the end of each key stage and has done since the year 2002. The public availability of the National Pupil Database (NPD) has had an enormous impact on the research into educational inequalities in England, as it has allowed

scholars to perform detailed analyses of the academic progression that students of different social classes or ethnicities make since they start school.

In this regard, some scholars have already highlighted the variations in ethnic attainment gaps across time. That is, the differences in academic performance between ethnic minorities and the White British group do not appear to be constant across the stages of compulsory education (Dustmann, Machin, & Schonberg, 2008; Plewis, 2009; Strand & Demie, 2007; D. Wilson et al., 2005a). Indeed, even though most ethnic minorities are disadvantaged compared to the White British group at the age of 5 –particularly Pakistanis and Bangladeshis- (Hansen et al., 2010), most of them manage to decrease or even reverse this gap over the years, especially during the last stage of compulsory education. This is particularly so for Indians, Pakistanis, Bangladeshis and Black Africans. In contrast, the Black Caribbean minority progresses at the same speed as the White British group and therefore, the gap in attainment remains stable across the years (D. Wilson, Burgess, & Briggs, 2005b). Moreover, the NPD has revealed that the improvement of ethnic minorities relative to the reference group is most intense during the last two years of compulsory school, namely, from KS3 (age 13/14) to KS4 examinations (age 15/16), which has also been highlighted by other researchers (Dustmann et al., 2008; D. Wilson et al., 2005b). In this sense, my own empirical analysis about the attainment gaps at the end of KS2, KS3 and KS4 for the LSYPE sample also confirms the previous findings[17].

The fact that some ethnic minorities are able to catch up or at least to reduce the gap in attainment by the end of compulsory education is itself a relevant finding. But why does the improvement of some ethnic minorities relative to the White British group concentrate during the last two years of compulsory school? That is, what are the changes in the behaviour of students of each ethnic minority that are associated with different patterns of academic progress? Unfortunately, previous

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[17] Table A3.1 presents the results of several OLS regressions with the average grade in English and Maths obtained in KS2, KS3 and KS4 as dependent variables. See the appendix for a detailed explanation of the findings.

studies have mainly relied on the NPD and the School Census datasets, which provide limited or no information about students' household characteristics or relevant attitudinal and behavioural indicators of students and their families. The advantage of linking the NPD/PLASC with a rich survey like the LSYPE is that it allows me to test more refined explanations to account for the observed ethnic differentials in academic progress.

The chapter is organised in four parts: the first one, which includes section 3.2 and 3.3, focuses on the concept of academic progress and presents the theoretical approaches that I rely on to explain the different rates of progress across ethnic minorities. The second part (section 3.4) explains the operationalisation of academic progress and summarises the differences across ethnicities in this respect. The third part (section 3.6.) is entirely devoted to the empirical analysis of the ethnic differentials in academic progress from the end of KS3 to the end of KS4. Finally, the main findings of the empirical analysis are reviewed at the end of the chapter.

3.2. What is academic progress? Absolute vs relative progress

The concept of academic progress is closely related to that of academic achievement, as students must follow a series of sequential steps –that is, should make a progression- in order to achieve certain educational outcomes or qualifications (e.g. a degree in Law, 5 A*-C GCSEs, etc). The educational credentials are strong predictors of a wide array of life outcomes, particularly the labour market position of an individual, and that is why understanding the processes that operate to create systematic disadvantages in education of certain groups becomes extremely relevant. In order to shed light on those processes and mechanisms that are behind the final educational outcomes- that is, the formal qualifications that are obtained- individual longitudinal data about students' life and academic trajectories is needed. That is, if we want to explain the final educational outcomes that individuals obtain at the end of their school years, we also need to assess how they have

progressed across the different stages of the educational system. Moreover, even when individuals have similar educational outcomes they may have different academic progressions; e.g. an individual starting from a disadvantaged position compared to the average, may manage to catch up later. In addition, the extent to which individuals are able to overcome their learning difficulties and progress academically is also likely to affect relevant psychological outcomes, such as self-esteem and self-confidence.

Strictly speaking, academic progress should be understood as the process through which individuals acquire new skills and learning capabilities throughout their education. In that respect, all individuals make some academic progress during their school years, even those with very poor performance. However, what is more relevant for sociologists is not the absolute level of progress that individuals make over a certain period of time, but the relative amount of progress of a certain group of individuals in relation to another group or to a standard measure of progress that is externally defined, usually by educational authorities. As a consequence, the two initial descriptive questions that should be tackled when analysing academic progress are the following: firstly, are there any systematic differences in actual progress throughout the student population in terms of socio-economic background, ethnicity or gender? And secondly, do all students progress as expected, according to the standards defined by the educational authorities through the academic curriculum?

Regarding the first question, the main concern of researchers has been to explain systematic group differences, which in the social sciences have been usually –but not only– defined in terms of three characteristics, namely social class, gender and ethnicity. In fact, the concern of most sociological work in the field of education has been to identify the main mechanisms through which these three characteristics operate to generate systematic inequalities in educational outcomes. More recently however, more attention has been paid to the interaction between these three characteristics and how they create a complex picture of inequalities in education (Platt, 2011).

In relation to the second question, the focus would not only be on group differences but on the comparison of each group's progression with a certain standard of progress. The progress that students are expected to make from one year or academic stage to the following tends to be thoroughly defined by governments through the curriculum and qualifications framework, which establishes the steps and knowledge necessary to achieve certain educational credentials. In England, the National Curriculum is the instrument used by the government to ensure that teaching and learning is uniform across all state schools. The National Curriculum sets out the knowledge, skills and understanding required in each subject, as well as the standards or attainment targets that will be used to measure children's progress (Department for Education, 2011b). In England and Wales the performance in a certain subject is evaluated annually by teacher's assessments and/or national examinations in relation to those standards[18]. In this regard, a student might be performing over, under, or at the expected level in a certain subject given his/her age and academic year.

However, in this chapter, the main objective is to explain the variations in relative progress across ethnic minorities, taking the White British students as the reference group for comparison. That is, my primary interest is not the average academic progress of each ethnic group in relation to the National Curriculum, but the comparison between the average academic progress of each ethnic minority with that of White

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[18] The emphasis on students' assessment to ensure the meeting of standards defined by the National Curriculum for each subject has been commonplace in England since the Education Reform Act 1988, which introduced a school-choice system to allow parents to express their school preference (even outside their local authority for the case of secondary schools). The performance tables of schools are published every year as a way to help parents to decide on which school to choose as well as to force schools to improve their standards. One of the major concerns regarding the introduction of free choice has been the effect that this system might have on class and ethnic stratification.

Regarding the tests taken at the end of certain key stages tests, their existence has been justified as a way to provide families with an external evaluation about their children's performance, and in order to help schools to see whether they are teaching effectively by comparing their pupils' performance to national results.

British students. In order to frame those differences and to guide the empirical analysis that will follow, the next section introduces the main theoretical approaches that have been put forward to explain ethnic inequalities in education.

3.3. Why differentials in academic progress across ethnic groups might be expected?

As mentioned earlier, the ethnic gaps in attainment relative to the White British majority are not constant from KS2 to KS4. Therefore, it is necessary to put forward explanations that account for these systematic variations across time. The analysis of these differentials can be framed under various theoretical approaches that in some cases complement each other, but in others offer opposing explanations for the very same phenomenon. The fact that these theories come from different disciplines such as Sociology, Anthropology or Psychology explains why they have rarely been tested all together in the same piece of research. In this regard, the theoretical approaches that I am introducing in this part of the chapter are the following:

- Theories of immigrant selectivity
- Cultural-difference approaches
- Acculturation theories
- Theories about the effects of discrimination and locus of control.
- Theories about school effects.

All these approaches are able to offer explanations that support the expectation of finding ethnic differentials in patterns of academic progress. However, even if they are clearly distinguishable from a theoretical point of view, it is usually the case that scholars lack appropriate data to test the precise mechanisms put forward by each of the theories. As a consequence, researchers have frequently relied on proxy variables that only provide indirect or partial empirical evidence in favour of or against a certain theory. The problem arises when different approaches use the same proxy variables to test their hypotheses, as in these cases, the empirical evidence would not be

enough to discriminate between theories. In fact, this is what happens with the first two approaches, namely the immigrant selectivity and the cultural-difference theories. Both of them provide explanations for the ethnic gaps in progress, but there are currently no surveys for the English or UK case that include indicators that would allow them to be tested simultaneously.

For example, several studies have pointed out the high educational expectations of immigrant and/or ethnic families compared to natives (Goyette & Xie, 1999; Kao & Tienda, 1998). This difference is highly connected to the effort that immigrant students make at school and positively impacts their attainment and progress. However, it is not clear whether the higher educational expectations of immigrants compared to natives are related to the selectivity of the migration flow, to different cultural values, or to a combination of both.

Before going into detail for each of the theoretical approaches mentioned before, I will briefly explain why I do not include innate ability as a relevant factor to account for the ethnic differentials in progress. Trying to control for students' unobserved cognitive ability has been subject to a great amount of academic debate, particularly in economics (Hansen, Heckman, & Mullen, 2004). Innate ability is an unobserved characteristic that is not evenly distributed across individuals; some students might have higher IQs than others and, therefore, need to make less effort to achieve the same outcomes as other students with lower IQs. However, since it is not measured (it is an unobserved characteristic), it cannot be directly introduced into the equation model to explain achievement or progress. Among the techniques developed to manage this issue are instrumental, variable and fixed-effects models for longitudinal data, where the objective is basically to get rid of the time invariant error u_i. Nevertheless, I have no reason to expect ability to be distributed unevenly across ethnicities. That is, there are no grounds to support the affirmation that the distribution of ability in each ethnic group is significantly different from the White British group and, therefore, I do not consider IQ or innate ability differences as relevant factors to explain differential in academic progress.

3.3.1. Theories of immigrant selectivity

A possible way of explaining the ethnic differentials in rates of progress is through the theory of immigrant selectivity. Immigrants are not representative samples of their countries' of origin populations, but they are (self) selected samples that differ in one or more relevant characteristics from the non-migrant population, e.g. ambition, motivation, level of education, etc. (Feliciano, 2005). In general, most researchers have emphasised the positive selection of immigrants, since they are considered to have more ambition and drive for success, as well as higher levels of education than those who do not migrate (Chiswick, 2000; Feliciano, 2005; Portes & Rumbaut, 2001). Indeed, educational selectivity is likely to become a form of ethnic capital that influences the attainment of the second-generation (Feliciano, 2006).

The decision to migrate is usually a family, not an individual strategy (Stark & Bloom, 1985). The adults of the household migrate to increase the income or the opportunities of the whole family, particularly for children. For that reason, it is likely that immigrant families have high expectations for their children's future, given the sacrifices they have made for them. In this regard, the success of the family migration project is partially related to the educational success of their children. The higher the level, the more likely it is that these children will secure a good employment position and overcome the disadvantages faced by their immigrant parents. Therefore, I expect both immigrant and second-generation children and their parents to have both high educational ambitions and strong motivations that would eventually translate into faster progress compared to the native group(s).

The positive selection has also been frequently linked to the existence of strong and cohesive ethnic communities in the destination countries. Positively selected migration flows, in terms of education and skills, will mobilise their resources to build strong ethnic communities that favour upward social mobility for the next generation. Being part of these communities might help to mitigate the impact of discrimination

and might also act as a protective net for individuals at risk of exclusion. Moreover, the strong bonds between co-ethnics are likely to reinforce parental authority and control over adolescents, preventing them from engaging in dangerous activities or deviant behaviour that might affect their academic attainment during teenage years, e.g.: alcohol and drug consumption, truancy, involvement in gangs, etc. In this respect, the cohesiveness of these communities would represent a form of social capital from which adolescents would benefit (J. Coleman, 1988). This is particularly so for those living in deprived urban areas, since the normative control of the ethnic group would prevent them from getting involved in troublesome behaviours that would otherwise worsen their academic performance.

As mentioned earlier in the dissertation, UK surveys have not collected information about the migration history of individuals until very recently. As a consequence, no indicators of selectivity in terms of observable characteristics (e.g. education or social class) have been built for the main ethnic minorities in the UK[19].

3.4.2. Cultural-difference approaches

The relative academic success of ethnic minorities like the Chinese in the UK and US or the Indians in the UK has sometimes been explained in terms of their 'aspirational cultures' (Archer & Francis, 2007), since parents and children of these minorities tend to report high educational ambitions and a stronger work and academic commitment than natives. Cultural-based theories have a long tradition in the literature of immigrant incorporation and have been particularly popular among American scholars to explain the upward social mobility of certain minorities such as Jews, Chinese or Japanese (Vermeulen, 2000). As Kao and Thompson point out, "although cultural deprivation models are out of favour among social scientists in explaining the lower

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[19] The preliminary results of a cross-country research project about the second-generation presented in 6th EducEight International Conference in Newcastle (July 2012) highlighted the positive selection in terms of education of the main ethnic minorities except the Black Caribbean (A. Heath, van der Werfhorst, & van Elsas, 2012).

performance of Blacks, cultural models are popular for explaining the relatively higher performance of Asians" (Kao & Thompson, 2003).

However, the most common critique against those theories is that they ultimately fail to explain why most individuals of a certain minority endorse a particular set of values and to what extent these values are indeed representative of a particular culture, country, region or group. Since it is already known that migrants are not random samples of their countries, it is difficult to sustain that their values are representative of those of their country of origin. Another critique that has been made to the culturalist perspective is that culture is frequently invoked when no other type of explanation is available (Vermeulen, 2000).

Again, in order to explain the differences in ambitions and commitment to school work in terms of culture –and not, for example, in terms of immigrant selectivity– it would be necessary to compare the immigrant minorities with the population in their countries of origin. In this regard, some cross-cultural Psychology scholars have provided empirical evidence of systematic cultural value differences across countries, particularly in terms of the opposition between individualistic and collectivistic orientations (Georgas et al., 2006). Collectivistic values, which are predominant in non-Western countries from which some immigrant minorities come from, attach more importance to intergenerational kin ties and extended family relations. In this regard, the individual's wellbeing is usually understood in relation to the (extended) family welfare (de Valk & Billari, 2007). The respect for parental authority and the close family bonds – familism– that are common among certain minorities could be explained in terms of their collectivistic values. In this regard, strong family bonds and high levels of parental control might help students to cope with disadvantage (Portes, 1998). At the same time, these close relationships among family members are likely to act as mechanisms of control of students' behaviour, making sure they fulfil their school duties and preventing them from engaging in deviant behaviour.

Some of the differences in values and behaviours that exist between immigrant and native families might indeed be attributed to purely cultural differences. Even though, it is important to bear in mind the influence that the context of reception could have in shaping those attitudes; e.g. recent immigrants might be more likely to strengthen their kin ties to cope with economic and social constraints (Clark, Glick, & Bures, 2009).

3.3.3. Selectivity or cultural difference?

The existence of strong family ties, the drive for success, and the high educational aspirations that are found among certain ethnic minorities could be explained in terms of these two different perspectives: on the one hand, they can be seen as the product of the positive (self) selection of migration flows, particularly in terms of human capital. On the other, it could be a consequence of the collectivistic values that are dominant in the countries of origin where minorities come from. Moreover, the two perspectives are not mutually exclusive. In fact, it is quite likely that culture and selectivity influence the way ethnic minorities integrate in the destination country.

In the empirical analyses of academic progress that are presented in Section 4.6 of the chapter, I include several variables that could be used as indicators of both theories. However, the main hypotheses that derive from the two theories cannot be tested empirically because the LSYPE does not have enough information to build selectivity measures and/or indexes on cultural values and orientations (e.g. individualism-collectivism scale, or Schwartz's value inventory). The variables that are included in the analyses are the following:

- Students' taste for school, an index built from the responses given to a set of items that capture the extent to which students have positive or negative attitudes towards school.
- An indicator measuring the effort put in by students into their schoolwork.
- Students' expectations for future education, particularly whether they plan to apply to university or not.

- The value given to education by the main parent, the family academic supervision, and their help through private tutoring. These indicators capture the overall importance given to schooling and the educational career of the student by their parents. As has been mentioned before, several scholars have described systematic differences between native and immigrant parents in this respect (Kao & Thompson, 2003).
- The degree of familism, operationalised as the amount of time spent by students with family members during their leisure time. The closeness among family members has been mentioned as a protective factor that might prevent teenagers from engaging in any kind of anti-school behaviour that are common during adolescence. In this respect, variations in the degree of familism across ethnicities are likely to reflect cultural differences between ethnic groups.

A detailed explanation of all the indicators and the construction of the indexes is presented in the appendix of the chapter.

3.3.4. Acculturation theories

The research on acculturation of immigrant minorities has been extensive, particularly in the field of cross-cultural psychology. From an individual point of view, acculturation is understood as the process through which immigrants learn the values, behaviours, life-styles, and language of the destination country. This process can entail high levels of stress for immigrant individuals, particularly if they are not at all familiar with the language and culture of the country of destination. As for children, the older they are at the time of arrival, the higher their penalty in terms of educational attainment (A. Heath & Kilpi-Jakonen, 2012). Böhlmark has pointed to the existence of a critical age of arrival at 9 years old, above which there is a strong impact on academic performance (Böhlmark, 2008). Although most of these studies use cross-sectional data and focus on educational outcomes instead of academic progress, the hypothesis might also apply to the latter, meaning that those children arriving at age 9 or later would not be able to close the gap with natives over time. In my analyses, I include the

country of birth of the student (in or outside the UK), since the LSYPE does not give information regarding the age at arrival of those children that were born outside the UK.

The difficulties that immigrant children might face at school are manifold: first of all, the lack of proficiency in the language of the destination country would certainly delay the academic progress of these children. In general, the older an individual is, the greater the difficulties to become proficient in a new language. Therefore, those immigrant children that are already proficient in the language of the destination country would not experience a penalty in attainment as strong as those who do not. Secondly, the acculturation shock that derives from starting school in a totally different environment might be quite severe. The shock is likely to be more severe the older the child is, as the difficulties for adaptation are expected to increase with age. Finally, if the educational standards of the school system in the country of origin are lower than those in the destination country, immigrant children would lag behind natives in terms of attainment and they will have to make a considerable effort to close the gap. However, from the perspective of progress, it could well be that immigrant children progress at a faster rate than natives once they adapt to the new environment, since they have more room for improvement.

In my empirical analysis, I use the language spoken at home and the importance of religion for students' life as two indicators of the degree of acculturation of ethnic minority students. Language and religion have been considered as two relevant measures of the level of acculturation of immigrant individuals, particularly language. In the literature on American second-generation immigrants (Portes & Rumbaut, 2001), the acculturation of parents and children is measured using various indicators, one of them being the maintenance of the home-country language. With regard to religion, it is likely that it plays an even more important role than language in the English context, since it is a salient identity trait for the two main Muslim minorities, namely the Pakistani and the Bangladeshi (Modood, 1994).

3.3.5. Theories on the effects of discrimination and racism and the theory about the locus of control

The research on discrimination in education does not necessarily relate to that about the locus of control, though, as is explained in this section, there is a connection between the two.

The literature regarding the locus of control can be framed under the more general area of personality psychology. Rotter was among the first researchers to conceptualise the locus of control (Rotter, 1966), which can be internal or external. Individuals with an internal locus of control perceive that what happens in their life is contingent on their behaviour or personality. In this regard, they would establish a direct relationship between their behaviour or effort and their chances of success. In contrast, the external locus of control is dominant when individuals perceive that what happens in their lives is beyond their control, either due to the influence of external factors or due to chance or luck. As can be seen in the appendix of the chapter, the two composite variables included in the LSYPE that measure students' locus of control refer to how relevant they think their behaviour at school is for their success in life.

But how can we relate the locus of control with discrimination? Firstly, individuals that feel discriminated against in society because of their race, ethnicity or religion might tend to externalise more their locus of control than similar individuals that do not think that their group is discriminated against in society. This is because they might consider that their personal failures are the consequence of their group's disadvantaged position in society and not of their own behaviour. That is, even though the locus of control is considered as a personality trait, systematic differences across ethnic groups might be related to widespread feelings of discrimination among the members of that group. As a consequence, I expect the locus of control of ethnic minority students to be correlated by how they perceive the status of their ethnic minority in English society.

On the other hand, the literature studying the effects of racism and discrimination on the school outcomes of minority students has had a prominent role in England, particularly to explain the low achievement of black students (D. Gillborn, 1998; David Gillborn, 1997; Ogbu, 2008). Despite its prominence, the findings about the actual effect of discrimination on academic achievement have not been conclusive so far. In this regard, two lines of reasoning can be identified depending on the direction of the effects of discrimination on educational performance.

Negative impact on academic performance: oppositional culture

Some scholars have emphasised the negative effect that discrimination has on the learning process of ethnic minority students. British scholars have been particularly concerned by the interaction between white teachers and Caribbean students at schools, as the former tend to see Black Caribbean pupils as problematic and conflictive. This negative stereotyping might lead to a systematic bias of the teachers against students of this minority, which might in turn reinforce the disadvantage in education of Caribbean students (Archer & Francis, 2007; David Gillborn, 1997).

The theory of oppositional culture developed by Ogbu (Ogbu, 1991) is a prominent example of this line of research, and it has had a great influence on sociologists [20] . This theory, which was originally developed to explain the underachievement of African- American children in the US, sees the negative attitudes towards school of black students as a logical reaction to their disadvantaged position in society. The oppositional culture approach has tried to avoid the critiques made to purely culturalist perspectives, which simply associate a set of

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[20] The other theory is the stereotype threat approach (Steele & Aronson, 1995), developed in the field of social psychology and much less influential among sociologists. According to this theory, "individuals' awareness of society's negative stereotypes about their social group leads them to be anxious about engaging in behaviours that confirm those stereotypes, particularly those pertaining to intellectual abilities" (Wong, Eccles, & Sameroff, 2003). As a consequence, the emotional maladjustment caused by these stereotypes would affect the performance of minority students in a negative way.

values and/or behaviours of a group with their culture or religion. In this regard, their past and present experiences of discrimination as an involuntary minority would make African-Americans distrust the institutions of the majority group on the one hand, and to adopt deviant behaviours as a mechanism to cope with their disadvantage on the other. Usually these deviant behaviours and lifestyles that characterise an oppositional culture or reactive ethnicity (Portes & Rumbaut, 2001) are normally adopted during the teenage years. As a consequence, a worsening of the academic performance of these adolescents might be expected.

Positive impact on academic performance: anticipated discrimination

In contrast, other scholars have suggested that students that are aware of the discrimination that their ethnic group faces in society might see academic success as the only path to overcome that barrier (Sanders, 1997). That is, their academic effort and higher-than-average progress would be a conscious strategy to counteract future discrimination in the labour market.

It seems quite puzzling that the very same factor –discrimination- could lead to opposing outcomes, namely improvement or worsening of the academic performance of ethnic minority students. The apparently contradictory empirical evidence given by scholars on this subject might be related to the interaction of discrimination with other individual and/or contextual factors. That is, there might be other factors that either protect students from, or counteract, the discrimination that they might eventually experience. The family and ethnic community can actually play an important role in preventing students from engaging in the kind of reactive anti-school behaviour described by Ogbu.

In relation to academic progress, those minority students that experience discrimination at school, particularly by their teachers, or those that are highly aware of their disadvantaged position in society as a group, might have a different rate of progress than those who do not. That is, adolescents who feel discriminated against might have

more reasons to engage in deviant behaviour, which is likely to negatively affect their academic performance. In the English case, the Black Caribbean has historically been the minority that has been subject to more discrimination by the White majority. Therefore, it is not surprising that Black Caribbean students are precisely those that feel more discriminated against by teachers and society at large and, as a consequence, they engage more often in deviant behaviour.

In the empirical analysis presented in section 3.6.5, I use five composite variables to explore the relationship between discrimination, locus of control and academic progress. The first two variables give an overall measure of the extent to which students feel unfairly treated by their teachers, with no specific reference to racial/religious discrimination. That is, these variables measure how discriminated against students feel by their teachers, though it might not be (only) related to their race, ethnicity, or religion. The third variable combines several items that reflect how discriminated against ethnic minority students feel because of their race, ethnicity or religion. The fourth variable measures the involvement in risky or deviant behaviour. As mentioned before, the oppositional culture approach explains the prevalence of anti-school behaviour among African American students as a product of the historical and present discrimination and marginalisation of this minority in American society (Chiswick, 2000; Feliciano, 2005; Portes & Rumbaut, 2001). Finally, I include two composite variables aimed at measuring the locus of control of students (internal and external).

3.3.6. Impact of school characteristics and school composition

Research on the effects of schools on learning –both in terms of schools characteristics, structure and composition– has been one of the most prolific fields of study in sociology of education, particularly since the seminal works of James Coleman, which examined the effects of the school segregation of African Americans on their academic achievement (J. S. Coleman, Hoffer, & Kilgore, 1982; J. S. Coleman, 1966). The main problem that researchers on school effects

face, relates to the control of variables that produce a non-random selection of students into schools, as well as the unobservable attributes of students and families that may confound with school effects (Sorensen & Morgan, 2000). If students were randomly assigned to schools, selection problems would be avoided and the measurement of school contextual effects would be a relatively easy task.

Many of the studies of the so-called school-effects literature are actually more interested in analysing the impact of the quantity and quality of social interactions taking place at school among students and teachers rather than in any other kind of school effect, such as the school structure or resources, among other characteristics [21]. The relationship between academic achievement and the student-body composition at schools has been framed in the broader literature of peer effects and social capital. Although the mechanisms are not always fully understood or captured, it is assumed that students constantly influence each other, and that peer pressure and peer acceptance play an important role in shaping students' behaviour and attitudes, particularly during adolescence. Considering that we usually lack specific measures about the frequency and type of contact among students –that is, about peer networks– the student-body composition of the school or the classroom is taken as an indirect measure of the frequency and intensity of the students' interactions. The two characteristics of the student-body composition that have been

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[21] My analysis concentrates on the effects of ethnic peer-group composition at school, controlling for the overall school ethnic and socio-economic composition. However, scholars have also paid attention to other school features such as the school organisation, practices, and normative environment, namely the number of students per teacher, the practice of streaming in terms of abilities, or the quality of the relationship of teachers with students and their parents (Lee, 2000). In addition, schools might also differ in their resources (e.g.: quality of the school facilities, number and quality of teachers, variety of recreational and/or extra-curricular activities offered, number of books available for students, etc.). There is no agreement on the extent to which school resources contribute to learning (Rumberger & Palardy, 2004), but this disagreement might be related to the lack of reliable data on some of the characteristics that are expected to have an effect on learning, such as a teacher's abilities and dedication. It might be that schools with a higher proportion of ethnic minority students receive more public funding and that, in turn, would impact positively on children's learning.

examined more frequently are the family socio-economic background and the ethnic and/or immigrant origin. As has been just mentioned, the difficulties of isolating the exogenous variation in the socio-economic or ethnic composition of schools is one of the main reasons why researchers have found contradictory evidence on this issue (Hanushek & Rivkin, 2009).

The identification of the consequences of a *de facto* ethnic segregation on achievement has concentrated the efforts of many scholars, firstly in the US and afterwards in Europe (J. S. Coleman et al., 1982). The main concern has been to analyse whether the higher ethnic or immigrant concentration that is commonplace in schools placed in highly segregated residential areas has a negative impact on the attainment of students enrolled in these schools. The concern has arisen because a significant negative correlation is usually found between ethnic concentration and achievement (Cebolla Boado & Garrido Medina, 2011). Some American studies have shown that students attending segregated minority schools do not reach the same level of attainment as students at integrated or White segregated schools, net of other factors (Bankston & Caldas, 1996; Roscigno, 1998). In this sense, Szulkin and Jonsson (Szulkin & Jonsson, 2007) find a negative effect of ethnic concentration for first-generation immigrant children while for the for second-generation children the disadvantage appears to be entirely related to their poor family socio-economic background and resources of the school. The authors identify language problems and lack of positive role models as the two main factors that worsen the achievement of first-generation students in Swedish schools with high ethnic concentrations (Szulkin & Jonsson, 2007). In contrast, other scholars have highlighted the different impact of ethnic concentration depending on the ethnicity (Portes & MacLeod, 1996). That would be the case of enclave schools, which would have positive effects on attainment for minorities that are rich in ethnic capital. Nevertheless, the impact of the enclave is still an unresolved issue, and whether there is a positive, negative or no effect at all seems to depend on the interaction of ethnic concentration with other factors such as the socio-economic or educational composition of the minority.

In my empirical analysis, I pay attention to several indicators of school social relations, school characteristics, and composition of the student body and how they associate with the observed ethnic differentials in academic progress relative to the White British group.

Parent-school relationships

Parents can get involved in the education of their children in several ways that might impact differently on their learning. In the empirical analysis, I include indicators of the interactions that parents have with their children's school, mostly, but not only, with their teachers. Even though this variable should be relevant for all students, I expect it to have a different impact for students with foreign-born parents, since they might be less familiar with the school environment. The extent to which parents know the ´nuts and bolts` of the educational system and are aware of the expectations that teachers have on them, is likely to impact on their children's success at school. In general, past research has suggested that student academic success increases when parents are included in the education of their children at school, particularly for children that face several disadvantages outside school (Jeynes, 2007). In the case of immigrant families, having regular contact with schoolteachers can be difficult for various reasons: firstly, immigrant parents tend to be in a disadvantaged position in the labour market, and their long working hours might prevent them from attending school meetings. This explanation is not immigrant-specific, as it could also apply to White British parents working in unstable or low-skilled jobs. Secondly, there might be a language barrier. That is, if immigrant parents are not fluent enough in the language of the destination country and the school does not have a translation service, they will not be able to communicate successfully with teachers. Finally, there might also be a cultural barrier, in the sense of schoolteachers not being familiar with the expectations of parents and vice versa. Therefore, it is important to know whether there are systematic differences between ethnic groups in the quantity and quality of parents-school meetings. In order to estimate this effect, it is necessary to control for the students'

behavioural problems, since some of these parent-teacher interactions could be related to them.

Student's perception of teachers' efficacy in class

This factor is mostly related to how the students perceive that their teachers are able to maintain discipline and to follow the activities of their students.

Average spending per student and pupil-teacher ratio

In England, important differences in average spending exist across schools in the state sector. The variations are mainly related to the differences in the socio-economic background of the student body. That is, schools with a high proportion of disadvantaged students have higher spending per pupil, mostly due to the costs associated with the free school meal program targeted at children in the most deprived families.

The pupil-teacher ratio compares the number of students to the number of teachers in a certain school. The ratio "does not take into account the amount of instruction time for students compared to the length of a teacher's working day, nor how much time teachers spend teaching" (OECD, 2012, p. 396), which implies that the student-teacher ratio cannot be interpreted as class size, although it is related to it.

Peer-group ethnic composition

In this respect, I analyse whether students with more co-ethnic friends at school progress better than those with fewer friends from the same ethnicity, controlling for the school ethnic composition. I am aware of the endogeneity problem that this type of analysis entails, since it is quite likely that students choose to be friends with other students with whom they share certain characteristics, with ethnicity being one of them. This problem is presented in more detail in the empirical analysis.

3.4. The dependent variable: differentials in average value-added scores (VAS) in English and Maths from KS3 to KS4

This section pays attention to the operationalisation of the dependent variable, namely, students' average academic progress in English and Maths from KS3 to KS4 national examinations. As mentioned earlier in the chapter, the reasons for not including in my analysis the progress that students make at an earlier stage (from KS2 to KS3) are twofold: firstly, the improvement of ethnic minorities' performance relative to the White British group is more pronounced from KS3 to KS4 than from KS2 to KS3 final examinations and, therefore, it is of a more substantive interest to model progress of the former period. And secondly, the LSYPE starts when the sampled students begin KS3 at the age of 13/14. Thus, the available information for earlier years is much more limited and restricted to that provided by the NPD/PLASC and to those LSYPE variables that are time-invariant.

My empirical analysis of progress uses information from two different time points, namely when students are 13/14 and when they are 15/16. As mentioned in the description of the English educational system, the grading scales change from being continuous at KS3 to categorical at KS4. That means that the distance between each measurement unit varies from KS3 to KS4 examinations and no arithmetic operations could be performed between the outcomes at each time point, e.g.: $y_{KS4} - y_{KS3}$. Therefore, I cannot use a first-differenced estimator model that is commonly applied when only two or three waves of data are available[22]. Taking into account this limitation, I have decided to model academic progress using students' value-added scores (VAS) in English and Maths from KS3 to KS4, as there is no requirement of the scales to be the same. In this regard, a student's VAS from KS3 to KS4 is the difference between his/her grade at KS4 and the average

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[22] In addition, first differencing would eliminate the time-invariant individual characteristics from the model such as the ethnicity or gender of students, given that fixed-effects models only look at the within individual variation.

grade at KS4 of the group of students that achieved the same grade as him/her at KS3. VAS are relative measures of progress, as the performance of a certain student at KS4 is only compared with that of other students that had the same prior attainment at KS3. Therefore, each student has a specific VAS.

The grades in English and Maths that students receive at KS3 and KS4 national examinations have been used to build the VAS for each student. That is, I have decided to work with a single VAS for English and Maths instead of two VAS, one for each subject. The reasons to do so are twofold: firstly, I do not find significant differences in attainment gaps between each ethnic minority with the White British group for each subject. And secondly, using a single measure of academic progress instead of one for Maths and another for English eases the presentation and interpretation of results.

[table 3.1. about here]

Table 3.1. shows the descriptive statistics (mean, standard error, minimum and maximum values) for the average VAS in English and Maths from KS3 to KS4 by ethnicity [23]. Not surprisingly, the distribution of the values is more spread out for White British than for ethnic minorities. This is not surprising, since the native group tends to be much more heterogeneous than the ethnic minorities, and not only in terms of academic performance or progress. The White British majority has not experienced any process of selection that could have shaped their profile as a group, unlike ethnic minorities of immigrant origin.

With regard to the average VAS, Mixed Black, Black Caribbean and White British students have the lowest average scores (-0.20 and -0.18) while Indians and Black Africans have the highest (0.18 and 0.15). Bangladeshis and Pakistanis lie in between, though the

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[23] A graphic showing the average VAS from KS2 to KS3 for the two periods (KS2-KS3 and KS3-KS4), by ethnicity, is also presented in the appendix of the chapter.

academic progress of the former (0.12) is stronger than that of the latter minority (0.0).

3.4.1. Within ethnic group differences in progress from KS3 to KS4

The description of the dependent variable has only been presented in terms of students' ethnicity. Obviously, this type of description has the danger of minimizing the within group differences in progress. As Moore points out, "differences between groups are based on averages, but there is always a significant amount of variance around the mean, and this variance is of considerable importance" (Moore, 2004).

[table 3.2 about here]

Thus, it is important to keep in mind that there are significant differences in progress from KS3 to KS4 within each ethnic group depending on the social class or education of students' parents. As shown in table 3.2, the academic progress of ethnic minority students appears to be less associated with their family's social class, contrary to the case of White British students. In the majority group, there are huge differences in levels of progress across social classes. In fact, the group of White working-class students[24] constitute the group making the smallest academic progress of all students in the sample.

[graphs 3.1 and 3.2 about here]

Graph 3.1. presents the predicted academic progress in English and Maths from KS3 to KS4, expressed in VAS, of each ethnicity, by social class[25]. Graph 3.2. also shows the predicted VAS but in terms of

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[24] Those with at least one parent in a lower supervisory, lower technical, routine or semi-routine occupation, according to the National Statistics Socio-Economic Classification (NS-SEC)

[25] Predicted values calculated from OLS regression with the following covariates: gender, immigrant generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London.

students' ethnicity and the level of education of parents. Both graphs show that Indians, followed by Bangladeshis, Pakistanis and Black African students progress, on average, significantly more than White British, Black Caribbean and Mixed students from age 13/14 to age 15/16, regardless of their parents' social class and education. However, while the average progress of White British students clearly declines the lower the level of education and social class of their parents, this is not the case for the Bangladeshi, Pakistani, and Black Caribbean minorities. Particularly for these three ethnic groups, the association between academic progress and parents' social class and education is totally different to that of White British. For Bangladeshis, it seems that there is almost no relationship, while for the Black Caribbean minority, it is non-monotonic, with socio-economically disadvantaged students progressing much more than those in a better position.

To sum up, the level of within ethnic group heterogeneity varies substantially across ethnicities, with the Bangladeshi minority being the most homogeneous and the White British group being the least. In addition, the pattern of association between academic progress and parents' social class and education for ethnic minorities does not reproduce that of White British students.

The next part of the chapter comprises five sections where I present the results of the empirical analysis of progress from KS3 to KS4. Each of the sections represents a different theoretical framework and pays attention to the specific explanatory factors that were introduced in the first part of the chapter.

3.5. Methods

As mentioned earlier, I am not using a first difference estimator because the distance between each measurement unit of the grading scales at KS3 and at KS4 varies, the former being continuous and the latter categorical. Therefore, I am not able to exploit the statistical techniques designed for longitudinal data to address the problem of unobserved heterogeneity. Nevertheless, I still use the time variation of the explanatory variables when they are measured more than once. The

changes in the time varying variables are calculated using information from two of the first three waves of the LSYPE. Some variables are measured at least in two different waves but, unfortunately, others are only measured once.

In order to build indicators of change for the explanatory variables, two different strategies are used, depending on the variable:

- Firstly, calculating value-added indicators of change. In those cases, students' change from time t_1 to time t_2 is only compared to that of other students giving the same answers at time t_1.

- Secondly, calculating the difference between the answer given at t_2 and that given at t_1.

As will be shown, using one or other strategy to build the indicators of change will depend on the number of answering categories or scales of the explanatory variables.

3.6. Empirical analysis of ethnic patterns of progress from KS3 to KS4

Section 3.6 comprises the third part of the chapter, where the theories put forward in section 3.4 to frame the ethnic differentials in progress are tested empirically. The analyses and the discussion of the findings are presented in the following order:

- The first sub-section (3.6.1.) pays attention to the differences across ethnicities in students' school attitudes, behaviours, and expectations, and how this variation links with the observed ethnic differentials in academic progress.

- Secondly, (3.6.2.) I examine the relationship between parents' attitudes, expectations and the value they give to education on

the one hand and the ethnic differentials in students' academic progress on the other.

- In sub-section 3.6.3. the variables of the two previous sub-sections are combined in a single model, as they are all measuring the attitudes and behaviours towards school of both parents and their children.

- Afterwards (3.6.4.) I explore the differences in academic progress between immigrant and second or higher-generation students. In addition, I test whether different degrees of acculturation, which is operationalised in terms of language use and religiosity, are significantly associated with differentials in academic progress across ethnicities. An indicator of students' degree of familism is also included in the analysis.

- In sub-section 3.6.5 I examine the association between perceived discrimination and unfair treatment by teachers and ethnic differentials in academic progress. In addition, I pay attention to the relationship between discrimination and involvement in deviant behaviours during adolescence.

- And finally (3.6.6.), I explore the association between several school characteristics, including the student-body ethnic composition, and the differentials in progress across ethnicities.

3.6.1. Students' attitudes, effort, and expectations

The explanatory variables included in this empirical analysis are the following four[26]:

- The composite variable taste for school, formed by several items summarising students' attitudes towards school; e.g. how much they like being at school or how useful they think school is. The

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[26] See chapter appendix for details about the operationalisation of the composite variables.

variable has been measured at the end of KS3, when students are age 13/14 and at the end of KS4, when they are age 15/16.

- The number of weekdays doing homework, measured when the students are at the end of KS3 (age 13/14) and a year after (age 14/15).

- A composite variable indicating the perceived importance given to education as the best way to secure a better future. The three items that form this variable have been designed to measure students' internal locus of control, mainly in relation to school. That is, whether they think that the effort they put into school is important for their future. This variable is measured only once when students are age 14/15.

- And finally, the reported expectations of applying to university in the future, for which I have information from three different time points: when students are age 13/14, when they are 14/15, and the last year of KS4, when they are 15/16[27].

Value-added indicators have been calculated using the data from two time points. In this regard, students' change from time t_1 to time t_2 is only compared to that of other students giving the same answers at time t_1.

The variable that measures the changes in university expectations has been constructed using only students' answers given at the ages of 13/14 and 14/15. I have not used the reported expectations at age 15/16 due to the high number of students that were interviewed after their scores at GCSE examinations were made public. Knowing their GCSE

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[27] Students are asked about their educational expectations with the question: "How likely is it that you will apply to university in the future?". The answering categories are the following:
- Will not apply or not likely at all to apply
- Not very likely to apply
- Fairly likely to apply
- Very likely to apply
- Don't know

scores might have altered their previous expectations, so their reported expectations at the age of 14/15 are preferred. The construction of this indicator of change in expectations has not followed the value-added calculation to avoid the exclusion of students with missing values in expectations[28].

Ethnic differences in the explanatory variables

[table 3.3. about here]

Table 3.3. presents the average values in the base year and the changes over time for the seven ethnic groups. As shown in the table, there are significant differences across ethnicities in the four explanatory variables, both in the base year (that is, when students are age 13/14) and in the direction of changes over the next two years.

With regard to the composite variable taste for school, the three South Asian and Black African minorities have significantly more positive attitudes towards school than White British, Black Caribbean and Mixed Black students, whose average score is significantly lower. Moreover, compared to the South Asian and Black African minorities, White British students report more negative attitudes and behaviours towards school at the age of 15/16 than two years earlier. That is, White British students increase their negative attitudes towards school during the last two years of compulsory education significantly more than South Asian and Black African students that reported the same attitudes at age 13/14. Mixed and Black Caribbean students are, on average, considerably similar to the White British majority group in this respect, even though they do not worsen their attitudes towards school as much as the reference group. The differences across

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[28] This is due to the fact that the value-added measures cannot be calculated for those students answering 'don't know' at age 13/14 and/or 15/16. Therefore, to avoid the exclusion of those cases from the analysis, a variable with several categories of change has been created. This new variable is not a relative measure. That is, it only measures raw changes in expectations and students are not only compared to those giving the same answer at time t_1.

ethnicities in this respect can be also pictured using the percentage of students that express a high taste for school both at the end of KS3 and at the end of KS4. Those are the students that obtained a value of at least 3.75 out of 4 on the composite variable at the two time points. In this regard, 27% of Black Africans, 24% of Indians and 20% of Bangladeshi and Pakistani students have values higher than 3.75, compared to only 11% of White British, 10% of Mixed and 9% of Black Caribbean students.

Students' effort is operationalised with an indicator of the number of days per week spent doing homework (not including weekends). As seen in table 3.3, Indian (3.4 days), Black African (3.3), Pakistani and Bangladeshi (3.1) students report, on average, more days doing their homework than Black Caribbean (2.8), White British (2.8 days) and Mixed students (2.6). On the other hand, White British students are the group with the highest decrease in the number of days per week doing homework from age 13/14 to 14/15 compared to the other ethnicities. It should also be noted that the percentage of students that report spending at least 4 days out of 5 doing homework in both years is also higher among some minorities (23% of Indians and 17% of Pakistanis, Bangladeshis and Black Caribbeans) than among White British students (10%).

In terms of internal locus of control, White British students are the group with the lowest average value, meaning that they consider their performance at school to be less important for their future compared to all the other ethnic groups except the Mixed Black minority, which resembles White British students in this aspect. Black Africans are at the opposite end of the spectrum, reporting a highly internalised locus of control, while South Asians and Black Caribbeans are in a middle position.

With regard to students' expectations of applying to university in the future, all ethnic minorities but the Mixed Black group report significantly higher expectations than White British students at the age of 13/14, particularly Black African and Indian students. When the expectations at age 13/14 are compared to those reported a year after,

it can be seen that there is more stability than change, so the differences across ethnicities described for the base year remain to a great extent. However, there are still significant variations in the percentage represented by those who do change their expectations in each ethnic group. In particular, the Bangladeshi minority stands out for having the highest percentage of students increasing their expectations (26%) compared to the White British group (20%).

Results of empirical analysis

The empirical analyses are shown in table 3.4, which presents the estimates yielded by several nested OLS regressions. The first column is the baseline model (model 1), which only includes the ethnicity variables. The four explanatory variables are sequentially added in models 2, 3, and 4. Finally, the control variables are included in model 5.

[table 3.4. about here]

The four explanatory variables (models 2 to 4) partially account for the stronger progress from KS3 to KS4 of the three South Asian and Black African minorities compared to that made by White British students. As has been already described, not only do these groups have significantly more positive school attitudes and behaviours than the White British at age 13/14, but they also have a smaller proportion of students worsening their attitudes in the proceeding years. In fact, the students with stronger academic progress from KS3 to KS4 are those with highly positive attitudes towards school at age 13/14 that are also able to maintain them in the following years. In contrast, Mixed and Black Caribbean students do not differentiate much from the White British in their academic progress. As described in the previous section, their school attitudes and behaviours, both in the base year at age 13/14 and in their evolution over time, are notably similar to those of the White British group, though slightly more positive for the Black Caribbean minority. However, the slightly more favourable attitudes of students from this minority do not translate into a comparable advantage in academic progress over White British students.

When the control variables are introduced in model 5, the coefficients for the three South Asian minorities increase in size and gain significance, particularly those for Pakistanis and Bangladeshis. That is, South Asian disadvantaged students progress much more than equally disadvantaged White British students. In contrast, for Black Africans, the situation is exactly the opposite. The ethnicity coefficient loses significance when the control variables are added in model 5, suggesting that their stronger progress compared to White British students is mostly driven by a composition effect. As mentioned in chapter 2, Black African parents are, on average, better educated than White British parents and, not surprisingly, the Black African minority progress more, on average, than the reference group. Therefore, when parental characteristics are controlled, the difference between the Black African and the White British group are no longer significant. Finally, adding the control variables does not seem to affect the size of the coefficients for the Black Caribbean and Mixed minority groups, which remain non-significant across all models. In this regard, it is surprising that the Black Caribbean coefficient does not change at all when I control for living in a single-parent family in model 5. That is, it seems that the academic progress of the Black Caribbean minority relative to the White British is not affected by the extremely high percentage of students living in single-parent families among the Caribbean minority.

To sum up, the results presented in table 3.4. show that the stronger progress of South Asian and Black African students compared to the White British group is driven by the more positive school attitudes, effort and the higher educational expectations of the former compared to the latter. These attitudinal and behavioural differences appear to be more marked among students of low socio-economic backgrounds. Moreover, White British students are more likely to worsen their school attitudes and behaviour significantly more than South Asians and Black Africans and, as a consequence, the former progress less than the latter. These results are somehow expected, since those students that consider education to be important are also likely to invest more time in schoolwork, which, in turn, will positively impact

their progress. Nevertheless, the stronger progress of Indians and Bangladeshis is only partially accounted for by these factors, as their coefficients remain positive and significant after introducing the explanatory variables in model 4 and the control variables in model 5. Therefore, there might be other factors at play that account for the differentials in progress of South Asian children with White British students. In contrast, the slightly more favourable school attitudes of Black Caribbean students compared to the reference group are not translated into an equivalent differential in progress with the White British group.

3.6.2. Importance given to education by parents

In this section, I examine the relationship between the ethnic differentials in academic progress and the following four explanatory variables measuring parents' educational attitudes, behaviours and expectations[29]:

- The overall value given to education by the main parent, measured with the composite variable parental value to education when students are age 13/14.

- Whether parents pay for private tuition to help students' performance in the main subjects. This question is asked to students at the ages of 13/14, 14/15 and 15/16.

- The degree of homework supervision by family members, asked when students are age 13/14 and 14/15.

- Parents' expectations about their children applying to university. Unfortunately, this question is only asked in the first wave, when

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[29] See chapter appendix for details about the operationalisation of the composite variables

students are age 13/14[30]. Therefore, no indicator of change is built for this variable.

The variation across time of the two time-varying variables has been captured with the construction of several indicators: to measure the changes in homework supervision, a VAS has been calculated. That is, the changes in students' supervision from age 13/14 to age 14/15 are only compared with those cases reporting the same degree of supervision at the age of 13/14. On the other hand, the time change in private tuition has been codified into a new variable with four different categories: the first two refer to students that had the same situation with respect to private tuition at age 13/14 and 15/16; and the other two indicate students that had private tuition at age 13/14 but did not have it at 15/16 and vice versa.

Ethnic differences in the explanatory variables

Table 3.5. presents the average differences across ethnicities in the four explanatory variables whose association with academic progress is examined in this section.

[table 3.5. about here]

With regard to the first composite variable, all ethnic minority parents give significantly more importance to education than White British parents, particularly South Asians and Black African parents, with a score of 3.8 out of 4 compared to the average of 3.4 of White British parents.

In terms of private tuition, Indians and Black Africans stand out for being the minorities with the highest percentage of students receiving

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[30] The expectations for son/daughter are measured using the answers given to the question "How likely is it that your son or daughter will apply to university in the future?", which are organised in 4 categories:
- Will not apply or not likely at all to apply
- Not very likely to apply
- Fairly likely to apply
- Very likely to apply

at least one private lesson in the last year of KS3 (26% and 19%) and that continue to receive it in the last year of KS4. It is striking that the percentage of students receiving private tuition among the Pakistani and Bangladeshi minorities is very similar to that of White British (10%) despite the fact that their socio-economic status is much lower. Indeed, this might be considered an indicator of the greater effort that Pakistani and Bangladeshis parents make for their children's education.

The ethnic groups with more students declaring to receive a high level of family supervision in their homework are the White British and Mixed. As will be analysed later, this measure is likely be an indicator of students' anti-school attitudes, since the supervision might occur precisely because these students do not take enough personal responsibility for their school work.

The ethnic variations in terms of the university expectations of parents are very similar to those of students. In fact, Black African parents report, on average, the highest educational expectations for their children, followed by Indians and Bangladeshis. On the contrary, White British parents hold, on average, the lowest educational expectations, with the other groups lying somewhere in between.[31]

Results of empirical analysis

[table 3.6. about here]

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[31] Previous models have also considered the expectation differentials between parents and students, but the degree of agreement seems to be less relevant for academic progress than the level of expectations themselves. This is probably so because those students with very high expectations also have parents with high expectations and vice versa. For example, the percentage of cases where the students have very high and the parents have low expectations is less than 1% of the sample. However, it is worth noting the high percentage of families where the main parent reports higher educational expectations than their son/daughter in the White British majority (24%) compared to the other groups (between 6% of Black African and 19% of Mixed families). This aspect is further analysed in chapter 4.

Table 3.6. presents the estimates yielded by four nested OLS regressions where model 1 only includes the ethnicity variables; model 2 adds the first three explanatory variables; model 3 adds parental expectations and, finally, the control variables are included in model 4.

Surprisingly, the composite variable measuring the value that parents give to the education of their children is barely significant. The small size of the coefficient, as well as its low statistical significance, might be related to the high level of agreement that all parents expressed with the items, which might be driven by a desirability bias and the generality of the statements.

Paying for private tuition at least once during the last year of KS3 and KS4 has an overall positive and significant impact on academic progress. In contrast, there is no significant association between family homework supervision and academic progress. In terms of parents' expectations, students whose parents consider it very likely that they will apply to university progress significantly more than those with lower parental expectations.

The changes in the ethnicity coefficients from model 1 to model 3 reveal that the four explanatory variables are able to account for a substantial part of the advantage in academic progress of Indians, Pakistanis, Bangladeshis and Black Africans over White British students. When the control variables are added in model 4, the coefficients for the Pakistani and Bangladeshi minorities increase substantially, as expected, in size and significance. As has already been mentioned, Pakistani and Bangladeshi students are in a more disadvantaged position in terms of their family socio-economic status and parental level of education compared to the White British majority. But, since White British students with the same family background are doing particularly bad, the gap in progress with Pakistani and Bangladeshis increases when the control variables are added to the model. In contrast, the coefficient for Black Africans decreases slightly in model 4, given their advantaged position in terms of parental education compared to the reference group. That is, their stronger progress is partially accounted for by a composition effect due

to the average higher educational level of Black African parents, as occurred in the previous empirical analysis.

The case of Black Caribbean students is different from that of the other minorities: their progress in model 1 (that is, without any explanatory or control variables included) does not differ from that of White British, as is reflected by the small size and non-significance of the Black Caribbean coefficient. However, when parental expectations are introduced in model 3, the coefficient becomes negative and significant at $p<0.05$, meaning that despite the fact that Black Caribbean parents report significantly higher educational expectations for their children than White British parents, this does not seem to translate into different rates of academic progress from KS3 to KS4 between the two groups. The Black Caribbean coefficient only decreases slightly its significance and size when the control variables are added in model 4, given their similar socio-economic background with the White British majority.

With regard to Mixed ethnicity students with a white and a black parent, their coefficient remains small and non-significant throughout all the models, as they do not differentiate from White British students in their progress or in their distribution of values of the explanatory variables.

3.6.3. Combining the former explanations

The objective of this section is to combine in the same model the explanatory variables that have been considered in the previous sections 3.6.1. and 3.6.2. The reasons for doing so are twofold:

- Firstly, the two sets of variables are highly related. In section 3.6.1. the focus is on the student while in section 3.6.2. the attention is on the parent, but in both cases, their attitudes, behaviours and expectations regarding school and education are examined in relation to the ethnic differentials in progress. As has been already noted with respect to educational

expectations, there is a high correlation between parents and students in this regard.

[table 3.7. about here]

- Secondly, I also want to test whether the ethnic residuals that, though small, remain in the final models of the two previous empirical analyses, disappear once I include all the explanatory variables for students and parents in the same model. Since the number of missing values increases when I jointly consider all the explanatory and control variables, I perform the analysis in sequential steps, as shown in table 3.7: model 1 only includes the ethnicity variables; model 2 replicates model 3 of table 3.6 of the previous section by including the four explanatory variables about parents' attitudes and expectations. The number of cases decreases from 10.350 to 8.464 and, therefore, there are small changes in the coefficients but they do not alter the interpretation of results. In model 3, the four explanatory variables about students' attitudes, behaviours and expectations are added; and finally, model 4 includes the control variables. Model 5 replicates model 4 except for the two interaction terms between parents' education and Indian ethnicity on the one hand, and parents' education and Bangladeshi ethnicity on the other.

First of all, as the changes in the ethnicity coefficients from model 1 to model 3 suggest, the two groups of explanatory variables are almost completely able to account for the observed gaps in academic progress from KS3 to KS4 between the South Asian and Black African minorities and the White British group. Indeed, only the coefficients for the Black Caribbean and the Bangladeshi minorities remain marginally significant in model 3. This result is extremely relevant, considering that one of the objectives is to eliminate or, at least, reduce the size and significance of the ethnic residuals in the models (Kao & Thompson, 2003). The changes observed from model 1 to model 3 in table 3.7 suggest that the stronger academic progress of Indian, Pakistani, Bangladeshi and Black African students relative to the

White British majority can be attributed to the maintenance of positive educational attitudes, behaviours and expectations of both parents and children throughout the last two years of compulsory education.

When the control variables are added in model 4, only the ethnicity coefficients for Indians and Bangladeshis increase their size and significance, particularly in the latter case. Similarly to previous models, adding the family control variables always translates into an increase of the coefficient for the Bangladeshi minority. For this reason, model 5 introduces two interaction terms between the dummy variables for Bangladeshis and Indians and the variable indicating parents with low or no formal qualifications. All the explanatory factors and the family controls that were included in model 4 remain also in model 5. The interaction[32] reveals that Bangladeshi students with parents with low qualifications progress significantly more than White British students with the same background. In contrast, the progress of Bangladeshi students with parents with qualifications above level 1 is only marginally stronger than that of similar White British students. Therefore, the negative association that usually exists between parents' education with and children's academic performance is moderated by unobserved factors that are specific to Bangladeshi students from low socio-economic backgrounds. That is, even after including in the model all the variables about students and parents' attitudes and expectations, the gap in progress between Bangladeshi and White British students with parents with no or low qualifications remains statistically significant. In contrast, the interaction effect is not significant for Indians, meaning that students of this minority with parents with low qualifications do not differentiate from similar White

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[32] Model 5 in table 3.7 presents the main effects of being Indian, Bangladeshi and having non-educated parents as well as the two interactive terms Indian*non-educated parents and Bangladeshi*non-educated parents. My objective is to know whether the academic progress of Bangladeshi and Indian students with non-educated parents is significantly different from that of similar White British and to measure the gap:

β (Bangladeshi)+ β (Bangladeshi*non-educated parents) = β (non-educated parents)

British individuals once their attitudes, behaviours and expectations with regard to education are taken into account.

3.6.4. Acculturation: language, religiosity and familism

In this section, I analyse the extent to which certain variables that are normally used as indicators of the level of acculturation of immigrant minorities are able to account for part of the ethnic differentials in average academic progress in English and Maths from KS3 to KS4. The variables that are included in the models are the following:

- A dichotomous variable that discriminates between those students that were born in the UK (that is, second or higher generation) and those that were born outside the UK (first generation).

- The main language that students use at home with their families, which distinguishes between those who only speak English, those who mainly speak English but also use another language, and those that either use another language other than English or they are bilingual.

- The importance that religion has for students' lives at age 13/14, and how this changes until they reach age 15/16. There are four answer categories, ranging from 'not religious/religion not important at all' to 'very religious'.

- Whether the students attended any religious classes in the last year, which is asked to students at the age of 13/14 and 14/15. An indicator of change has been constructed to see whether they have increased, maintained or decreased their attendance to religious classes during this period.

- The gap in religiosity between students and parents, which differentiates between those with an equal level of religiosity and those that are more religious or less religious than their

parents. The parents' level of religiosity is measured with the same categories as those for students.

- Students' degree of familism, operationalised as the amount of time that students spend with their families in their spare time[33]. This question is asked to students at the ages of 13/14 and 14/15.

Similarly to the previous analyses, several indicators have been built to measure changes in students' attitudes and behaviours. Firstly, changes in religiosity from age 13/14 to age 15/16; and secondly, changes in students' attendance to religious classes and in students' level of familism from ages 13/14 to 14/15, as this information is not available for age 15/16.

Ethnic differences in the explanatory variables

The average differences across ethnicities in the explanatory variables that are included in the models are presented in table 3.8.

[table 3.8. about here]

As mentioned earlier, the proportion of students born outside the UK varies considerably across ethnic minorities, from 9% of Mixed, to 15% of Bangladeshi and 56% of Black African students.

With regard to students' mother tongue, 24% of Indians, 33% of Black Africans, 36% of Pakistanis, and 54% of Bangladeshis use a language other than English when they are at home, whereas the overwhelming majority of Mixed and Caribbean students have English as their mother tongue.

In terms of religiosity, the differences between ethnicities are remarkable[34]. Although most White British and Black Caribbean

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[33] The variable only distinguishes between respondents reporting to spend most of their free time with their family and those who do not.

[34] As mentioned in Chapter 2, it is important to bear in mind that the religious divide does not necessarily match the ethnic divide. Among Mixed students, 54%

students identify as Christians, a considerable percentage of students among these ethnicities do not identify with any religion at all (41% of White British and 15% of Black Caribbean students). Among the Mixed minority, the percentage of students without religion increases up to 39% but for the other minorities the percentage is negligible. Muslim students are, compared to those with other religions, the group with the highest percentage of individuals considering religion to be very important in their lives. Therefore, Pakistanis, Bangladeshis, Black Africans and Indians are, on average, the most religious groups, while White British and Mixed are the least religious. In parallel, South Asians and Black Africans also have the highest percentage of students attending religious classes at the age of 13/14 and that also continue to do so a year after.

With regard to the differences in the level of religiosity between students and parents, the highest level of agreement is found among Pakistanis and Bangladeshis (83%), followed by Black Africans (67%) and Indians (64%). At the same time, the percentage of cases where both students and parents declared to be very religious is extremely high for Bangladeshis and Pakistanis (80%) and Black Africans (62%), and moderately high for Indians (45%). On the contrary, the lowest levels of agreement are found among the Black Caribbean and Mixed minorities (57% and 54%), as well as in the White British group (53%).

Finally, there are huge differences across ethnicities in how family oriented students are. Half of the South Asian teenagers report at age 13/14 spending most of their free time with their families, compared to 34% of Black Africans, 23% of Black Caribbeans, and only 18% of Mixed and White British students. Nevertheless, South Asians and Black Africans are also the groups with the highest percentage of students that report spending most of their free time with their families

report to be Christian and 6% Muslim; 36% of Indians define themselves as Hindu, 20% as Muslim, and 34% as Sikh. Among Black Africans, 76% define themselves as Christians and 22% as Muslims. The most homogenous minorities in terms of religion are Pakistanis and Bangladeshis, with 99% of students defining themselves as Muslims.

at age 13/14 but stop doing so at age 14/15. This seems quite logical given that the majority of these students were very family oriented at age 13/14.

Results of empirical analysis (I): immigrant generation and language

In this first analysis, I examine whether immigrant children are progressing at a different pace than second or higher-generation individuals, and whether students that have another language other than English as their mother tongue also differentiate in their progress from those who speak English at home. The variables are added in sequential steps: model 1 only includes ethnicity; in model 2, the interactions between ethnicity and country of birth are included; model 3 adds the information about the language spoken at home, with interactions between ethnicity and speaking another language other than English; and finally, model 4 introduces the control variables.

[table 3.9. about here]

Only Black Caribbean immigrant students significantly differentiate from their non-immigrant co-ethnics in the stronger progress that they make (model 2, 3 and 4). White British students born outside the UK also progress more than their native co-ethnics, though the difference is only significant at $p<0.1$ and disappears once the family control variables are included in model 4.

[table 3.10. about here]

Why are the differences in academic progress between immigrant and second or higher-generation students only significant for the Black Caribbean and, though marginally significant, also for the White British? Even though I do not have any selectivity measure, I can compare the average level of education of parents of immigrant children with those of second or higher generation (see table 3.10.) In this respect, parents of White British children born outside the UK seem to be more qualified, with 50% having a degree or higher

education qualification below university degree, whereas only 35% of parents of UK-born White British students. In contrast, Black Caribbean parents of immigrant children are on average, less qualified than those of second or higher generations. Therefore, the stronger progress of Black Caribbean immigrants from KS3 to KS4 might not be related to an educational advantage of their parents, as is the case of the White British group. In addition, given that academic progress is operationalised in VAS, the stronger progress of Black Caribbean immigrants cannot be related to their lower point of departure in terms of performance, something that has been observed in other contexts (Cebolla Boado, 2008). That is so because VAS takes into account this fact by only comparing the progress of individuals that were at the same level in the base year. A possible explanation might be related to the different peer groups or segments of the English society that Black Caribbean immigrant and Black Caribbean natives integrate with during adolescence[35]. An alternative explanation might be related to the degree of selectivity of the migration flow, as it could be that the recent migration flows are more selected, having a positive impact on the progress that these children make.

With regard to the mother tongue, I have created several interaction terms between using another language other than English as a mother tongue and ethnicity for Indians, Pakistanis, Bangladeshis and Black Africans. The interactions show that only Black Africans that speak another language other than English progress more than their co-ethnic English speakers though it is not clear why that is so. A possible explanation could be that speaking another language works as a proxy for the place of origin or the time of migration, both of which are factors that could relate the degree of selectivity of those migrants.

Results of empirical analysis (II): religion and familism

[table 3.11.]

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[35] As will be shown in the last section of the chapter with regard to the relationship between peer group ethnic composition and academic progress, being in a peer group with a majority of Black Caribbean students is negatively associated with academic progress for disadvantaged Black Caribbean students.

The results in table 3.11 reveal a positive association between being religious and academic progress [36] for all ethnicities, including the White British majority. As can be seen in the changes of the ethnicity coefficients from model 1 to model 3, the size and significance of the estimates for South Asians and Black Africans decrease or reverse considerably when religiosity and degree of familism are taken into account.

With regard to religiosity, models 2 and 3, which do not include the control variables, show that being very religious from age 13/14 to age 15/16 as well as attending religious classes is positively and significantly associated with academic progress. Is religiosity therefore, a proxy variable for other kinds of attitudes and behaviours? That is, are religious students more controlled by their families or their local community and, as a consequence, have fewer opportunities to get distracted from their studies and lower their performance? Indeed, the negative coefficient for students that are more religious than their parents supports the idea that the stronger academic progress is only significant for religious students with parents that are also religious. Nevertheless, it is important to bear in mind that the percentage of Pakistani and Bangladeshi students and parents declaring to be very religious is extremely high (80%), meaning that the ´within group` variation is small.

The indicator of familism is added in model 3, further reducing the ethnic residuals of model 2, particularly in the case of Indians. In this respect, students reporting to spend most of their free time with their families from age 13/14 to age 15/16 progress significantly more than those who do not. Indeed, the closeness among family members is likely to act as a protective and control factor preventing teenagers from engaging in any kind of anti-school behaviours that are prevalent during adolescence. South Asian students report spending most of their free time with their family and, as a consequence, it is expected that the inclusion of this variable in the empirical model, accounts for the

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[36] Very similar results were also found when the dependent variable is final achievement at KS4 instead of academic progress from KS3 to KS4.

stronger progress of these three minorities relative to the White British group. Even with no information about the type of activities that students do when they are with their families in their spare time, it is quite likely that these students are more closely supervised by their parents and/or by other family members than if they were with friends or alone[37].

[tables 3.12 and 3.13 about here]

Finally, separate models for each ethnic group have also been run, with changes in the degree of familism from age 13/14 to age 14/15 as the main explanatory variable along with the control variables (see tables 3.12 and 3.13). In this regard, spending most of the time with family is not significantly associated with academic progress in the separate models run for Indian, Pakistani, Bangladeshi and Black African students (table 3.12) How could this finding be explained? In the case of Pakistanis and Bangladeshis, this fact seems to be related to a gender composition effect, as familism gains significance when gender is not included in the model (table 3.13) but loses its significance once gender is added (table 3.12). That is, it appears to be a confounding between gender and familism for these two minorities. In fact, the gender gap with regard to family oriented behaviour is particularly wide for Pakistanis and Bangladeshis. Whilst for the White British, the percentage of females spending most of their spare time with their families at age 13/14 and 14/15 is quite similar to that of boys (8% of girls vs 5% of boys), for Pakistanis it is 39% of girls and 14% of boys and for Bangladeshis is 39% of girls and 18% of boys.

3.6.5. Perceived discrimination and locus of control

In this section, I analyse how several composite measures of discrimination, as well as students' locus of control, associate with the ethnic gaps in academic progress from KS3 to KS4. The variables on

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[37] In fact, there is a correlation of 0.25 between spending most free time with the family and not being allowed to go out in the weekend evenings, which gives more empirical support to the hypotheses regarding the higher supervision of these students.

discrimination included in the empirical analysis are the following three[38]:

- The first one focuses on the extent to which students perceive that the amount of attention that they receive by teachers is fair. I call this variable teachers' attention.

- The second asks students whether they feel they are unfairly punished by teachers. I call this variable teachers' punishment.

- The last composite variable measures the extent to which ethnic minority students feel that their race, ethnicity or religion are a handicap for their future, and whether they think that teachers treat them unfairly for that reason. I call this variable ethnic discrimination.

The first two variables do not specifically measure racial, ethnic or religious discrimination, but only whether students feel unfairly treated by their teachers. Although both variables can be related, this is not necessarily so. In addition, the empirical analysis includes another two composite variables aimed at measuring students' locus of control (external vs internal). All these five variables are measured only once when students are age 14/15, meaning that no indicators of change are built for the analysis. In addition to these five explanatory variables, I also include an indicator of students' involvement in risky behaviour and about how their level of involvement changes from age 13/14 to age 15/16[39].

Ethnic differences in the explanatory variables

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[38] See chapter appendix for details about the operationalisation of the composite variables.

[39] The composite variable considers the following four behaviours: whether the students have played truant, drank alcohol, graffitied on walls and/or vandalized public property. The value-added measure of the variable risky behaviour indicates whether students have increased or decreased their involvement in risky behaviours at age 15/16 compared to the average of those who were involved in the same risky behaviours two years before.

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With respect to the locus of control, all minorities have on average, significantly higher values in the internal locus of control composite measure compared to White British students. The highest scores are those of Black Africans (3.66) and Indians (3.60), followed by Pakistanis and Bangladeshis (3.55), and Black Caribbeans (3.53). All of them are significantly different from White British (3.37) at $p<0.05$, while for Mixed students (3.44) the difference is only marginally significant ($p<0.1$). This might seem surprising, given that the initial expectation was that ethnic minorities (or, at least those that feel more discriminated against) would have on average, lower values in the internal locus of control than White British students. However, this is not confirmed by the data and ethnic minority students seem to consider that their future is more conditioned by their individual actions (at school) than White British do.

With regard to the external locus of control, only Pakistani, Bangladeshi and Black Caribbean students obtain significantly higher values than White British students, though the difference is only significant at $p<0.1$ for the Caribbean minority. Therefore, it seems that the answers of Pakistani, Bangladeshi and Black Caribbean individuals are, on average, less consistent than those of White British, since they score high values in the internal but also in the external locus of control. It is expected that the external and internal locus of control are negatively correlated, as individuals with a stronger sense of agency (internalised locus of control) are likely to feel that what happens in their life is not determined by external factors or by chance (externalized locus of control). Therefore, the high scores of Pakistanis, Bangladeshis and Black Caribbeans on both measures are striking. Indeed, these three minorities have the lowest correlation between both factors.

In terms of the perceived attention paid by teachers, Indian and Pakistani students feel, on average, significantly less ignored by their teachers than White British do. In contrast, Black Caribbean students feel, on average, significantly more ignored than the former. With

regard to the extent to which students believe they are unfairly punished by their teachers, Pakistani, Black Caribbeans and Black Africans differ significantly from White British students because they perceive themselves to be more punished than their classmates.

If we focus on how discriminated minority students feel due to their race, ethnicity or religion, Black Caribbeans and Black Africans are the two groups reporting to feel more discriminated against, followed by Pakistani, Bangladeshi, Mixed and Indian students. The fact that Black students are not only those than perceive to be more discriminated against but also those feeling more unfairly treated by their teachers does not come as a surprise. Past empirical research has reported that the Black Caribbean minority is the group feeling more discriminated against in their everyday lives (Chahal, 1999; Karlsen & Nazroo, 2002). Moreover, recent investigations have acknowledged the communication problems that Black students experience with white teachers compared to black teachers (David Gillborn, 1997). Nevertheless, some scholars have challenged this assumption and have emphasised the greater discrimination faced by the Muslim population, which comprises the Pakistani and the Bangladeshi minorities and a fraction of the Indian minority (Modood, 1994).

Finally, the extent to which ethnic minority students are involved in risky behaviour, and whether this is connected to how discriminated against or unfairly treated they feel by society, including the educational system, is extremely relevant. White British, Mixed, and Black Caribbean students are the groups that are more involved in risky behaviour at the age of 13/14, whereas South Asian students are those reporting the smallest degree of involvement. Moreover, South Asians and Black Africans are also the minorities that reduce their participation in this type of behaviour the most from the age of 13/14 to age 15/16.

Results of empirical analysis

The explanatory variables are sequentially added in the following order: firstly, the two variables indicating how students perceive that

teachers treat them –teachers' attention and teachers' punishment– are included in model 2; afterwards, the variables about perceived ethnic discrimination (model 3) and locus of control (model 4) are added, including interactions between ethnicity and ethnic discrimination. Model 5 includes an indicator of change in involvement in risky behaviour from age 13/14 to 16/16. Finally, in model 6, all the control variables are added.

[table 3.16. about here]

The results of the empirical analysis are presented in table 3.16. As expected, in models 2 to 4, the three composite discrimination variables as well as the external locus of control are all significantly and negatively associated with academic progress, while the internal locus of control is positively associated.

The coefficients for Indians, Pakistanis, Bangladeshis and Black Africans increase slightly in size when the explanatory variables are introduced in models 2 and 3. This is due to the fact that, on average, ethnic minority students feel more discriminated against due to their ethnicity than White British students do. Therefore, given that all discrimination measures are negatively associated with academic progress, when these are controlled for, the relative progress of all ethnicities compared to the White British group increases.

Nevertheless, except for the Black Caribbean group, the measures of discrimination do not seem to be related to the differentials in academic progress between the other ethnic minorities and the White British group. However, it should be noted that the change in the coefficient for the Black Caribbean minority, becomes positive and significant, once the explanatory variables about teachers' behaviour and ethnic discrimination are introduced in model 3. Considering that this is the minority group that feels more discriminated against on the one hand, and that discrimination is negatively associated with academic progress on the other, this change in the Black Caribbean coefficient is expected.

Model 4 introduces several interaction terms between ethnicity and ethnic discrimination to examine whether there are variations in the relationship between ethnic discrimination and academic progress across ethnicities. In this respect, all interactions turn out to be non-significant. That is, feeling more discriminated against is not significantly associated with academic progress for any ethnic minority. In order to explore in more detail this finding, a variable indicating students' involvement in risky behaviour from age 13/14 to 15/16 is added in model 5. After including this variable, the interaction between discrimination and Black Caribbean becomes significant, suggesting a positive association between discrimination and academic progress[40]. The most likely explanation for the change is related to the association between perceived discrimination and participation in risky behaviours. When the negative effect of risky behaviours and of the other four explanatory variables that are associated with feeling discriminated against are controlled for, the coefficient for ethnic discrimination becomes positive and significant for the Black Caribbean group. However, when the control variables are added in model 6, the interactions are no longer significant for any ethnic minority, suggesting that perceived discrimination is prevalent among Caribbean boys of low socio-economic status.

Anticipated discrimination or oppositional culture?

The results presented in model 5 of table 3.16 raise some questions about the extent to which ethnic discrimination can differently affect the school-related behaviour of ethnic minority students. As has been just reviewed, it seems that ethnic discrimination is not associated with the academic progress of Mixed, South Asian and Black African children. On the other hand, the significance (even if marginal) of the coefficient for Black Caribbeans only emerges when I control for the other explanatory variables.

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[40] The coefficient of ethnic discrimination for the Black Caribbean minority is 0.15 and non-significant in model 4, whereas in model 5 is 0.18 and significant at $p<0.1$. The change is quite small and, therefore, the results should be taken with caution.

In this regard, it is worth analysing the association between the five explanatory variables that have been used to measure discrimination and locus of control with the composite variable indicating the involvement in risky and/or problematic behaviour at the age of 14/15[41]. The results of this analysis are presented in table 3.17. Model 1 only includes the two variables indicating how ignored and unfairly treated by their teachers students feel; model 2 adds the variable on ethnic discrimination, while model 3 includes the two locus of control measures. Finally, model 4 introduces all the control variables.

One of the most relevant findings presented in table 3.17 is that the three South Asian and Black African minorities are all significantly less likely to be involved in problematic behaviours compared to White British students. The case of Black Caribbean students is more interesting, since they are on average very similar to White British students in their absolute levels of involvement in problematic behaviour (that is, when no other variables are taken into account). However, when discrimination and teachers' behaviour are included in models 2 and 3, the coefficient for Black Caribbeans becomes negative and significant. That is, the problematic behaviours of Black Caribbean students are partially associated with how discriminated against they feel by their teachers and society in general. This result supports the existence of an oppositional culture or reactive behaviour among Black Caribbean students, which seems to emerge as a consequence of their subordinate position in society as a group.

It is worth noting that when the two measures of locus of control are added in model 4, the Black Caribbean ethnicity coefficient decreases in size and loses significance. Black Caribbean teenagers, compared to White British students, have a more internalised locus of control. And,

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[41] For this analysis I have created a new composite variable which not only includes the involvement in truancy, alcohol drinking, graffitiing walls and vandalizing public property, but also the frequency that the student creates trouble in class at age 13/14, as reported by the student himself/herself at that age.

given that an internalised locus of control negatively correlates with problematic behaviour, the Black Caribbean ethnicity coefficient decreases in size and significance when this variable is kept constant in model 3. This is indeed a puzzling result: on the one hand, Caribbean students feel discriminated against and unfairly treated in society and in the educational system but, on the other, they score relatively high in the internal locus of control measure. It seems contradictory at first sight, as I would expect that students feeling unfairly treated and discriminated are also those perceiving that their success is more dependent on external factors that are not under their control. However, it is also important to bear in mind that the Black Caribbean minority also scores high in the external locus of control indicator, which partially calls into question the reliability of their internalised orientation.

Finally, in model 6 of table 3.17, I introduce two interaction terms to examine whether Black Caribbean students of parents with low and high qualifications differentiate significantly from White British students in their involvement in problematic behaviours. In this regard, model 6 reveals an unexpected result: Black Caribbean children with non-educated parents get involved in significantly less problematic behaviour when the variables on discrimination and locus of control are kept constant. On the contrary, Black Caribbean students with moderately and highly educated parents do not differentiate from White British students in their behaviour, whether the explanatory variables are taken into account or not. These results in model 6 suggest the following: firstly, Black Caribbeans are not, on average, more prone than White British children to getting involved in problematic or anti-school behaviour. Secondly, the more problematic behaviour of Caribbean students with non-educated parents is related to how discriminated against and unfairly treated they feel. In contrast, since White British students do not feel ethnically discriminated against as Black Caribbeans do, their problematic behaviour is not explained by these factors.

Black Caribbean students with parents with low qualifications constitute the most disadvantaged group within this minority, since

their parents are overwhelmingly working in low-paid jobs. It is not surprising that these students are precisely those that feel more unfairly treated and discriminated against. Even though White British students with non-educated parents also feel unfairly treated, it seems this perception is not as related to their problematic behaviour as in the case of Black Caribbean students[42]. In this sense, my findings match previous research that reports a higher degree of misconduct among Black Caribbeans children compared to the other minorities (Rothon, 2005).

3.6.6. School effects (I): teachers' efficacy, parents-school relationships and average pupil spending

Considering the complexity of the analysis of the so-called school composition effects on academic progress, I firstly examine separately the extent to which three school-related factors –perceived teachers' efficacy, parents-school relations, and average pupil spending- are able to account for the ethnic differentials in progress from KS3 to KS4[43]. For all the school effects analyses, I only include students in comprehensive state schools, which represent nearly 90% of the student body in England.

- The first variable, which I refer to as *teachers' efficacy*, is the result of students' evaluation of their teachers in several aspects, such as how well they maintain discipline or whether they check if students do their homework and behave correctly at school.

The quality of the parents-school relationship is measured with the following two composite variables:

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[42] In fact, adjusted Wald tests comparing the average scores in external locus of control and perceived discrimination of White British and Black Caribbean students with non-educated parents reveal that the latter score significantly higher than the former in external locus of control and in perceived discrimination at p<0.05. However, the fact that both groups feel unfairly treated by their teachers gives evidence of how excluded disadvantaged White British children feel at school.

[43] See chapter appendix for details about the operationalisation of the composite variables

- The first one, which I call school communication, measures whether parents feel that the school gives them regular information about how their children are doing and whether they are able to understand the English educational system and the qualifications.

- The second one, which I call school events, asks parents whether they have participated in any parents' meetings or events, which are very common in English schools.

- Finally, I also include a measure indicating the pupil-teacher ratio as well as the average student spending in secondary education for each local authority. The spending per pupil varies considerably across local authorities in England, and it is usually the schools with high percentages of disadvantaged children that are those which have the highest spending per pupil.

All these variables are measured only at one time point, when students are 13/14 and are finishing or have just finished KS3. The data about pupil spending is from the year 2003/2004, when the cohort of students of the LSYPE is age 13/14.

Ethnic differences in the explanatory variables

[table 3.17. about here]

In terms of perceived teachers' efficacy, South Asian and Black African minority students consider their teachers to be more effective than White British students. In contrast, Black Caribbean students consider their teachers to be less effective, although the difference with White British is only marginally significant ($p<0.1$). Considering that these scores are based on students' perceptions, it is not clear whether the group differences reflect actual disparities in teachers' behaviours. However, it is important to bear in mind that students considering their teachers to be more effective are also the groups progressing more

from KS3 to KS4 and that have more positive attitudes and behaviours towards school.

With regard to school communication, Black Caribbean and Black African parents differ significantly from White British parents because they consider it more important to have a better relationship with schoolteachers and have more knowledge about their children's education than White British parents do. In contrast, Bangladeshi parents report more difficulties in their contacts with schools and having less knowledge compared to White British parents. With respect to the attendance at parents' meetings, Indian parents report going significantly more than White British parents, while Bangladeshis attend significantly less. Therefore, it seems that Bangladeshi parents are those facing more difficulties establishing regular contacts with their children's school and those with less knowledge about how the English educational system works compared to the other ethnic minorities. This disadvantage is likely to be related to the lack of fluency in English and the average low educational qualifications of the Bangladeshi minority.

Finally, in terms of average pupil spending in secondary education, there are significant differences across ethnicities derived from the fact that they tend to be more geographically concentrated in the most deprived local authorities of the country. For example, the correlation between the average pupil spending in secondary education and the percentage of students entitled to free school meals is 0.62. Ethnic minorities are over-represented in schools with higher spending per student than the White British, as table 3.19 reveals. For example, the average spending per pupil in schools where Bangladeshi students are enrolled is £4,455 pounds, while for the White British it is £3,570 pounds.

With regard to the pupil-teacher ratio, the three South Asian minorities go to schools that, on average, have a smaller pupil-teacher ratio than those of White British students.

Results of empirical analysis

The models presented in table 3.18. show that, as expected, higher perceived teachers' efficacy as well as good communication and participation of parents at school are all significantly and positively associated with students' academic progress. On the other hand, the spending per student appears to be negatively correlated with progress. Although it might look contradictory at first sight, the pupil spending is highly correlated with geographical deprivation, and it is precisely those schools with a higher proportion of economically disadvantaged students that receive more funding. However, it is quite likely that the overall performance of schools in deprived local authorities would have been even lower had they not received that extra funding for their students. In this regard, the slight decrease of the Bangladeshi covariate from model 2 to model 3 suggests that it is the minority that benefits the most from the higher pupil spending of the schools they attend, since Bangladeshis are highly concentrated in the most deprived areas of the country. Nevertheless, these four variables cannot explain much of the differentials in progress between ethnic minorities and White British students, as the changes in size of the ethnicity coefficients from model 0 to model 3 are very small.

With regard to the between-schools variance in progress, the variance partition coefficient derived from the two level random intercept regressions without covariates (model 0), suggests that 16% of the total variance in progress can be attributed to differences across schools. When the ethnic covariates are added, the variance reduces to 12.4%. The last model (model 5) further reduces the amount of variance in the differentials in academic progress that could be attributed to schools to only 10.1%.

3.6.7. School effects (II): ethnic composition

One of the most recent studies about the effects of ethnic concentration in English schools on the achievement of ethnic minorities is the research by Burgess et al., which focuses on the test score gap of Black Caribbean, Indian, and Pakistani with White British students. In contrast with much of the empirical evidence coming from the US, they found no evidence of a negative impact of ethnic segregation on educational attainment (Burgess, Wilson, Briggs, & Piebalga, 2008). In my empirical analyses, I argue, like most researchers do, that the characteristics of the student-body composition are relevant for academic progress because they define to a great extent the type of social interactions and relations that students have in their lives. Peer groups constitute relevant actors in the individuals' socialisation process, and their influence on the behaviour and attitudes of students is likely to be even more intense during adolescence, a period when relationships outside the family become an integral part of teenagers' development (Giordano, 2003). In this regard, the aim of my research is to identify whether the academic progress made by students of different ethnicities varies depending on the ethnicity of their closest peers at school. Given that the probability of having friends of the same ethnicity increases the higher the proportion of co-ethnics at a school is, I include several variables measuring the percentage of students from the main ethnic groups in each school.

I am aware of the fact that including observed contextual and family control variables does not solve the problem of self-selection. In this regard, there are two possible sources of selectivity bias: firstly, the non-random distribution of students into schools. As explained in the theoretical section, families are geographically segregated in terms of relevant characteristics such as ethnicity or socio-economic background[44]. As a consequence, schools reflect to some extent this

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[44] Most students can choose between schools located in their Local Authority. In this regard, the majority of parents report that their children go to the school that was their first choice, though there are some variations across ethnicities: 91% of White British students go to schools that were their first choice, but only 87% of

spatial segregation. And secondly, the other source of selection bias is related to how students choose their group of peers, that is, the tendency of individuals to join a group of peers with similar attitudes and behaviours. Considering that students are more likely to become friends with other students with whom they share certain characteristics, it might be that the estimation of peer effects is overestimated.

Ethnic differences in the explanatory variables

The student body of English schools varies considerably in terms of their ethnic and socio-economic composition. In most cases, schools with a high proportion of ethnic minority students also have a high proportion of children from a poor socio-economic background. The percentage of children entitled to free school meals (FSM) has been used in the English literature as a proxy variable to measure the socio-economic composition of schools.

[table 3.19. about here]
[table 3.20. about here]

The overlap between the ethnic and socio-economic composition appears in table 3.19., which presents the correlations between the percentage of FSM entitlements and the percentage of students from the main ethnic minorities at English state schools. The correlations are particularly high for the Bangladeshi, Pakistani and Black African minorities, but less so for the Indian minority. Several studies have presented empirical evidence about the negative association between the over-representation of students from poor socio-economic backgrounds and the educational attainment of the whole student body. Indeed, this fact has been frequently invoked in the literature to explain the average lower performance of schools with a high proportion of immigrant and/or ethnic minority children. Though the correlation between immigrant presence and average levels of attainment at schools tends to be negative, the sign of the correlation is

Bangladeshis, 84% of Pakistanis, 80% of Indians, 75% of Mixed, 73% of Black Africans and 69% of Black Caribbeans do so.

not so clear when it comes to academic progress instead of educational attainment. In terms of the latter, table 3.20. confirms these negative correlations between students' average grades at KS2, KS3 and KS4 examinations in English and Maths and the percentage of ethnic minority students at schools. The only exception is the case of Indians, whose over-representation is not significantly correlated with the average school performance at KS2 and KS3, and it is positively correlated at KS4. This is not surprising, since the average grades obtained by Indians at KS2 and KS3 do not differentiate from those of White British, but they are significantly higher at the end of KS4.

In contrast, the correlations between the ethnic composition of schools and students' VAS in English and Maths reveal a different story: while those in the period KS2-KS3 are negative, they become positive in the KS3-KS4 period. That is, the proportion of ethnic minority students does not negatively correlate with the academic progress that students make from KS3 to KS4 examinations. However, the higher the presence of students from disadvantaged backgrounds (namely, those entitled to free school meals), the lower the attainment and progress. Nonetheless, it is surprising to find a correlation of only -0.02 between the KS3 to KS4 value-added scores and the percentage of children entitled to FSM at schools, while the correlation with the scores from KS2 to KS3 is considerably higher (-0.24).

[table 3.21. about here]
[table 3.22. about here]

Ethnic minority students are clearly over-represented in schools that have a considerable proportion of students of the same ethnicity, as table 3.21 shows. For example, 47% of Pakistanis and 40% of Indians and Bangladeshis go to schools where 20% of the student body is of the same ethnicity. The two Black minorities appear to be less concentrated than the South Asians, as only 26% of Black Africans and 12% of Black Caribbeans go to schools where at least 20% of the students are from the same ethnicity. More generally, compared to White British, ethnic minority students tend to go to schools where there are proportionally more ethnic minority students, co-ethnics or

not. For instance, only 7.5% of White British students go to schools with more than 20% of non-English speakers, while this percentage increases by up to 33% for Mixed, 62% for Caribbeans, 66% for Indians and Black Africans, 74% for Pakistanis, and 80% for Bangladeshis (see table 3.21). In terms of the school socio-economic composition, ethnic minority students, especially Pakistanis and Bangladeshis, tend to be over-represented in schools with a high percentage of free school meal entitlements, as appears in table 3.22. and are highly concentrated in certain urban area schools, particularly the Bangladeshi students (Burgess et al., 2008). In this regard, the preference of Pakistani and Bangladeshi parents for sending their children to schools with a high presence of co-ethnics has been previously described (Cebolla Boado, 2007).

[table 3.23. about here]

In terms of the ethnic composition of students' peer groups at school, there are significant differences across ethnicities, as table 3.23 shows. As expected, White British students are those with more co-ethnics in their group of friends at school, since they represent more than 85% of the school population. Among minority groups, Pakistanis and Bangladeshis also stand out for being the two minorities with the highest percentage of students reporting that all or most of their friends at school to be of the same ethnicity (26%). This is entirely consistent with the concentration of Pakistanis and Bangladeshis in schools with high percentages of students from the same ethnicity shown in table 3.21., since that increases their likelihood of having co-ethnic school friends. However, Bangladeshis are also the minority group with the highest percentage of students reporting no co-ethnic friends (12%) in their school peer group, compared to 10% of Indians and 6% of Pakistanis, Black Caribbeans, and Black Africans.

Results of empirical analysis

In this section, I analyse more in-depth the association between ethnic peer group composition and academic progress from KS3 to KS4. In

this regard, I focus on two specific questions[45]: firstly, does the association between academic progress and ethnic peer composition vary systematically by ethnicity? And secondly, does the association between academic progress and the ethnicity of school friends vary across schools depending on the socio-economic composition (measured as the percentage of FSM entitlements in the student body)? For example, does the academic progress of Black Caribbean students, whose school friends are mostly Black Caribbean, differ depending on whether the school has more or less students receiving FSM?

Does the proportion of co-ethnic friends interact differently with progress depending on students' ethnicity?

Table 3.24. includes six nested two-level random-intercept regressions, where individuals are taken as level 1 and schools as level 2 units. The point of departure is model 1, which only includes the ethnicity covariates. Model 2 introduces the variable about the peer group ethnic composition, which is interacted with the five main ethnicities[46]. I also include an interaction with the Mixed ethnicity, although it is not clear whether these students consider as co-ethnic only those with a White and a Black parent, or they also see Black students as co-ethnics.

[table 3.24 about here]

The results in table 3.24. show significant variations across ethnicities compared to White British students in the association between their peer group ethnic composition and academic progress. In this respect, having more co-ethnic friends at school appears to be significantly and

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[45] Initially, I have also analysed whether the association between academic progress and ethnic peer composition vary depending on the school ethnic composition. The models show no significant interaction effects, suggesting that the association between progress and peers' ethnicity does not vary depending of the percentage of co-ethnics in schools' student bodies.

[46] I consider the measure on peer group composition as a continuous variable. This decision was taken to be able to interact this variable with all the ethnic covariates. Had it been taken as categorical, there would be five categories to interact with each ethnic covariate, which would yield 30 interaction terms. Having such a high number of interactions would make the model unnecessarily complex and difficult to estimate.

negatively associated with academic progress for Pakistani and Black Caribbean students compared to White British. Moreover, this association remains significant across all the models; that is, the control variables do not confound with peer composition. In contrast, the negative association between academic progress and having more co-ethnic friends for Black Africans is entirely explained by family background characteristics.

Does the effect of ethnic peer composition vary depending on the student body socio-economic composition?

In order to analyse these differences, I have run three different models: the first one only for those students in schools where children entitled to FSM make up 10% or less of the student body, which I call *low deprivation* schools. The second, for students in schools where between 10% and 25% of the student body are entitled to FSM, which I refer to as *moderately deprived* schools. And finally, the third is run only for those students in schools with more than 25% of the student body entitled to FSM, which I call *deprived* schools.

My objective is to analyse whether the association between having more co-ethnic friends with academic progress varies depending on the school socio-economic composition. For this reason, I interact the ethnicity with a variable indicating the proportion of co-ethnics among school friends. The reference category in each of the three types of school is always the White British majority.

[table 3.25 about here]

The models reveal that, for Pakistanis in low to moderately deprived schools, having more co-ethnic friends is significantly associated with having a poorer academic progress compared to the White British with more co-ethnic friends in similar schools. On the other hand, in deprived schools, those with more than 25% of FSM entitlements, having an increasing number of co-ethnic friends is not significantly worse for Pakistanis than it is for White British students. This is likely

to be related to the poor progress of White British students in deprived schools.

However, for Black Caribbean and Black African students in deprived schools, having more co-ethnic friends is negatively and significantly associated with their progress compared to White British. This could be evidence that the co-ethnic peer networks among black children are more detrimental for their members than the peer groups of White British children. The same situation occurs for Mixed students in moderately deprived schools[47]. However, these conclusions should be taken with caution and should not be interpreted in terms of a causal relationship between peer network composition and academic progress. That is, it could be that the selection of peers among Black and Mixed students in deprived schools is different from the selection process among White British students.

Is there evidence of a peer effect on learning?

Even though I acknowledge the limitations of my approach, the results presented in tables 3.24 and 3.25. give some empirical evidence of a negative association between peer group ethnic composition and academic progress for the Pakistani and the Black Caribbean minorities. For the other minority groups the results were either less consistent or, as in the case of Indians, gave no evidence at all of a peer group *effect* of any kind. One of the most striking findings is that, for Pakistani and Black Caribbean students, studying in schools with more co-ethnics as well as having more co-ethnic friends is negatively associated with progress even when the family background controls are added to the models. In addition, for these two minorities, the negative association between academic progress and having more co-ethnic friends appears to be stronger in schools with high numbers of socio-economically disadvantaged children.

Why does having more co-ethnic friends remain negative for the progress of Pakistani and Black Caribbean students after including all

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[47] All these results remained, even when the family background variables were included in the models.

the control variables? Even though I might be overestimating the peer effect due to self-selection, these results might offer some evidence on the existence of an oppositional culture among students from these two minorities.

This finding leads me to ask why this negative peer group effect exists only among Pakistanis and Black Caribbean students but not among Indians, Bangladeshis or Black Africans. The case of Bangladeshis is indeed quite surprising given that they do not differentiate much from Pakistanis in their socio-economic and cultural background. With regard to Black Africans, and in contrast to what happens for Pakistanis and Black Caribbeans, the negative association between having more co-ethnic friends and academic progress is completely accounted for by family background factors (model 6 in table 3.24.). In particular, it is when we control for the immigrant generation of the student that the negative effect disappears[48]. A possible explanation for this negative association is that it would only occur among Black African immigrants whose co-ethnic friends were also mostly first-generation immigrants. In those cases, it is likely that spending most of the time with peers that do not speak English, and that might also not be fully integrated at school, is not beneficial for their academic progress.

3.8. Summary of findings

In this chapter, I have identified several mechanisms that are behind the different levels of academic progress of ethnic minorities relative to the White British group from KS3 to KS3. The empirical analysis has been organised according to the theoretical approaches that were presented in the first part of the chapter, namely: the theory of immigrant selectivity, cultural difference approaches, acculturation theory, theories about the effects of discrimination and locus of

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[48] Table 3.24. only shows model 6, where the control variables are added all at once. However, the interaction indicating the effect of having more co-ethnic friends for Black Africans loses its significance when the students' country of birth is added to model 4.

control, and theories on school effects. As mentioned at the beginning of the chapter, some of the variables that are included in the empirical analysis could be interpreted as indicators of attitudinal and behavioural differences between the ethnic minorities and the White majority that might be due to the selectivity of the migration flows that originated the former or due to their cultural background. As presented in the section on acculturation, there are indeed significant behavioural or attitudinal variations across ethnicities, such as the degree of religiosity or familism. In this case, these two characteristics are likely to be related to the actual differences that exist between the majority culture in England and those that are/were dominant in the countries of origin where ethnic minorities come from. However, other differences in behaviour or attitudes with regard to education might not be at all related to cross-country cultural variations but to the characteristics of migrants. That is, immigrants, particularly those in the first waves of migration, are likely to be, on average, more ambitious and have more drive for success than non-migrants (Feliciano, 2005). This ambition is reflected in the higher expectations that immigrant parents hold for their children and the importance they give to education. This is even the case of Black Caribbean parents, even if many of these parents are bound to be second generation and, therefore, they might be more assimilated to the attitudes towards education that exist among the White British group. Even though I do not have individual information about the generation or time of arrival of parents, the migration flows from the Caribbean started earlier than those coming from South Asia and, therefore, the proportion of second and higher-generation individuals is higher among the Black Caribbean (Hatton, 2005). As a consequence, it is not surprising that this minority resembles more the White British group in their patterns of academic progress as well as in their attitudes and behaviours towards education.

In the remainder of this section, I will review the main findings that have been presented in the chapter. For that purpose, the sizes of the ethnicity coefficients –that is, the ethnicity residuals- that remain after including each set of explanatory variables in the models of academic progress are shown in graphs 3.3 and 3.4. In this respect, graph 3.3. presents the ethnic residuals for the models that only include the

explanatory but not the control variables. On the other hand, in graph 3.4, the ethnic residuals that remain after including the explanatory and the control variables, are presented.

[graph 3.3. about here]
[graph 3.4. about here]

Model 1 of graphs 3.3. and 3.4. presents the absolute ethnic differentials in academic progress from KS3 to KS4. That is, the sizes of the ethnicity coefficients without taking into account any explanatory or control variables. Model 2, which corresponds to model 4 presented in table 3.4., shows the ethnic residuals that remain after including students' educational attitudes, effort and expectations. Model 3 corresponds to model 3 of table 3.6, which includes the variables that measure the importance that parents give to the education of their children and the expectations they have for them. Model 4 shows the ethnic residuals that remain after taking into account the explanatory variables of the two prior models, which corresponds to model 4 of table 3.7. Model 5 includes the acculturation indicators (generation, language, religiosity and familism). Model 6 includes the variables about discrimination and locus of control. And finally, models 7 and 8 show the ethnic residuals for the models that include the two sets of school variables.

As the differences between graph 3.3 and 3.4 reveal, when the control variables are included in the empirical models (graph 3.4), the ethnic differentials in academic progress with the White British group increase, particularly for the three South Asian minorities. As explained earlier in the chapter, Pakistani and Bangladeshi students are in a significantly more disadvantaged position in terms of their family socio-economic background, compared to the White British group. However, the negative effects that are associated with living in a poor family with non-educated parents appear to be milder for South Asians, especially for Bangladeshi students, than for the White majority group. Indeed, the differentials in progress between White British and South Asian students with non-educated parents are dramatic, with the latter progressing much more than the former.

Both graphs 3.3 and 3.4 make clear that the absolute differentials in progress of South Asians and Black Africans relative to the White British group represented in model 1, can be explained to a great extent by the attitudes, behaviours and expectations with regard to education of both parents and students. In this respect, it appears that White British students increase their negative attitudes towards school and decrease their expectations during the last two years of compulsory school much more than South Asian and Black African students. In addition, the high levels of religiosity and familism of these four minorities, particularly the South Asians, are able to account for a large amount of the observed differentials in academic progress.

In contrast, for Black Caribbean students, the slightly more positive attitudes and expectations of both students and parents are not translated into a comparable advantage in progress over the White British group. Therefore, when these factors are taken into account in models 2, 3 and 4, the coefficient for Black-Caribbbeans becomes negative and significant (see graphs 3.3. and 3.4).

As shown in the two graphs, the last three groups of variables, which correspond to the theories about the effects of discrimination on the one hand, and of school effects on the other, do not seem to be as able to account for the gaps in academic progress across ethnicities as the previous theoretical approaches. With regard to the association between academic progress and perceived discrimination, the empirical analysis suggests the existence of a reactive ethnicity (Portes & Rumbaut, 1996) among Black Caribbean students of low socio-economic status, which could be interpreted as a reaction to their perceived exclusion and marginalisation in English society. However, although discrimination is associated with students' involvement in deviant anti-school behaviour, when I control for the latter in the model, the association between feeling discriminated against or unfairly treated is not significant or is even positive.

With regard to the ethnic composition of students' peer group at school (model 8 in the graphs), the analysis only yields significant results for

the Black Caribbean and the Pakistani minorities. The results point to a significant and negative association between having more co-ethnic friends at school and academic progress among economically disadvantaged Caribbean and Pakistani students. This finding reinforces the idea that some students from these two minorities are adopting a reactive ethnicity as a consequence of their disadvantaged position in society.

To sum up, the empirical analyses presented in this chapter have shown that the ethnic differentials in academic progress are mainly driven by the worsening of school attitudes, behaviours and expectations of White British students on the one hand, while, on the other, South-Asian and Black African students are more able than the reference group to maintain or increase their positive attitudes towards school as well as their educational ambitions.

Table 3.1. Descriptive statistics of the VAS in English and Maths from KS3 to KS4, by ethnicity

	mean	se	median	min	max	N
White British	-0.16	0.01	0	-6	5.5	8456
Mixed	-0.20	0.05	0	-4.5	2	391
Indian	0.18*	0.04	0	-2.5	3	884
Pakistani	0.00*	0.03	0	-3.5	2.5	777
Bangladeshi	0.12*	0.04	0	-3.5	3	599
Black Caribbean	-0.18	0.05	0	-3	2	443
Black African	0.15*	0.05	0	-4	2	379

N=12458
Difference with White British significant at p<0.05

Table 3.2. Mean VAS in English and Maths from KS3 to KS4, by ethnicity and family SES

	I	II	III	IV	N
White British	0.01	-0.18	-0.39	-0.58	8456
Mixed	0.02	-0.34*	-0.37	-0.39	391
Indian	0.30*	0.16*	0.09*	-0.10*	884
Pakistani	0.15*	0.00*	-0.01*	0.00*	777
Bangladeshi	0.15*	0.15	0.13*	0.10*	599
Black Caribbean	-0.19*	0.01*	-0.29	-0.08*	443
Black African	0.38*	0.17	0.12*	-0.15*	379

N=12458
Difference with White British significant at p<0.05
I: higher/lower managerial positions
II: intermediate occupations and small employers
III: lower supervisory and technical occupations, routine and semi-routine occupations
IV: Never worked/long term unemployed

Graph 3.1. Predicted VAS in English and Maths from KS3 to KS4, by ethnicity and family SES
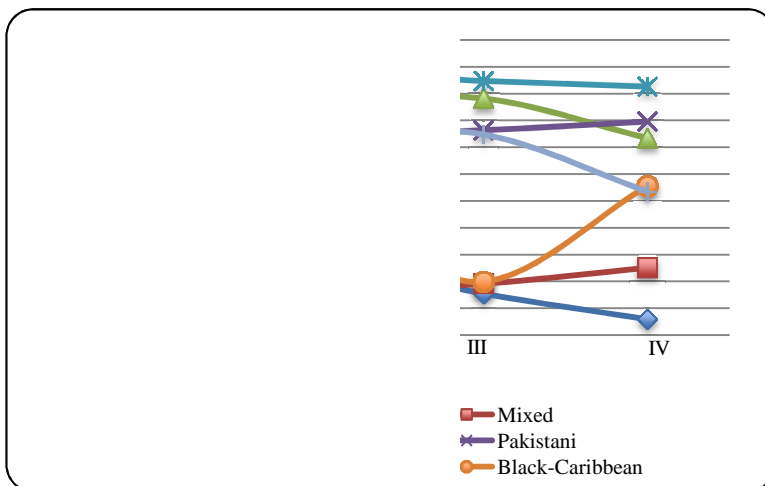
N=12458
I: higher/lower managerial positions
II: intermediate occupations and small employers
III: lower supervisory and technical occupations, routine and semi-routine occupations
IV: Never worked/long term unemployed
Explanatory variables: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London

Graph 3.2. Predicted VAS in English and Maths from KS3 to KS4, by ethnicity and parental education
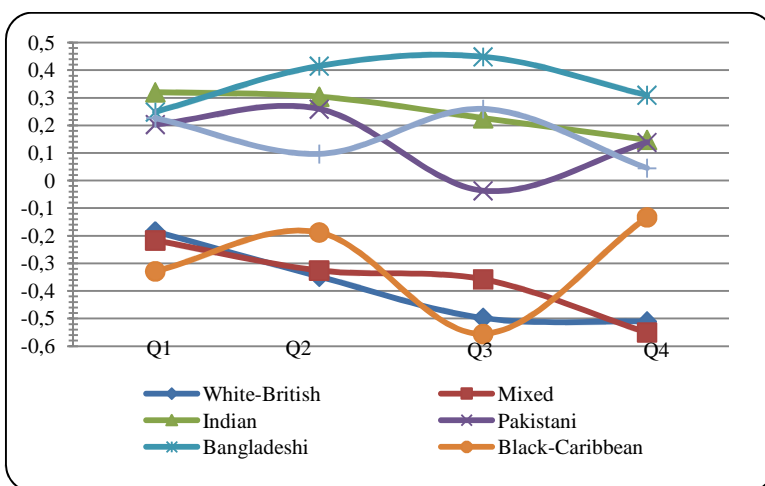
N=12458
Q1: Degree/equivalent and higher education below degree level
Q2: A-levels and GCSE grades A*-C
Q3: Level 1 and lower qualifications
Q4: No qualifications

Table 3.3. Average values of explanatory variables, by ethnicity

	Wh.Brit.	Mix.	Ind.	Pak.	Bangl.	Bl. Car.	Bl. Afr.
Taste for school at age 13/14	3.08	3.07	3.28*	3.25*	3.23*	3.06	3.27*
VA taste for school (13/14 – 15/16)	-0.02	-0.01	0.16*	0.12*	0.14*	0.00	0.16*
Taste for school: 3.75 at age 13/14 & 15/16	11.0	9.8	24.3*	19.8 *	20.1 *	9.2	27.2 *
Decrease	46.7	42.4	39.7*	42.8*	40.4*	43.8*	40.6*
Increase	35.1	42.2*	28.9*	31.5*	33.0	40.1*	27.3*
Days homework age 13/14	2.76	2.57*	3.40*	3.15*	3.11*	2.85	3.32*
VA homework (13/14 – 14/15)	-0.06	0.08*	0.53*	0.30*	0.34*	0.22*	0.32*
4/5 days at age 13/14 & 15/16	10.4	8.0	23.1*	16.3*	17.5*	11.6	17.8*
Increase days	27.8	35.0*	32.6*	32.4*	30.9*	31.7*	30.1*
Decrease days	37.4	32.8*	28.1*	30.5*	31.4*	29.9*	31.9*
Internal locus of control (14/15)	3.37	3.44*	3.57*	3.53*	3.50*	3.50*	3.63*
Expectations university age 13/14[1]	2.8	3.0*	3.3*	3.2*	3.2*	3.1*	3.4*
Very likely-very likely (13/14 – 14/15)	7.1	13.5*	17.9*	15.3*	13.7*	10.9*	25.6*
Fairly likely-Fairly likely (13/14 – 14/15)	34.0	35.2	38.0*	36.4	28.5*	37.8	25.8*
No change (13/14 – 14/15)	13.9	8.1*	1.8*	3.7*	6.4*	5.7*	2.9*
Increase (13/14 – 14/15)	20.2	20.0	23.8*	22.1	26.5*	21.8	22.2
Decrease (13/14 – 14/15)	24.8	23.3	18.4*	22.5	24.9	23.9	23.5

N=9229
Difference with White British significant at $p<0.05$
[1] Likelihood of applying to university: 1=will not apply/not at all likely, 2=not very likely, 3=fairly likely, 4=very likely. Average expectations calculated excluding individuals answering 'don't know'

Table 3.4. OLS regressions of KS3 to KS4 VAS in English and Maths, controlling for survey design

	(1) β (se)	(2) β (se)	(3) β (se)	(4) β (se)	(5) β (se)
Mixed	0.00127	-0.0036	-0.0199	-0.0446	0.00454
	(0.0573)	(0.0552)	(0.0563)	(0.0548)	(0.0525)
Indian	0.305***	0.230***	0.176***	0.135***	0.168***
	(0.0389)	(0.0380)	(0.0374)	(0.0376)	(0.0351)
Pakistani	0.132**	0.0759+	0.0395	0.0103	0.124**
	(0.0433)	(0.0405)	(0.0404)	(0.0405)	(0.0414)
Bangladeshi	0.268***	0.201***	0.167***	0.150***	0.289***
	(0.0430)	(0.0439)	(0.0403)	(0.0399)	(0.0468)
Black Caribbean	-0.0167	-0.0227	-0.0547	-0.0763	-0.0748
	(0.0485)	(0.0471)	(0.0467)	(0.0463)	(0.0456)
Black African	0.317***	0.244***	0.202***	0.158**	0.0907+
	(0.0550)	(0.0531)	(0.0533)	(0.0533)	(0.0536)
Other	0.285***	0.256***	0.223***	0.193***	0.157***
	(0.0471)	(0.0458)	(0.0451)	(0.0448)	(0.0428)
Taste school (va score)		0.415***	0.354***	0.323***	0.298***
		(0.0200)	(0.0207)	(0.0207)	(0.0201)
Change days homework (va score)			0.0845***	0.0754***	0.0551***
			(0.00733)	(0.00723)	(0.00689)
Internal locus of control			0.0750***	0.0439*	0.0592**
			(0.0205)	(0.0203)	(0.0193)
Change expectations uni. (ref: very likely-very likely)					
Fairly likely-fairly likely				-0.162***	-0.101***
				(0.0305)	(0.0292)
No change				-0.435***	-0.279***
				(0.0397)	(0.0393)
Increase				-0.179***	-0.0885**
				(0.0328)	(0.0318)
Decrease				-0.283***	-0.174***
				(0.0329)	(0.0318)
Constant	-0.0955***	-0.0884***	0.0381	0.208***	-0.347***
	(0.0151)	(0.0148)	(0.0352)	(0.0432)	(0.0957)
N	9229	9229	9229	9229	9229
R^2	0.013	0.075	0.098	0.119	0.178

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001
Control variables added in model 5: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London.

Table 3.5. Average values of explanatory variables, by ethnicity

	Wh.Brit.	Mix.	Ind.	Pak.	Bangl.	Bl. Car.	Bl. Afr.
Value given to education by parents at age 13/14 (1=min / 4=max)	3.4	3.6*	3.8*	3.8*	3.8*	3.7*	3.8*
Private tuition (PT) (age 13/14)	9.8	9.0	26.3*	11.2	11.1	11.4	19.7*
PT at 13/14 & PT at 15/16	2.3	1.7	11.6*	3.7	2.1	3.6	6.8*
No PT at 13/14 & No PT at 15/16	87.3	87.2	67.5*	83.5	86.0	86.2	75.6*
No PT at 13/14 & PT at 15/16	2.9	3.8	6.2	5.3	2.9	2.5	4.7
PT at 13/14 & No PT at 15/16	7.5	7.2	14.7*	7.6	8.9	7.8	12.9*
Homework supervision at age 13/14 (1=never/4=always)	1.9	1.9	1.7*	1.6*	1.7*	1.7*	1.6*
Change in supervision (age 13/14 to 14/15)	0.0	-0.1	0.0	0.2	0.2	0.1	0.2
Parental expectations for university at age 13/14 (1=min/4=max) [1]	2.8	3.2*	3.6*	3.5*	3.6*	3.3*	3.8*

N=10075

Difference with White British significant at $p<0.05$

[1] Average value calculated excluding individuals in the 'don't' know' category

Table 3.6. OLS regressions of KS3 to KS4 VAS in English and Maths, controlling for survey design

	(1) β (se)	(2) β (se)	(3) β (se)	(4) β (se)
Mixed	-0.017	-0.0159	-0.082	-0.0209
	(0.0563)	(0.0550)	(0.0559)	(0.0557)
Indian	0.323***	0.262***	0.149***	0.184***
	(0.0373)	(0.0359)	(0.0366)	(0.0358)
Pakistani	0.162***	0.148***	0.0458	0.154***
	(0.0393)	(0.0391)	(0.0381)	(0.0385)
Bangladeshi	0.269***	0.269***	0.157***	0.287***
	(0.0472)	(0.0474)	(0.0450)	(0.0499)
Black Caribbean	-0.0411	-0.0483	-0.139**	-0.116*
	(0.0507)	(0.0507)	(0.0497)	(0.0508)
Black African	0.350***	0.314***	0.154**	0.120*
	(0.0525)	(0.0508)	(0.0505)	(0.0516)
Other	0.243***	0.210***	0.0917+	0.0924+
	(0.0555)	(0.0549)	(0.0534)	(0.0526)
Value given to education by parents		-0.00122	-0.0490***	-0.0191
		(0.0145)	(0.0141)	(0.0140)
Priv. lessons (ref: yes at 13/14 & 15/16)				
No-No		-0.400***	-0.306***	-0.226***
		(0.0414)	(0.0421)	(0.0403)
No-Yes		-0.0581	-0.0857+	-0.0863+
		(0.0507)	(0.0505)	(0.0503)
Yes-No		-0.134**	-0.0938*	-0.0866*
		(0.0451)	(0.0456)	(0.0440)
Homework supervision (va score)		-0.00489	-0.000864	0.00349
		(0.00915)	(0.00885)	(0.00861)
Parental expectations age 13/14 (ref: very likely to apply to university)				
Fairly likely			-0.171***	-0.127***
			(0.0210)	(0.0205)
No very likely			-0.428***	-0.322***
			(0.0258)	(0.0252)
Not likely at all			-0.511***	-0.354***
			(0.0305)	(0.0299)
Don't know			-0.301***	-0.207***
			(0.0369)	(0.0372)
Constant	-0.129***	0.236***	0.548***	0.135
	(0.0149)	(0.0646)	(0.0638)	(0.0889)
N	10350	10350	10350	10350
R²	0.013	0.033	0.091	0.135

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001
Control variables added in model 4: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London.

Table 3.7. OLS regressions of KS3 to KS4 VAS in English and Maths, controlling for survey design

	(1) β (se)	(2) β (se)	(3) β (se)	(4) β (se)	(5) β (se)
Mixed	-0.00756	-0.0728	-0.0839	-0.0295	-0.0295
	(0.0597)	(0.0588)	(0.0564)	(0.0544)	(0.0544)
Indian	0.291***	0.127**	0.0601	0.104**	0.118**
	(0.0409)	(0.0398)	(0.0390)	(0.0375)	(0.0421)
Pakistani	0.127**	0.0163	-0.0324	0.0674	0.0679
	(0.0454)	(0.0434)	(0.0407)	(0.0420)	(0.0421)
Bangladeshi	0.263***	0.152**	0.0997*	0.218***	0.147*
	(0.0520)	(0.0476)	(0.0435)	(0.0499)	(0.0717)
Black Caribbean	-0.00049	-0.0814+	-0.0866+	-0.0822+	-0.0822+
	(0.0510)	(0.0488)	(0.0462)	(0.0468)	(0.0468)
Black African	0.288***	0.109+	0.0523	0.0265	0.0266
	(0.0626)	(0.0605)	(0.0594)	(0.0600)	(0.0600)
Other	0.309***	0.155**	0.136**	0.132**	0.132**
	(0.0505)	(0.0495)	(0.0483)	(0.0471)	(0.0471)
Indian*Level 1/no qualifications					-0.0439
					(0.0732)
Bangl.*Level 1/no qualifications					0.0873
					(0.0803)
Level 1 and no qualifications					-0.182***
					(0.0295)
PARENTS' VARIABLES					
Parents' value given to education		-0.0481**	-0.0483**	-0.0206	-0.0205
		(0.0152)	(0.0147)	(0.0145)	(0.0145)
Private lessons (ref: yes at 13/14 & 15/16)					
No-No		-0.307***	-0.250***	-0.176***	-0.177***
		(0.0493)	(0.0486)	(0.0475)	(0.0476)
No-Yes		-0.120*	-0.103+	-0.0898	-0.0900
		(0.0565)	(0.0565)	(0.0564)	(0.0564)
Yes-No		-0.120*	-0.0891+	-0.0759	-0.0761
		(0.0522)	(0.0523)	(0.0517)	(0.0517)
Homework supervision (va score)		-0.00559	-0.0241**	-0.0193*	-0.0192*
		(0.00906)	(0.00877)	(0.00851)	(0.00851)
Parental expectations age 13/14 (ref: very likely to apply to university)					
Fairly likely		-0.172***	-0.114***	-0.0809***	-0.0809***
		(0.0210)	(0.0205)	(0.0199)	(0.0199)
No very likely		-0.427***	-0.305***	-0.224***	-0.224***
		(0.0268)	(0.0271)	(0.0261)	(0.0261)
Not likely at all		-0.503***	-0.314***	-0.198***	-0.198***
		(0.0343)	(0.0347)	(0.0342)	(0.0342)
Don't know		-0.279***	-0.199***	-0.126**	-0.126**
		(0.0427)	(0.0409)	(0.0408)	(0.0408)

STUDENTS' VARIABLES					
Taste school (va score)			0.285***	0.272***	0.272***
			(0.0215)	(0.0211)	(0.0211)
Days homework (va score)			0.0638***	0.0521***	0.0521***
			(0.00718)	(0.00699)	(0.00699)
Internal locus of control			-0.0449*	-0.0584**	-0.0584**
			(0.0201)	(0.0196)	(0.0196)
Change expectations university from age 13/14 to age 14/15 (ref: very likely-very likely)					
Fairly likely-fairly likely			-0.0981**	-0.0737*	-0.0740*
			(0.0318)	(0.0307)	(0.0307)
No change			-0.242***	-0.191***	-0.191***
			(0.0407)	(0.0402)	(0.0402)
Increase			-0.0612+	-0.0302	-0.0303
			(0.0340)	(0.0331)	(0.0331)
Decrease			-0.167***	-0.120***	-0.120***
			(0.0338)	(0.0330)	(0.0330)
Constant	-0.0875***	0.573***	0.651***	0.498***	0.497***
	(0.0153)	(0.0728)	(0.0827)	(0.0981)	(0.0982)
N	8464	8464	8464	8464	8464
R^2	0.013	0.091	0.152	0.187	0.187

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Control variables added in models 3 and 4: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London

Table 3.8. Average values of explanatory variables, by ethnicity

	Wh.Brit.	Mix.	Ind.	Pak.	Bangl.	Bl. Car.	Bl. Afr.
First-generation	2.0	8.7*	10.0*	13.2*	15.0*	11.4*	56.2*
Only English at home (age 13/14)	98.2	95.1	22.3*	11.3*	4.1*	97.1	43.9*
English main language at home (age 13/14)	1.4	1.6	53.3*	52.8*	41.3*	2.3	23.6*
Other main language at home or bilingual (age 13/14)	0.4	3.3	24.4*	35.9*	54.6*	0.6	32.6*
Students' religiosity at age 13/14 (1=min to 4=max)	1.7	2.1*	3.4*	3.9*	3.9*	2.9*	3.6*
No religious at age 13/14 & 15/16	44.6	39.3	1.2*	0.1*	0.0*	8.4*	0.3*
Very religious at age 13/14 & 15/16	2.0	9.7	36.6*	70.3*	75.3*	18.9*	52.1*
Decreased religiosity from age 13/14 to 15/16	11.7	12.1	15.8*	8.2*	5.4*	21.5*	21.3*
Increased religiosity from age 13/14 to 15/16	25.7	22.4	24.9	17.0*	14.8*	29.1	16.5*
Student attended religious classes in the last year (age 13/14)[1]	13.5	20.9*	35.5*	49.7*	47.6*	30.1*	46.1*
Classes at age 13/14 & 14/15	6.2	8.2	20.6*	29.2*	26.8*	14.2*	28.3*
No classes at age 13/14 & 14/15	81.4	69.7*	54.1*	40.7*	41.1*	55.7*	35.9*
Classes at 13/14 only	7.2	12.6*	14.9*	20.5*	20.8*	15.9*	17.7*
Classes at 14/15 only	5.1	9.4*	10.4*	9.6*	11.2*	14.2*	18.0*
Students and parents are very religious (age 14/15)	3.1	11.4*	45.1*	79.1*	81.8*	29.4*	62.0*
Students' religiosity stronger than parents' (age 14/15)	10.5	11.4	11.5	7.3*	6.9*	13.1	6.4*
Students' religiosity weaker than parents' (age 14/15)	34.8	33.3	24.4*	9.9*	9.7*	29.8	25.4*
Spending most free time with family at age 13/14	18.2	17.9	52.3*	49.9*	50.5*	22.8	33.8*
Most time with family at age 13/14 & 14/15	6.6	6.3	33.2*	26.1*	30.6*	7.8	14.3*
Most time with other people at age 13/14 & 14/15	75.5	79.3	35.8*	38.1*	38.1*	68.0*	54.4*
Most time with others at age 13/14 & most time with family at age 14/15	6.3	2.8	11.8 *	12.1*	11.3*	9.2	11.8*
Most time with family at age 13/14 & most time with others at age 14/15	11.6	11.6	19.2*	23.8*	19.9*	15.0	19.5*

N=9761
Difference with White British significant at p<0.05
[1] Individuals that report not to have a religion or not to be at all religious are not included (N=6748)

Table 3.9. OLS regressions for VAS from KS2 to KS3, and KS3 to KS4, controlling for survey design

	(1) β (se)	(2) β (se)	(3) β (se)	(4) β (se)
Mixed	0.00428	0.00949	0.00464	0.0438
	(0.0581)	(0.0613)	(0.0607)	(0.0587)
Indian	0.319***	0.316***	0.316***	0.278***
	(0.0395)	(0.0405)	(0.0553)	(0.0519)
Pakistani	0.131**	0.122**	0.116+	0.205**
	(0.0423)	(0.0454)	(0.0641)	(0.0648)
Bangladeshi	0.267***	0.271***	0.329***	0.475***
	(0.0407)	(0.0418)	(0.0618)	(0.0664)
Black Caribbean	0.0109	-0.00474	-0.00481	-0.0308
	(0.0472)	(0.0479)	(0.0479)	(0.0478)
Black African	0.260***	0.270***	0.256***	0.103
	(0.0541)	(0.0708)	(0.0701)	(0.0653)
Other	0.268***	0.229***	0.183***	0.164***
	(0.0478)	(0.0485)	(0.0508)	(0.0483)
First-generation		0.182**	0.120+	0.0793
		(0.0562)	(0.0621)	(0.0605)
*Mixed*First-generation*		-0.209	-0.154	0.0469
		(0.153)	(0.152)	(0.157)
*Indian*First-generation*		-0.105	-0.0395	0.0192
		(0.101)	(0.104)	(0.100)
*Pakistani*First-generation*		-0.0629	-0.00317	0.0417
		(0.122)	(0.123)	(0.116)
*Bangl.*First-generation*		-0.189+	-0.118	-0.103
		(0.107)	(0.110)	(0.103)
*Bl. Car.*First-generation*		0.0624	0.124	0.328*
		(0.136)	(0.137)	(0.149)
*Bl.Afr.*First-generation*		-0.197	-0.227+	-0.0577
		(0.129)	(0.132)	(0.122)
LANGUAGE (ref: only English)				
Mainly English but also other			0.00302	0.0545
			(0.0460)	(0.0440)
Mainly other language			0.310**	0.354***
			(0.0981)	(0.0901)
*Indian*other language*			-0.319**	-0.242*
			(0.123)	(0.118)
*Pakistani*other language*			-0.297*	-0.237*
			(0.122)	(0.117)
*Bangladeshi*other language*			-0.421***	-0.390***
			(0.121)	(0.111)
*Black African*other language*			-0.0797	0.0252
			(0.163)	(0.152)
Constant	-0.126***	-0.129***	-0.129***	0.447***
	(0.0156)	(0.0155)	(0.0156)	(0.0414)
N	9342	9342	9342	9342
R²	0.011	0.012	0.014	0.115

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Control variables added in model 4: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, student lives in London

Table 3.10. Distribution of parental level of education between immigrant and non-immigrant students by ethnicity

	Generation	Degree/HE below degree level	A-levels/5 A*-C GCSEs	Level 1/no qualifications	N
White British	2nd/3rd	35.6	50	14.4	**6339**
	1st	50.8	26.1	23.1	**127**
Mixed	2nd/3rd	34.9	41.2*	23.9*	**257**
	1st	18.0*	19.2*	62.8*	**15**
Indian	2nd/3rd	28.0*	40.0*	32.0*	**647**
	1st	16.4*	32.3*	51.3*	**52**
Pakistani	2nd/3rd	17.5*	25.2*	57.2*	**516**
	1st	19.7*	12.9*	67.4*	**65**
Bangladeshi	2nd/3rd	4.3*	13.8*	81.9*	**370**
	1st	8.5*	3.3*	88.3*	**64**
Black Caribbean	2nd/3rd	41.0*	44.8*	14.2	**254**
	1st	16.3*	49.7*	34	**26**
Black African	2nd/3rd	55.7*	30.5*	13.9	**131**
	1st	32.9*	16.2*	50.9*	**105**

N=9342

Difference with White British significant at $p < 0.05$

Table 3.11. OLS regressions for VAS KS3 to KS4, controlling for survey design

	(1) β (se)	(2) β (se)	(3) β (se)	(4) β (se)
Mixed	-0.0108	-0.0634	-0.0513	0.00373
	(0.0556)	(0.0557)	(0.0561)	(0.0565)
Indian	0.335***	0.111*	0.0754	0.0912+
	(0.0391)	(0.0522)	(0.0517)	(0.0486)
Pakistani	0.165***	-0.149*	-0.166*	-0.00903
	(0.0422)	(0.0647)	(0.0643)	(0.0610)
Bangladeshi	0.287***	-0.0517	-0.0632	0.138*
	(0.0406)	(0.0650)	(0.0649)	(0.0635)
Black Caribbean	0.016	-0.139**	-0.134**	-0.105*
	(0.0468)	(0.0473)	(0.0479)	(0.0478)
Black African	0.361***	0.0171	0.0347	0.0511
	(0.0532)	(0.0634)	(0.0645)	(0.0616)
Other	0.316***	0.158**	0.157**	0.148**
	(0.0471)	(0.0487)	(0.0483)	(0.0460)
First-generation		0.134***	0.131***	0.124**
		(0.0385)	(0.0381)	(0.0379)
LANGUAGE (ref: only English)				
Mainly English but also other language		-0.0322	-0.0485	0.00693
		(0.0420)	(0.0417)	(0.0389)
Mainly other language		0.0653	0.0394	0.135**
		(0.0524)	(0.0521)	(0.0510)
Change in religiosity from 13/14 & 15/16				
(ref: very religious at age 13/14 & 15/16)				
Not religious/not very religious at 13/14 & 15/16		-0.190*	-0.153+	-0.109
		(0.0782)	(0.0784)	(0.0740)
Decreased religiosity from age 13/14 to 15/16		0.0956	0.107	0.0847
		(0.0787)	(0.0790)	(0.0749)
Increased religiosity from age 13/14 to 15/16		-0.0488	-0.0364	-0.0431
		(0.0871)	(0.0871)	(0.0853)
Change in religion class attendance from 13/14 to 14/15				
No classes		-0.109**	-0.110**	-0.0392
		(0.0369)	(0.0364)	(0.0355)
Classes at 13/14 but not at 14/15		-0.0559	-0.0568	-0.0223
		(0.0422)	(0.0414)	(0.0401)
Class at 14/15 but not at 13/14		-0.0564	-0.0695	-0.0317
		(0.0525)	(0.0530)	(0.0504)
Gap in religiosity with parent at 14/15				
(ref: student and parent very religious)				
Same religiosity		-0.141*	-0.125+	-0.124+
		(0.0676)	(0.0669)	(0.0661)
Student more religious		-0.150*	-0.137*	-0.132*
		(0.0658)	(0.0654)	(0.0637)
MP more religious		-0.0932	-0.0756	-0.110
		(0.0691)	(0.0686)	(0.0675)
Student or MP answer 'don't know'		-0.167+	-0.138	-0.123
		(0.0921)	(0.0911)	(0.0902)
Familism (ref: most time with others at 13/14 & 14/15)				
Most time with family at age 13/14 & 14/15			0.254***	0.213***
			(0.0309)	(0.0296)
Most time with family at 13/14 but not at 14/15			0.160***	0.156***
			(0.0297)	(0.0286)
Most time with others at 13/14 but with family at 14/15			0.118***	0.111***
			(0.0242)	(0.0228)
Constant	-0.144***	0.246***	0.156*	0.0128
	(0.0152)	(0.0631)	(0.0651)	(0.0809)
N	**10624**	**10624**	**10624**	**10624**
R^2	0.014	0.034	0.044	0.129

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001   Control variables added in model 4

Table 3.12. OLS regressions for VAS from KS3 to KS4, controlling for survey design

	Wh.Brit. β (se)	Mix. β (se)	Ind. β (se)	Pak. β (se)	Bangl. β (se)	Bl. Car. β (se)	Bl. Afr. β (se)
First-generation	0.158**	-0.111	0.129	0.201*	-0.0201	0.350***	0.337***
	(0.0590)	(0.178)	(0.0843)	(0.0970)	(0.0957)	(0.0903)	(0.0966)
Familism (ref: most time with others at 13/14 & 14/15)							
Most time with family at age 13/14 & 14/15	0.258***	0.380**	0.052	0.134	0.104	0.198+	-0.0154
	(0.0362)	(0.132)	(0.0706)	(0.0950)	(0.0904)	(0.113)	(0.151)
Most time with family at age 13/14 but not at 14/15	0.203***	0.256	-0.0338	0.0952	-0.0431	0.0775	-0.180
	(0.0325)	(0.360)	(0.0729)	(0.103)	(0.119)	(0.132)	(0.131)
Most time with others at age 13/14 but with family at 14/15	0.127***	0.122	0.0555	0.0323	0.178	-0.1	0.00912
	(0.0257)	(0.194)	(0.0837)	(0.0831)	(0.120)	(0.113)	(0.102)
Female	0.131***	-0.0475	0.118+	0.140*	0.161*	0.210**	0.269**
	(0.0170)	(0.100)	(0.0621)	(0.0709)	(0.0657)	(0.0787)	(0.0947)
Constant	-0.360***	0.0751	-0.128	0.0734	0.166	-0.0181	-0.364*
	(0.0924)	(0.257)	(0.208)	(0.141)	(0.167)	(0.171)	(0.173)
N	10624	10257	10447	10468	10154	8861	10404
R^2	0.118	0.103	0.152	0.079	0.124	0.11	0.155

Control variables: single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London

Table 3.13. OLS regressions for VAS from KS3 to KS4, controlling for survey design

	Wh.Brit. β (se)	Mix. β (se)	Ind. β (se)	Pak. β (se)	Bangl. β (se)	Bl. Car. β (se)	Bl. Afr. β (se)
First-generation	0.161**	-0.111	0.108	0.184+	-0.0217	0.337***	0.336***
	(0.0583)	(0.180)	(0.0851)	(0.0970)	(0.0953)	(0.0938)	(0.0986)
Familism (ref: most time with others at 13/14 & 14/15)							
Most time with family at age 13/14 & 14/15	0.271***	0.375**	0.0752	0.182*	0.162+	0.197+	0.0726
	(0.0361)	(0.133)	(0.0690)	(0.0923)	(0.0875)	(0.114)	(0.151)
Most time with family at age 13/14 but not at 14/15	0.203***	0.247	-0.0266	0.124	-0.00804	0.0962	-0.167
	(0.0326)	(0.363)	(0.0728)	(0.102)	(0.122)	(0.125)	(0.146)
Most time with others at age 13/14 but with family at 14/15	0.133***	0.115	0.0747	0.0475	0.211+	-0.0655	0.0543
	(0.0258)	(0.199)	(0.0866)	(0.0835)	(0.123)	(0.108)	(0.0999)
Constant	-0.293**	0.0454	-0.0851	0.11	0.249	0.0938	-0.287
	(0.0917)	(0.241)	(0.202)	(0.137)	(0.174)	(0.172)	(0.179)
N	10624	10257	10447	10468	10154	8861	10404
R^2	0.11	0.102	0.145	0.072	0.112	0.09	0.129

Control variables: single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London

Table 3.14. Average values of explanatory variables, by ethnicity

	Wh.Brit.	Mix.	Ind.	Pak.	Bangl.	Bl. Car.	Bl. Afr.
Internal locus of control (1-4)	3.37	3.44	3.60*	3.55*	3.55*	3.53*	3.66*
External locus of control (1-4)	1.97	1.97	1.99	2.17*	2.15*	2.06*	2.00
Teachers' attention (1-4)	1.10	1.15	0.97*	1.04*	1.16	1.26*	1.10
Teachers' punishment (0 to 1)	0.13	0.16	0.13	0.18*	0.16	0.20*	0.19*
Ethnic discrimination (0 to 1)	0.03	0.18*	0.14*	0.21*	0.18*	0.34*	0.31*
Risk age 13/14 (1-4)	0.9	0.9	0.2*	0.2*	0.3*	0.7*	0.4*
VA score risk age 13/14 to 15/16	0.1	0.0	-0.3*	-0.5*	-0.4*	0.0	-0.3*

N=7670

Difference with White British significant at p<0.05

Table 3.15. OLS regressions for VAS KS3 to KS4, controlling for survey design

	(1) β (se)	(2) β (se)	(3) β (se)	(4) β (se)	(5) β (se)	(6) β (se)
Mixed	0.0204	0.0417	0.0622	0.0534	0.0391	0.0907
	(0.0719)	(0.0725)	(0.0737)	(0.0817)	(0.0820)	(0.0767)
Indian	0.304***	0.274***	0.291***	0.244***	0.209***	0.215***
	(0.0404)	(0.0388)	(0.0399)	(0.0388)	(0.0390)	(0.0378)
Pakistani	0.166**	0.167**	0.193***	0.176***	0.122*	0.234***
	(0.0554)	(0.0509)	(0.0526)	(0.0520)	(0.0524)	(0.0543)
Bangladeshi	0.262***	0.284***	0.304***	0.258***	0.208***	0.352***
	(0.0521)	(0.0533)	(0.0543)	(0.0598)	(0.0587)	(0.0630)
Black Caribbean	0.0242	0.0778	0.120*	-0.00679	-0.0328	-0.0435
	(0.0527)	(0.0507)	(0.0550)	(0.0621)	(0.0601)	(0.0589)
Black African	0.393***	0.409***	0.449***	0.340***	0.301***	0.181*
	(0.0667)	(0.0620)	(0.0650)	(0.0749)	(0.0751)	(0.0718)
Other	0.288***	0.287***	0.299***	0.297***	0.283***	0.201***
	(0.0571)	(0.0574)	(0.0574)	(0.0576)	(0.0572)	(0.0529)
Teachers' attention		-0.227***	-0.220***	-0.162***	-0.149***	-0.129***
		(0.0208)	(0.0210)	(0.0212)	(0.0209)	(0.0196)
Teachers' punishment		-0.270***	-0.264***	-0.238***	-0.226***	-0.170***
		(0.0364)	(0.0368)	(0.0369)	(0.0365)	(0.0353)
Ethnic discrimination			-0.146*	-0.189+	-0.168+	-0.0751
			(0.0697)	(0.103)	(0.102)	(0.0949)
External locus of control				-0.115***	-0.111***	-0.0635***
				(0.0193)	(0.0190)	(0.0178)
Internal locus of control				0.134***	0.123***	0.125***
				(0.0213)	(0.0213)	(0.0199)
Change in risk factors from age 13/14 to 15/16 (va score)					-0.0940***	-0.0918***
					(0.0148)	(0.0138)
*Mixed*Ethnic discrimination*				0.0101	0.0221	-0.138
				(0.264)	(0.265)	(0.270)
*Indian*Ethnic discrimination*				0.220	0.198	0.141
				(0.148)	(0.147)	(0.141)
*Pak.*Ethnic discrimination*				0.121	0.107	0.0338
				(0.160)	(0.158)	(0.147)
*Bang.*Ethnic discrimination*				0.251	0.233	0.107
				(0.175)	(0.171)	(0.161)
*Bl. Car.*Ethnic discrimination*				0.353*	0.363*	0.218
				(0.144)	(0.141)	(0.135)
*Bl.-Afr.*Ethnic discrimination*				0.268	0.254	0.0831
				(0.193)	(0.198)	(0.187)
Constant	-0.100***	0.184***	0.181***	-0.110	-0.0864	-0.481***
	(0.0158)	(0.0239)	(0.0240)	(0.0902)	(0.0903)	(0.111)
N	**7670**	**7670**	**7670**	**7670**	**7670**	**7670**
R²	0.012	0.058	0.059	0.073	0.081	0.163

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Control variables added in model 6: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London.

Table 3.16. OLS regressions for getting involved in problematic behaviours at age 13/14 and 14/15, controlling for survey design

	(1) β (se)	(2) β (se)	(3) β (se)	(4) β (se)	(5) β (se)	(6) β (se)
Mixed	0.103+	0.0684	0.0297	0.0479	0.0258	0.0259
	(0.0618)	(0.0596)	(0.0615)	(0.0616)	(0.0618)	(0.0618)
Indian	-0.444***	-0.402***	-0.433***	-0.395***	-0.362***	-0.362***
	(0.0355)	(0.0350)	(0.0357)	(0.0354)	(0.0370)	(0.0370)
Pakistani	-0.463***	-0.469***	-0.519***	-0.496***	-0.481***	-0.481***
	(0.0377)	(0.0333)	(0.0359)	(0.0359)	(0.0410)	(0.0410)
Bangladeshi	-0.348***	-0.383***	-0.421***	-0.391***	-0.364***	-0.364***
	(0.0615)	(0.0602)	(0.0589)	(0.0578)	(0.0634)	(0.0635)
Black Car.	-0.00152	-0.0848	-0.165*	-0.128+	-0.109	-0.317+
	(0.0640)	(0.0625)	(0.0683)	(0.0698)	(0.0706)	(0.167)
*Black Car.*Degree/HE*						0.266
						(0.182)
*Black Car.*A-level/GCSE A*-C*						0.248
						(0.193)
Black Afr.	-0.300***	-0.331***	-0.407***	-0.348***	-0.260***	-0.259***
	(0.0483)	(0.0462)	(0.0506)	(0.0517)	(0.0605)	(0.0605)
Other	-0.179***	-0.179***	-0.202***	-0.187***	-0.137**	-0.137**
	(0.0487)	(0.0494)	(0.0497)	(0.0495)	(0.0487)	(0.0487)
Teachers' attention		0.323***	0.310***	0.255***	0.244***	0.244***
		(0.0187)	(0.0189)	(0.0194)	(0.0190)	(0.0190)
Teachers' punishment		0.485***	0.475***	0.456***	0.431***	0.431***
		(0.0352)	(0.0355)	(0.0352)	(0.0348)	(0.0348)
Ethnic discrimination			0.276***	0.266***	0.234***	0.233***
			(0.0632)	(0.0625)	(0.0620)	(0.0621)
External locus of control				0.0562**	0.0445*	0.0446*
				(0.0181)	(0.0178)	(0.0178)
Internal locus of control				-0.196***	-0.194***	-0.194***
				(0.0208)	(0.0204)	(0.0204)
Constant	1.498***	1.081***	1.086***	1.700***	1.796***	1.797***
	(0.0114)	(0.0206)	(0.0206)	(0.0869)	(0.0992)	(0.0992)
N	7667	7667	7667	7667	7667	7667
R²	0.021	0.144	0.148	0.166	0.185	0.185

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Control variables added in models 4 and 5: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London.

Table 3.17. Average values of explanatory variables, by ethnicity

	Wh.Brit.	Mix.	Ind.	Pak.	Bangl.	Bl. Car.	Bl. Afr.
Perceived teachers' efficacy (by students)	3.86	3.89	4.02*	4.08*	4.00*	3.79	4.00*
School communication	3.09	3.04	3.13	3.08	3.03	3.17	3.23
School events	92.4	92.3	95.2 *	91.4	85.8 *	93.9	93.5
Spending per pupil in secondary schools, in pounds (by LEAs, year 2003/2004)	3568.0	3892.8*	3840.7*	3810.3*	4481.4*	4195.3*	4337.8*
Pupil-teacher ratio (year 2005/2006)	16.89	16.85	16.49*	15.96*	15.72*	16.78	16.86

Difference with White British significant at p<0.05

N=8908

Table 3.18. Two-level random intercept regressions for VAS from KS3 to KS4

	(1) β (se)	**(2)** β (se)	**(3)** β (se)	**(4)** β (se)	**(5)** β (se)
Mixed	-0.0117	-0.00464	-0.00145	-0.00202	0.0178
	(0.0450)	(0.0449)	(0.0444)	(0.0447)	(0.0438)
Indian	0.345***	0.330***	0.321***	0.330***	0.339***
	(0.0339)	(0.0338)	(0.0334)	(0.0338)	(0.0332)
Pakistani	0.203***	0.184***	0.192***	0.204***	0.261***
	(0.0373)	(0.0372)	(0.0367)	(0.0372)	(0.0373)
Bangladeshi	0.273***	0.261***	0.287***	0.269***	0.362***
	(0.0444)	(0.0442)	(0.0437)	(0.0461)	(0.0469)
Black Caribbean	0.0418	0.0468	0.0325	0.0313	0.00801
	(0.0449)	(0.0447)	(0.0442)	(0.0451)	(0.0446)
Black African	0.371***	0.360***	0.347***	0.342***	0.241***
	(0.0475)	(0.0474)	(0.0468)	(0.0481)	(0.0501)
Other	0.252***	0.254***	0.254***	0.257***	0.226***
	(0.0388)	(0.0386)	(0.0382)	(0.0385)	(0.0380)
Perceived teachers' efficacy		0.101***	0.0760***	0.0771***	0.0873***
		(0.0130)	(0.0130)	(0.0130)	(0.0127)
School communication			0.120***	0.120***	0.0833***
			(0.0128)	(0.0128)	(0.0126)
School events			0.263***	0.261***	0.153***
			(0.0281)	(0.0281)	(0.0278)
Spending per pupil				0.00093***	0.000697**
				(0.000284)	(0.000267)
Spending per pupil (Log)				-3.728**	-2.932**
				(1.160)	(1.088)
Pupil-teacher ratio				0.0129+	0.00409
				(0.00714)	(0.00665)
Constant	-0.155***	-0.545***	-1.062***	25.87**	20.33*
	(0.0148)	(0.0523)	(0.0635)	(8.491)	(7.966)
Var (u_1)	0.0687***	0.0673***	0.0638***	0.0614***	0.0486***
	(0.00302)	(0.00297)	(0.00284)	(0.00276)	(0.00234)
Var (u_0)	0.468***	0.465***	0.455***	0.455***	0.430***
	(0.00362)	(0.00360)	(0.00353)	(0.00353)	(0.00333)
N	8908	8908	8908	8908	8908

+ $p<0.10$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$

Control variables added in model (5) (not show in the table): gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London

Table 3.19. Correlations between percentages of ethnic composition and students entitled to free school meals at schools

	Students entitled to FSM
% White British	-0.67*
% Indians	0.12*
% Pakistanis	0.47*
% Bangladeshis	0.54*
% Black Caribbean	0.38*
% Black African	0.47*
% Non-English speakers	0.69*

N=10951 * p<0.05

Table 3.20. Correlations between school ethnic and socio-economic composition and attainment and progress of sampled students

	KS3 score in English & Maths[a]	KS4 grade in English & Maths[a]	KS3 to KS4 VAS in English & Maths[a]
% White	0.13*	0.05*	-0.11*
% Mixed	0.01	0.05*	0.07*
% Indian	-0.15*	-0.09*	0.05*
% Pakistani	-0.08*	-0.03*	0.06*
% Bangladeshi	-0.09*	-0.05*	0.05*
% Bl. Caribbean	-0.09*	-0.03*	0.08*
% Bl. African	-0.1*	-0.04*	0.04*
% Non-English speakers	-0.13*	-0.05*	0.11*
% FSM	-0.30*	-0.25*	-0.02*

N=10951 * p<0.05
[a] Only includes students that did not change school between age 13/14 and age 15/16

Table 3.21. Percentage of students from each ethnic group in schools with more than 20% of Indians, Bangladeshis, Pakistanis, Black Caribbean, Black Africans and non-English speakers, and more than 80% of Whites

	Wh.Brit.	Mix.	Ind.	Pak.	Bangl.	Bl. Car.	Bl. Afr.
+ 80% White	83.5	48.2*	18.3*	18.9*	14.4*	19.4*	20.4*
+ 20% Indian	1.2	3.8*	39.5*	14.8*	7.8 *	9.1*	6.0*
+ 20% Pak.	1.0	6.1*	11.1*	47.0*	20.5*	8.1*	4.8*
+ 20% Bangl.	0.0	1.3*	2.7*	3.8*	39.9*	0.2	2.8*
+ 20% Bl.Car.	0.2	5.4*	1.9 *	1.1*	0.7	11.7*	8.2*
+ 20% Bl.Afr.	0.4	4.4*	1.7*	1.7*	7.0*	16.5*	26.0*
+ 20% non-English speakers	7.5	33.4*	66.1*	73.9*	80.6*	62.3*	65.9*

N=10951
Difference with White British significant at p<0.05

Table 3.22. Percentage of students from each ethnic group in schools with different percentages of children entitled to free school meals

	Wh.Brit.	Mix.	Ind.	Pak.	Bangl.	Bl. Car.	Bl. Afr.
0 -10 %	57.9	33.2*	25.6*	16.4*	8.9*	18.6*	20.7*
10 -20 %	23.4	26.8	35.2*	13.0*	11.5*	22.7	14.3*
20 -30 %	12.1	17.1*	17.2*	21.3*	7.3*	26.3*	22.1*
30 -50 %	5.8	17.8*	19.6*	37.3*	28.0*	23.3*	28.7*
More than 50 %	0.8	5.1*	2.4*	12.0*	44.4*	9.2*	14.2*

N=10951

Difference with White British significant at p<0.05

Table 3.23. Average values of explanatory variables, by ethnicity

	Wh.Brit.	Mix.	Ind.	Pak.	Bangl.	Bl. Car.	Bl. Afr.
Proportion of co-ethnic friends at school (1=none/6=all or most)	5.55	3.48*	3.66*	4.22*	3.88*	3.81*	3.57*
All or most of them	67.2	14.7*	15.7*	26.1*	26.1*	15.9*	10.5*
More than half	24.2	11.7*	17.5 *	22.9	16.8*	21.8	21.1
About half	6.1	17.9*	22.9*	21.4*	16.4*	16.2*	18.0*
Less than half	1.5	22.7*	14.7*	11.8*	12.0*	25.1*	21.3*
Very few	0.8	29.0*	19.3*	12.0*	16.5*	14.8*	23.3*
None	0.1	4.1	9.9*	5.8*	12.2*	6.1*	5.9*

N=10951

Difference with White British significant at p<0.05

Table 3.24. Two-level random intercept regressions for KS3 to KS4 VAS in English and Maths

	(1) β	(se)	(2) β	(se)	(3) β	(se)	(4) β	(se)	(5) β	(se)	(6) β	(se)
Mixed	0.0165	(0.0432)	0.158	(0.121)	0.173	(0.121)	0.171	(0.121)	0.182	(0.121)	0.182	(0.117)
Indian	0.348***	(0.0321)	0.449***	(0.0883)	0.454***	(0.0886)	0.450***	(0.0887)	0.445***	(0.0885)	0.438***	(0.0857)
Pakistani	0.224***	(0.0340)	0.519***	(0.101)	0.530***	(0.102)	0.527***	(0.102)	0.531***	(0.102)	0.513***	(0.0986)
Bangladeshi	0.285***	(0.0403)	0.332**	(0.101)	0.335**	(0.102)	0.330**	(0.102)	0.332**	(0.102)	0.441***	(0.0998)
Black Caribbean	0.0061	(0.0429)	0.274*	(0.123)	0.285*	(0.123)	0.290*	(0.123)	0.290*	(0.123)	0.249*	(0.119)
Black African	0.393***	(0.0436)	0.593***	(0.125)	0.611***	(0.125)	0.609***	(0.125)	0.608***	(0.125)	0.474***	(0.122)
Other	0.230***	(0.0371)	0.245***	(0.0417)	0.236***	(0.0419)	0.235***	(0.0419)	0.236***	(0.0418)	0.221***	(0.0411)
Proportion of friends of the same ethnicity at school (1: none /6: all)			0.00993	(0.0101)	0.0127	(0.0102)	0.0122	(0.0103)	0.0116	(0.0103)	0.0107	(0.00996)
*Proportion*Mixed*			-0.037	(0.0310)	-0.043	(0.0312)	-0.0421	(0.0313)	-0.0435	(0.0312)	-0.0335	(0.0302)
*Proportion*Indian*			-0.0241	(0.0205)	-0.0259	(0.0211)	-0.0249	(0.0211)	-0.0218	(0.0211)	-0.0157	(0.0204)
*Proportion*Pakistani*			-0.0696**	(0.0217)	-0.075***	(0.0223)	-0.075***	(0.0223)	-0.074***	(0.0223)	-0.0556*	(0.0216)
*Proportion*Bangladeshi*			-0.0104	(0.0235)	-0.0189	(0.0250)	-0.018	(0.0251)	-0.0149	(0.0250)	-0.0178	(0.0242)
*Proportion*Black Caribbean*			-0.0690*	(0.0290)	-0.0762**	(0.0295)	-0.0774**	(0.0295)	-0.0767**	(0.0295)	-0.0660*	(0.0285)
*Proportion*Black African*			-0.0521+	(0.0302)	-0.0665*	(0.0308)	-0.0660*	(0.0308)	-0.0646*	(0.0308)	-0.0441	(0.0298)
SCHOOL COMPOSITION												
% Indian					-0.00303	(0.00241)	-0.00303	(0.00248)	-0.00594*	(0.00236)	-0.00332	(0.00229)
% Pakistani					-0.00185	(0.00233)	-0.00192	(0.00241)	-0.00116	(0.00222)	0.00121	(0.00224)
% Bangladeshi					-0.00179	(0.00249)	-0.00204	(0.00249)	-0.00045	(0.00236)	-0.000583	(0.00226)
% Black Caribbean					-0.00554	(0.00455)	-0.00403	(0.00483)	-0.00112	(0.00450)	-0.00404	(0.00432)
% Black African					0.00546	(0.00460)	0.00636	(0.00469)	0.00811+	(0.00435)	0.00521	(0.00426)
% non-English speakers					0.00246	(0.00201)	0.00223	(0.00208)	0.0055**	(0.00198)	0.00241	(0.00198)
Log. % Indian							0.00134	(0.00084)	-0.000301	(0.00079)	-0.000553	(0.00076)
Log. % Pakistani							-0.000358	(0.00089)	0.000524	(0.00082)	0.00052	(0.00079)
Log. % Bangladeshi							0.00065	(0.00093)	0.00123	(0.00086)	0.000755	(0.00083)
Log. % Black Caribbean							-0.00157	(0.00100)	-0.000313	(0.00093)	-0.000739	(0.00089)
Log. % Black African							-0.000217	(0.00095)	0.000251	(0.00088)	-0.000148	(0.00084)
Log. % non-English speakers							0.00107	(0.00274)	0.000344	(0.00251)	0.000479	(0.00240)
FSM entitlements									-0.00283	(0.00239)	0.000192	(0.00232)
Log. % FSM entitlements									-0.143***	(0.0359)	-0.0973**	(0.0347)
Constant	-0.162***	(0.0145)	-0.214***	(0.0568)	-0.241***	(0.0591)	-0.246***	(0.0692)	0.159+	(0.0940)	-0.223*	(0.0977)
Var (u₁)	0.0668***	(0.00288)	0.066***	(0.00286)	0.065***	(0.00282)	0.064***	(0.00279)	0.049***	(0.00234)	0.044***	(0.00215)
Var (u₀)	0.481***	(0.00352)	0.480***	(0.00352)	0.480***	(0.00351)	0.480***	(0.00351)	0.480***	(0.00351)	0.450***	(0.00329)
N	9901		9901		9901		9901		9901		9901	

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001
Control variables added in model 6: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London

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Table 3.25. Two-level random intercept regressions for KS3 to KS4 VAS in English and Maths

	Schools with 0 -10% FSM entitlements		Schools with 10%-25% FSM entitlements		Schools with more than 25% FSM entitlements	
	β	(se)	β	(se)	β	(se)
Mixed	0.0492	(0.167)	0.389+	(0.206)	0.175	(0.226)
Indian	0.300*	(0.137)	0.446**	(0.141)	0.580***	(0.169)
Pakistani	0.376*	(0.164)	0.998***	(0.185)	0.25	(0.176)
Bangladeshi	0.27	(0.285)	0.416*	(0.188)	0.418*	(0.162)
Black Caribbean	0.222	(0.196)	0.126	(0.198)	0.404+	(0.219)
Black African	0.468*	(0.219)	0.543**	(0.206)	0.750***	(0.202)
Other	0.101+	(0.0570)	0.236***	(0.0694)	0.324***	(0.0762)
Proportion of co-ethnic friends at school	-0.00604	(0.0135)	0.0186	(0.0167)	0.00611	(0.0228)
*Prop. co-ethnic friends*Mixed*	-0.00706	(0.0471)	-0.121*	(0.0516)	-0.0378	(0.0561)
*Prop. co-ethnic friends*Indian*	-0.0146	(0.0389)	-0.0213	(0.0330)	-0.0373	(0.0380)
*Prop. co-ethnic friends*Pak.*	-0.0805+	(0.0484)	-0.190***	(0.0451)	0.00571	(0.0361)
*Prop. co-ethnic friends*Bangl.*	0.0111	(0.157)	-0.0728	(0.0578)	-0.0161	(0.0357)
*Prop. co-ethnic friends*Bl. Car.*	-0.0686	(0.0570)	-0.0554	(0.0496)	-0.0854+	(0.0486)
*Prop. co-ethnic friends*Bl. Afr.*	-0.073	(0.0727)	-0.0746	(0.0545)	-0.0781+	(0.0461)
SCHOOL COMPOSITION						
% Indian	0.0000669	(0.00708)	0.00338	(0.00453)	-0.00884*	(0.00345)
% Pakistani	-0.00615	(0.0122)	0.00751	(0.00703)	-0.00623*	(0.00299)
% Bangladeshi	0.0227	(0.0519)	0.00315	(0.0201)	-0.0054+	(0.00286)
% Black Caribbean	0.0206	(0.0262)	-0.012	(0.0100)	0.000969	(0.00523)
% Black African	-0.00988	(0.0181)	0.0263**	(0.00924)	-0.00263	(0.00584)
% Non-English speakers	0.00267	(0.00501)	-0.00517	(0.00401)	0.0091**	(0.00281)
Log. % Indian	-0.000141	(0.000988)	-0.000445	(0.00181)	0.000643	(0.00163)
Log. % Pakistani	0.00062	(0.00128)	0.0022	(0.00176)	-0.000901	(0.00157)
Log. % Bangladeshi	0.0000205	(0.00205)	0.00264	(0.00173)	-0.000952	(0.00149)
Log. % Black Caribbean	-0.000225	(0.00150)	0.000101	(0.00191)	0.000437	(0.00172)
Log. % Black African	0.000137	(0.00130)	-0.000049	(0.00171)	-0.0011	(0.00169)
Log. % Non-English speakers	-0.00259	(0.00326)	0.00501	(0.00481)	0.00734	(0.00696)
Constant	-0.0209	(0.120)	-0.187	(0.122)	-0.555***	(0.135)
Var (u1)	0.0418***	(0.00292)	0.0792***	(0.00588)	0.0460***	(0.00446)
Var (u0)	0.452***	(0.00456)	0.475***	(0.00591)	0.576***	(0.00783)
N	5175		3458		2890	

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001
N=9901
Control variables: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London

Graph 3.3. Ethnicity coefficients in models for VAS from KS3 to KS4 (excluding control variables)
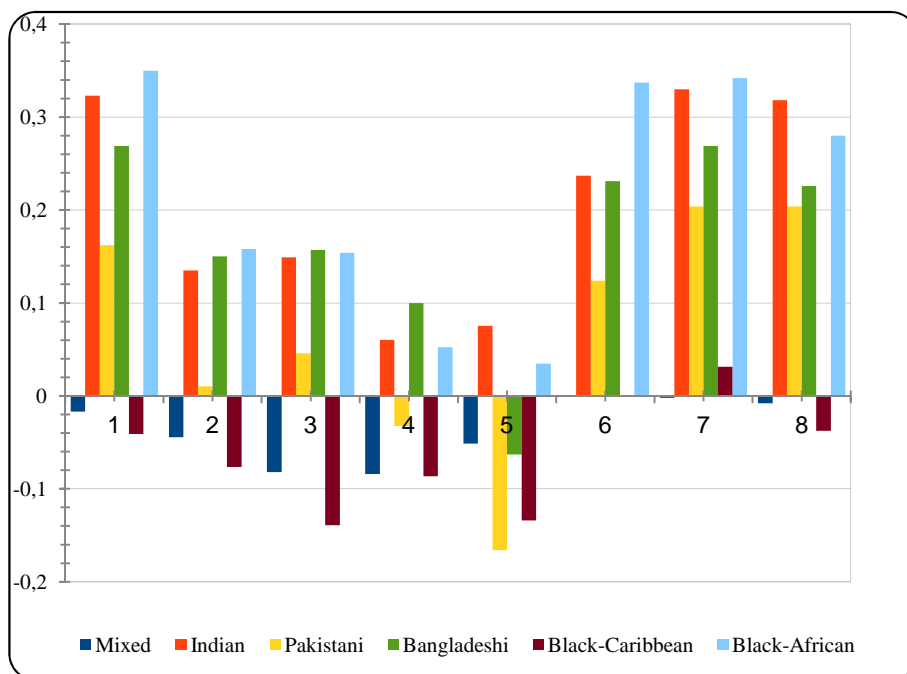
1: Model without explanatory variables
2: Students' attitudes, effort and expectations
3: Importance given to education by parents
4: Combination of 2 and 3
5: Acculturation: first-generation, language, religiosity and familism
6: Perceived discrimination and locus of control
7: School effects (I): teachers' efficacy, parents-school relationships and average pupil spending
8: School effects (II): ethnic composition of peer group at school

Graph 3.4. Ethnicity coefficients in models for VAS from KS3 to KS4 (including control variables)
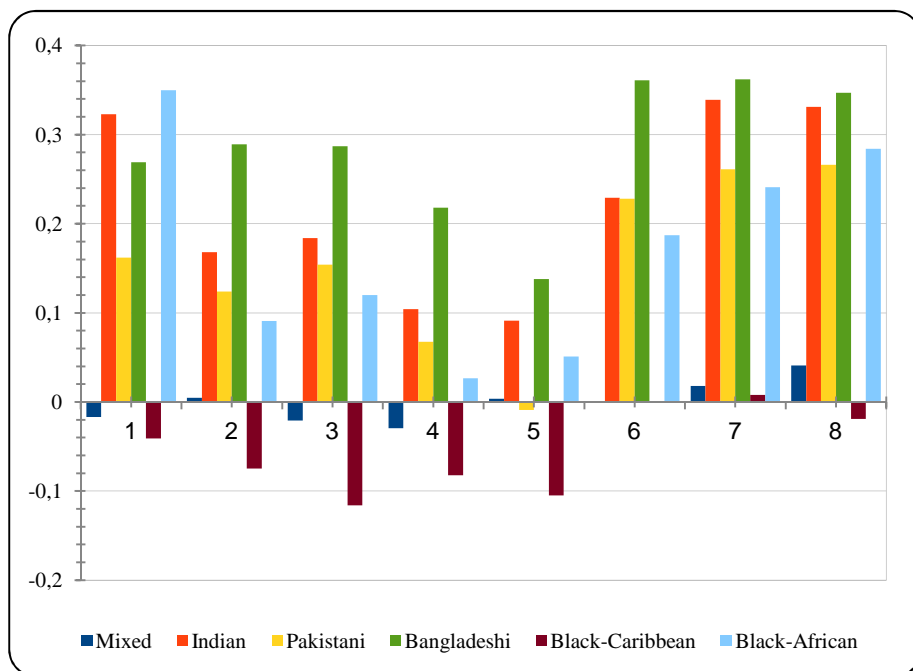
1: Model without explanatory variables
2: Students' attitudes, effort and expectations
3. Importance given to education by parents
4. Combination of 2 and 3
5. Acculturation: first-generation, language, religiosity and familism
6. Perceived discrimination and locus of control
7. School effects (I): teachers' efficacy, parents-school relationships and average pupil spending
8: School effects (II): ethnic composition of peer group at school

APPENDIX

Table A3.1. Operationalization of all the composite variables used in the analyses

CHAPTER SECTION	VARIABLE NAME	ITEMS (in composite variables)	ANSWERING CATEGORIES	RANGE OF VALUES	CRONBACH ALPHA Average inter-item covariance (AIC) & Scale reliability coefficient (SRC)
3.6.1. Students' attitudes towards school and educational expectations	Taste for school	- I am happy when I am at school - School work is worth doing - On the whole I like being at school - I work as hard as I can in school - School is a waste of time for me - Most of the time I don't want to go to school - In a lesson, I often count the minutes till it ends - I am bored in lessons - The work I do in lessons is a waste of time	- Strongly disagree - Fairly disagree - Fairly agree - Strongly agree	1-4	AIC: 0.18 SRC: 0.81
	Internal locus of control	- Working hard at school now will help me get on later on in life - Doing well at school means a lot to me. - If you work hard at something you'll usually succeed	- Strongly disagree - Fairly disagree - Fairly agree - Strongly agree	1-4	AIC: 0.15 SRC: 0.66
3.6.2. Value given to education by parents	Value given to education by MP	- Nowadays you need qualifications in order to get a job worth having - Leaving school at 16 limits young people's career - Parent wants student to have a better education than he/she had	- Strongly disagree - Fairly disagree - Fairly agree - Strongly agree	1-4	AIC: 0.17 SRC: 0.52
3.6.5. Perceived discrimination and locus of control	External locus of control	- Even if I do well at school, I'll have a hard time getting the right kind of job - People like me don't have much of a chance in life - How well you get on in this world is mostly a matter of luck	- Strongly disagree - Fairly disagree - Fairly agree - Strongly agree	1-4	AIC: 0.16 SRC: 0.54
	Teachers' attention	- Student thinks that is less likely that teachers take interest in own work - Student thinks that is less likely that teachers praise his/her own work - How many teachers this applies for: My teachers don't	- Strongly disagree - Fairly disagree - Fairly agree - Strongly agree	1-4	AIC: 0.14 SRC: 0.56

		listen to what I say - How many teachers this applies for: I get treated unfairly by my teachers			
	Teachers' punishment	- Student feels that he/she is more likely to be punished than others - Student feels that he/she is punish more heavily compared to others.	- Yes - No	0-1	AIC: 0.03 SRC: 0.59
	Ethnic discrimination	-Student thinks that skin colour/ethnic origin/religion will make it more difficult to get on in education after year 11 - Student thinks that skin colour/ethnic origin/religion will make it more difficult to get a job after you leave education - Student thinks ever been treated unfairly by teachers because of skin colour/ethnic origin/religion	- Yes - No	0-1	AIC: 0.09 SRC: 0.79
	Risk factors in the last 12 months	- Whether played truant in the last 12 months - Whether ever had a proper alcoholic drink - Whether ever graffittied on walls - Whether ever vandalized public property	- Yes - No	0-4	AIC: 0.02 SRC: 0.47
3.6.6. School effects (I):	Teachers' efficacy	- My teachers make sure that I do my homework - The teachers at my school make it clear how we should behave - The teachers in my school take action when they see anyone breaking school rules - My teachers can keep order in class - The teachers praise me when I do my school work	- Strongly disagree - Fairly disagree - Fairly agree - Strongly agree		AIC: 0.29 SRC: 0.76
	School communication	- I find it easy to deal with people at school - The school gives me clear information on how my son/daughter is getting on - The school makes it easy for me to get involved in my son/daughter's education - I know all I need to know about how I can help with my son/daughter's education - I don't know enough about modern qualifications to give my son/daughter proper advice about what to do	- Strongly disagree - Fairly disagree - Fairly agree - Strongly agree		AIC: 0.27 SRC: 0.71

Table A3.2. OLS regressions for average grade in KS2 and KS3 (100-point scale) and KS4 (9-point scale) English and Maths, accounting for survey design

	KS2 English & Maths		KS3 English & Maths		KS3 English & Maths including KS2 lagged		KS4 English & Maths		KS4 English & Maths including KS3 lagged	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	β (se)	β (se)	β (se)	β (se)	β (se)	β (se)	β (se)	β (se)	β (se)	β (se)
Mixed	-3.131*	-1.447	-3.107*	-1.316	-0.404	-0.141	-0.215*	-0.0628	0.00728	0.0258
	(1.356)	(1.325)	(1.209)	(1.124)	(0.613)	(0.609)	(0.100)	(0.0882)	(0.0498)	(0.0479)
Indian	-1.089	0.318	1.036	2.074*	1.976***	1.816***	0.422***	0.458***	0.348***	0.318***
	(0.935)	(0.888)	(0.980)	(0.887)	(0.461)	(0.450)	(0.0780)	(0.0659)	(0.0363)	(0.0350)
Pakistani	-10.96***	-4.363***	-9.839***	-3.059***	-0.378	0.488	-0.422***	0.108	0.281***	0.314***
	(1.067)	(1.074)	(0.974)	(0.912)	(0.512)	(0.499)	(0.0750)	(0.0706)	(0.0339)	(0.0373)
Bangladeshi	-6.546***	2.856*	-7.120***	2.403*	-1.468*	0.0814	-0.136+	0.585***	0.373***	0.424***
	(1.180)	(1.295)	(1.143)	(1.196)	(0.639)	(0.715)	(0.0811)	(0.0848)	(0.0421)	(0.0490)
Black Caribbean	-7.312***	-7.348***	-7.353***	-7.503***	-1.039	-1.530*	-0.415***	-0.438***	0.110*	0.0670
	(1.204)	(1.245)	(1.089)	(1.130)	(0.696)	(0.704)	(0.0889)	(0.0906)	(0.0439)	(0.0445)
Black African	-5.954***	-5.656***	-3.859***	-4.996***	1.282*	-0.399	0.0933	-0.132	0.369***	0.205***
	(1.216)	(1.289)	(1.141)	(1.096)	(0.646)	(0.614)	(0.0986)	(0.0890)	(0.0484)	(0.0495)
Other	0.304	1.141	3.112**	3.049**	2.850***	2.122***	0.411***	0.322***	0.188***	0.117**
	(1.095)	(1.076)	(1.041)	(0.989)	(0.522)	(0.519)	(0.0868)	(0.0814)	(0.0410)	(0.0414)
KS2 score in Eng. & Maths					0.863***	0.813***				
					(0.00581)	(0.00577)				
KS3 score in Eng. & Maths									0.0714***	0.0673***
									(0.000525)	(0.000553)
Constant	57.45***	59.27***	51.96***	53.03***	2.352***	4.855***	5.788***	5.893***	2.076***	2.322***
	(0.309)	(1.220)	(0.363)	(1.109)	(0.388)	(0.716)	(0.0303)	(0.0999)	(0.0323)	(0.0726)
N	12271	12271	12271	12271	12271	12223	12271	12271	12271	12223
R²	0.012	0.152	0.012	0.21	0.764	0.783	0.008	0.241	0.767	0.779

Source: LSYPE wave 1 and NPD 2001, 2004 and 2006

Control variables added in model 2 and 4: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family SES, student lives in London.

Table A4.2. Presents the ethnic differentials in English and Maths national examinations at the end of KS2 (age 10/11), KS3 (age 13/14) and KS4 (age 15/16). It is important to bear in mind that the grading scales change from KS3 to KS4. That is, while grades are expressed in a 100-point scale at KS2 and KS3[49], a 9-point categorical scale (A* to G) is used for grading at KS4. As a consequence, the size of the coefficients for the models on attainment at KS2 and KS3 are not comparable to those at KS4. The results in table A4.1 are presented as follows:

Models 1 and 2 (for KS2), 3 and 4 (for KS3), and 7 and 8 (for KS4) are two nested OLS regressions, where only the ethnicity variables are included in the first step and the control variables[50] are added to the model afterwards.

Models 5 and 6 (for KS3), and 9 and 10 (for KS4) are also two pairs of nested OLS regressions that differentiate from the previous models in that they include a lagged of the dependent variable among the explanatory variables. That is, the models for KS3 (5 and 6) include a measure of attainment at KS2, while the models for KS4 (9 and 10) include a measure of students' past attainment at KS3. These type of models are called first order autoregressive or conditional models (Rabe-Hesketh & Skrondal, 2012) and they are used to measure change in a certain outcome (in this case, change in average attainment in English and Maths from one key stage to the following).

If we compare the ethnicity coefficients of models for the average grade in English and Maths at KS3 without the lagged of the dependent variable (models 3 and 4) with those that include the KS2 attainment lagged (models 5 and 6), it can be seen how the gap with the White British group decreases and becomes non-significant in the autoregressive models for most ethnicities.

With regard to the net[51] gap (model 4), the negative and significant coefficients for Pakistanis, Caribbean and Black African students almost disappears when their performance at KS2 is taken into account (model 6).

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[49] The original scores in KS2 and KS3 are expressed in different continuous scales. Therefore, I have coverted them into a 100-point scale to make them comparable.

[50] The control variables are gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family SES, and whether student lives in London.

[51] The absolute gaps are the observed differences in attainment relative to the White British majority, while the net gap is the difference that remains after controlling for relevant background factors that are know to affect academic achievement, such as parental education or social class.

That is, while their attainment is still below that of the reference group, it is not the case of their progress, which appears to be similar. The progress of Bangladeshis does not differentiate from that of White British either, though Indians seem to progress more than comparable students of the reference group.

However, if we now focus on the ethnicity coefficients of the models on attainment at KS4 with and without the lagged variable (models 7, 8, 9, 10), it can be seen that, together with the Indian minority, now also the Pakistani, Bangladeshi and Black African minority appear to progress more than comparable White British students (model 10). These results confirm the stronger progress of South Asian and Black African minorities during the last two years of compulsory education that was highlighted by some English scholars (Dustmann et al., 2008; Plewis, 2009; D. Wilson et al., 2005b).

Graph A3.1. Average VAS in English and Maths from KS2 to KS3 and KS3 to KS4 across ethnicities
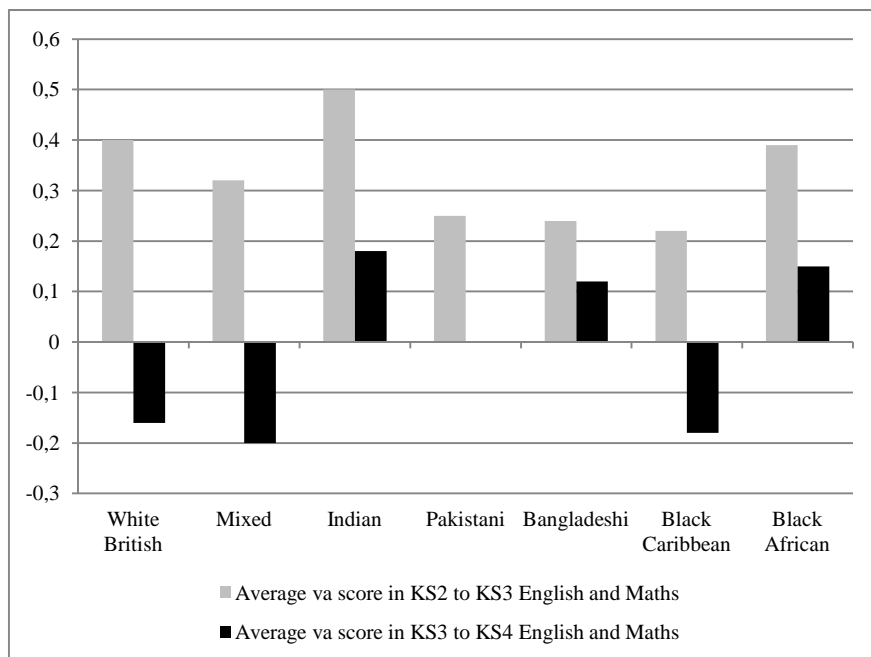
N=12458
Range of values KS2 to KS3: -3 to +3
Range of values KS3 to KS4: -6 to +5.5

The descriptive information presented in graph A3.1 raises the following question: why do White British students completely reverse their pattern of

progress during the last period (KS3 to KS4), contrary to the case of Indians, Bangladeshis or Black Africans, whose VAS are, on average, positive or close to zero? While during the first period, White British students were, on average, those making the strongest progression after Indians, the trend is reversed during the last two years of compulsory education, when only Mixed and Black Caribbean students worsen their performance at the same level as White British students do. As a consequence, the initial gap in attainment between ethnic minorities and the White British group is notably reduced or even reversed for the three South Asian and Black African minorities. In contrast, Mixed and Black Caribbean students have almost the same academic progress as the White British during the last two years and, therefore, the already existing gap between them remains unchanged.

Table A3.3.   Descriptive statistics of the VAS in English and Maths from KS3 to KS4, by ethnicity

	VAS KS2 to KS3					
	mean	**se**	**median**	**min**	**max**	**N**
White British	0.40	0.01	0.5	-3	2.5	8456
Mixed	0.32	0.04	0.5	-2	2	391
Indian	0.50*	0.03	0.5	-1.5	2	884
Pakistani	0.25*	0.03	0.5	-2	2	777
Bangladeshi	0.24*	0.04	0.5	-1.5	2	599
Black Caribbean	0.22*	0.04	0	-2	2	443
Black African	0.39	0.04	0.5	-2.5	2	379

N=12458

Difference with White British significant at p<0.05

CHAPTER 4

CROSS-SECTIONAL DIFFERENCES IN EDUCATIONAL EXPECTATIONS ACROSS ETHNICITIES

4.1. Introduction

Educational expectations have played a major role in the literature of sociology of education and social stratification during recent decades, and it is now commonplace to include them in models of educational achievement. Before the Wisconsin model of status attainment, whose first version was presented in 1969 (Sewell, Haller, & Portes, 1969b), expectations about future academic plans were only studied by educational psychologists, with the exception of Kahl's early work during the 1950s (Kahl, 1953). However, the status attainment models developed by Hauser, Sewell and their associates placed educational expectations at the core of explanatory models of intergenerational transmission of inequalities. In this regard, the educational expectations of parents and children were seen as the key relevant intervening variables through which parental education and SES operated to generate stratified educational outcomes.

The educational expectations of ethnic and/or immigrant minorities have received considerable attention from scholars (K. L. Alexander, Entwisle, & Bedinger, 1994; Cheng & Starks, 2002; Domina, Conley, & Farkas, 2011; Glick & White, 2004; Goyette & Xie, 1999; Hanson, 1994; Hao & Bonstead-Bruns, 1998; Messersmith & Schulenberg, 2008; Morgan, 2004; K. Wilson, Wolfe, & Haveman, 2005), since it

was found that ethnic minority students and their parents tend to report significantly more ambitious expectations than the majority groups. This finding has been explained in terms of cultural specificity or the positive selection of the migration flow (Feliciano, 2006), among other explanations [52]. In the previous chapter, I have shown that ethnic minority students and their parents report significantly higher expectations of going to university compared to White British students at the age of 13/14. Moreover, they not only report more ambitious plans but they are also more likely to maintain those initial plans during the last two years of compulsory education (from age 13/14 to 15/16). Their high expectations, along with more positive attitudes and behaviours towards school, partially accounted for the stronger academic progress of the three South Asian and the Black African minorities from KS3 to KS4 examinations.

This chapter and the following chapter analyse in-depth the factors associated with the more ambitious and stable educational plans of ethnic minorities, paying special attention to their expectations of applying to university. In this chapter, a cross-sectional perspective is adopted, focusing on the ethnic differentials in educational expectations at age 13/14, while in the following chapter, I adopt a longitudinal approach to analyse the evolution of these expectations during adolescence.

The purpose is not, however, to measure the impact of early expectations on the future educational trajectories of ethnic minorities after compulsory education, since that is the aim of Chapter 6. On the contrary, my objective here is to disentangle the educational expectations themselves, how they differ and change over time across ethnicities. For this reason, I first introduce the concept of educational expectations and a justification of their relevance for future and

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[52] In the American context, several scholars have found that the high expectations of ethnic minorities are not as good a predictor of future achievement as for the Caucasian group (Morgan, 2004). This aspect is analysed extensively in the last chapter of the dissertation, where I investigate the educational trajectories of English ethnic groups after they finish compulsory education.

present behaviour from two different theoretical points of view: the socio-psychological and the rational choice perspective. Afterwards, I use the LSYPE to analyse empirically the relationships brought about in the theoretical part of the chapter. In this regard, this descriptive empirical analysis aims at answering the following research questions:

- Firstly, to what extent the more ambitious educational expectations of ethnic minority students are consistent with their school attitudes and behaviours? That is, are their expectations more or less associated with their actual school behaviour compared to White British students? In this regard, I expect some degree of correspondence between academic goals or expected outcomes, such as going to university, and the actual behaviour at school, such as studying on a regular basis. Indeed, it is highly unlikely to access university without making any academic effort or by holding strong negative attitudes towards education and/or school during adolescence. Nevertheless, the level of agreement between expectation, attitudes and behaviours varies significantly across ethnicities.

- Secondly, are there significant ethnic differentials in the relationship between students' educational expectations and those reported by their parents for them? That is, are ethnic minority students more likely to adopt their parents' expectations compared to White British students?

- Thirdly, are the ethnic differentials in the plans of going to university related to diverse perceptions of the returns of having a university degree in the labour market? Ethnic minority students might attach more value than comparable White British students to higher education in terms of future labour market outcomes and this could account for their significantly higher ambitions.

The last part of the chapter presents several multivariate analyses with three dependent variables: the preferences for post-compulsory secondary education, the likelihood of applying to university in the

future and the consistency between students' and parents` expectations of applying to university. I explain the cross-ethnic variations in the three dependent variables by considering two different processes of expectation formation: firstly, the process of adoption and, secondly, the process of adaptation (Andrew & Hauser, 2011). The former uses psychological mechanisms to explain why students hold different educational ambitions. In this regard, students would adopt their parents' expectations for them during childhood. However, not only is the level of expectations of parents e important, but also their efficacy in transmitting them to their children. The latter process of expectation formation is based on a rational perspective, according to which students would adapt their expectations to their academic abilities (i.e. grades) on the one hand, and to the benefits and costs that they attach to each possible educational path, including leaving full-time education, on the other hand.

4.2. Defining the concept of educational expectations

The conceptualisation of expectations has sometimes been subject to confusion, particularly when used interchangeably with the closely related concept of aspirations. In order to allow a certain degree of consistency, I present one of the most popular definitions of educational expectations in the sociological literature, formulated by S. L Morgan in 2006. Morgan uses the concept of expectations and aspirations interchangeably[53], and defines them as "stable prefigurative orientations composed of specific beliefs about one's future trajectory through the educational system and one's ultimate class or status position" (Morgan, 2006, p. 1528). In his 2005 book, Morgan offers a

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[53] Even though I start this section with the definition of expectations given by Morgan (Morgan, 2006: 1528), in my research I do differentiate between the concept of *expectations* (as defined by Morgan) and that of *aspirations*. Many scholars have made a distinction between expectations and aspirations although sometimes both terms have been used interchangeably. In principle, expectations tend to be considered realistic beliefs or cognitions about the future, while aspirations have an idealistic and affective component, and refer to the desires or personal preferences that individuals hold about their future.

clearer picture of his definition of expectations as prefigurative orientations:

> Prefigurative commitments share essential features with the concept of an attitude in the social psychology literature [...] Numerous studies show that individuals who lack information are unable to maintain strong probabilistic judgments and are more likely to have ambivalent attitudes [...] This literature is broadly supportive of the claim that a prefigurative commitment is a joint function of the accuracy and amount of available information (Morgan, 2005, p. 133).

As can be inferred from this quotation, Morgan defines educational expectations as future-oriented cognitions or beliefs that reflect what individuals consider to be their most likely future outcome or trajectory regarding their education. In both Psychology and Sociology, expectations have been considered as relevant predictors of a variety of future courses of action or events. As Morgan points out, educational expectations have played a major role in models of educational attainment and intergenerational transmission of inequalities since the appearance of the Wisconsin model of status attainment at the end of the 1960s (Haller & Portes, 1973). The Wisconsin model itself and many other recent sociological works that are at least partially based on it, assume that expectations have a causal and predictive power on future attainment, and that the mechanisms through which these expectations are formed and affect behaviour are based on psychological processes, even if these are sometimes not explicitly acknowledged.

In the following section, I review the two main theoretical approaches that can be used to study the formation, evolution and impact of educational expectations. These are the psychological and the rational choice perspectives. I mainly pay attention to how both have tackled the question of the influence of expectations on individuals' present behaviour as well as future achievement, since this has been one of the main concerns of sociologists of education.

4.3. Do expectations affect the present and future behaviour of individuals?

This question is key in any kind of research that involves expectations, since only in understanding the mechanisms through which they operate is it possible to argue in favour of their explanatory power. The empirical research on attitudes and motivation carried out in the field of social psychology has shed light on the relationship between expectations and achievement. In contrast, the mainstream research in economics has regarded the causal power of expectations to explain future behaviour as quite limited. For economists, the educational expectations reported by individuals in surveys would only represent a proxy variable for a future outcome. That is, the expectations held by students would not condition their behaviour in any manner, since they would be simply probabilistic statements about their future.

4.3.1. Research in social psychology: the complex link between expectations (as cognitions), aspirations (as affections), and behaviours

According to Morgan, expectations share essential features with the concept of attitude, which is central in the literature of social psychology. Why is that the case? Even though the understanding of attitudes has changed during the last decades of research, the notion of evaluation has always been at the core of all definitions (Banaji & Heiphetz, 2010). According to Eagly and Chaiken, attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour. This minimalist definition retains two of the three dimensions that have been classically included in the structure of attitudes: cognitions and affections. Cognitions are beliefs or ideas that individuals have about certain objects, actions or events. Affections, however, are related to the feelings of like or dislike that they have towards them (Eagly & Chaiken, 1998). The classic triadic view of attitudes will also include behaviours as the third component of an attitude, together with cognitions and affections. The triadic perspective was highly popular

until the 1960s, when multiple empirical works started to reveal low correlations between reported beliefs, preferences and behaviour in many social contexts (Breckler & Wiggins, 1989). As a consequence, many scholars abandoned the triadic attitude structure to focus their research on identifying the conditions under which cognitions and/or affections could actually predict or are associated with certain behaviour (Banaji & Heiphetz, 2010).

In this regard, it is easy to see the similarities between the concept of (educational) expectations and that of attitudes (to education), although the latter is broader than the former. Therefore, expectations would only refer to what has been generally recognized as the cognitive component of an attitude, i.e. ideas that express what an individual believes or knows about certain objects, events or actions. However, the concept of expectations itself would not have any affective component, i.e. positive or negative feelings, which has been central in attitude research. In this regard, the affective component would be acknowledged by the concept of aspirations. That is, while expectations are considered realistic beliefs or cognitions about the future, aspirations refer to the wishes that individuals hold about their future, i.e. what they would like to do/to happen versus what they think will happen. As a consequence, the more realistic aspirations are, the more they would match expectations. Expectations and aspirations tend to be highly, but not perfectly, correlated, since individuals' preferences do not necessarily coincide with what they consider more likely to happen; e.g. a student's personal taste might be studying Arts at university but, for several reasons, he/she might consider him/herself more likely to end up studying Economics instead.

In surveys, questions about educational expectations request individuals to report their current beliefs about their future educational trajectory, e.g. how likely do you think it is that you will go to university? On the other hand, questions aimed at measuring aspirations ask individuals about their tastes or wishes, that is, what they would like to happen or to do in the future with respect to their education, e.g. how much would you like to go to university or how important is it for you to go to university?

In addition to the link between expectations/cognitions and aspirations/affections, the other relationship that has attracted attention has been that between the cognitive and/or affective component on the one hand and the behavioural component on the other. In the case of educational expectations, the relationship between reported beliefs of future educational plans and individuals' present behaviour (e.g. academic effort) deserves particular attention. As Morgan points out, expectations are, on the one hand, probabilistic statements expressed by individuals about their future but, on the other, expectations also condition individuals' present behaviour. That is, an expectation represents a cognitive attachment to a future event or course of action to which individuals commit their current behaviour (Morgan, 2005). In other words, we expect that individuals with high expectations of going to university also elicit behaviours in accordance with those expectations that facilitate the occurrence of the expected event in the future, e.g. doing homework and studying on a regular basis would increase the probability of attending university. Despite the rationality of the previous statement, empirical studies have shown systematic variations in the consistency of the attitude-behaviour link across different social groups. However puzzling it might seem, what individuals think or like is not always in agreement with their behaviour. This lack of agreement forced social psychologists to focus on the causes of the dissonance, that is, why sometimes individuals show a discrepancy between present cognitions or affections on the one side and behaviour on the other, e.g. a student who expects to go to university but at the same time does not put any effort into his/her everyday homework. As a matter of fact, cognitive dissonance theory continues to be one of the preferred theoretical frameworks to analyse these discrepancies. However, the theories of cognitive dissonance have mostly focused on how individuals react when they find themselves in a state of dissonance, but not on why they are in that situation in first place.

One of the issues that has also received considerable attention among psychologists and sociologists is the process of educational expectation formation. That is, the age at which individuals form their

expectations regarding their future and the main factors shaping their formation. In most cases, the role of parents is key to understanding this process, since they are the main significant others during the process of socialisation of individuals during their childhood. Moreover, parents are likely to hold educational expectations for their children's future well before they start secondary school. Status attainment theory has traditionally assumed that young individuals adopt their parents' expectations for them at an early age, and that explains their higher stability across time[54] (Haller, 1982). As pointed out by Sewell & Hauser "parents serve as models to be emulated, and they are constantly revealing their overt and covert evaluations and expectations through interactions with their child. […] It is the child's perception of the parents' intent to encourage or discourage his/her educational aspirations that is crucial to the development and maintenance of those aspirations" (Sewell & Hauser, 1993)

Taking into account the psychological perspective, my empirical analysis will present the ethnic differentials in consistency between educational expectations, aspirations, and academic behaviours, particularly the relationship between expectations and behaviours. That is so because I consider school behaviours to be goal-oriented, that is, they are directed towards the occurrence of a certain future event expected by the student (e.g. going to university). Therefore, students with higher levels of agreement between their educational expectations and their academic behaviours are likely to be those with stronger academic ambitions (e.g. going to university). In this regard, even if two students report exactly the same educational expectations for their future, different levels of agreement between those and their academic behaviours would also reflect different degrees of personal attachments to a future event.

With regard to the relevance of parents in the formation and maintenance of adolescents' educational expectations, my empirical analysis examines the extent to which ethnic minority students differ

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[54] In the following chapter, I examine in more detail the issue of stability of educational expectations across time, since I analyse the evolution of the expectations of going to university from early adolescence until age 17/18.

from White British students in the degree of adoption of their parents' educational expectations for them. In addition, parental expectations are included as one of the main explanatory variables in all the models about the ethnic differentials in expectations at early adolescence (age 13/14).

4.3.2. Research in economics: educational expectations as unreliable data

Economists have generally avoided working with subjective data, that is, data collected in surveys about individuals' attitudes or beliefs, since they consider it unreliable (Manski, 1995)[55]. Therefore, research in economics has not paid much attention to the reported expectations regarding future educational trajectories or to the attitudes to education, contrary to what happens in sociology. Even though, similarly to sociologists, they are also interested in explaining the actual educational achievement or the school-continuation decisions of students, but they consider past educational expectations irrelevant for this task[56]. This aspect has been criticized by scholars like Morgan, suggesting that individuals' beliefs about their alternative potential futures have an influence on their present behaviour (Morgan, 2005). However, Morgan has also highlighted the limited explanatory power of expectations as they are currently operationalised in most surveys, including the LSYPE (Morgan, 2004). According to him, this is so because these types of questions do not delve deep enough into the ways through which these expectations are formed and revised, and the

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[55] An exception would be the research on the impact of individuals' risk aversion orientations on several economic outcomes. In addition, some economists have paid attention to the subjective expectations for future educational returns reported by individuals at key transition points of their school trajectories.

[56] All this literature has been particularly concerned about the ability bias, meaning that individuals with high ability tend to have higher school grades, pursue higher educational levels and have higher success in the labour market than those with lower ability. OLS regressions do not control for these unobserved individual skills and tastes, and therefore the estimates are biased. However, since the ethnic differentials are my concern and I have no reason to assume that the distribution of innate ability varies significantly across ethnicities, I am not taking into account this factor here or in the following chapter.

circumstances under which they condition the current behaviour. For this reason, he proposes surveys where students are required to choose their preferred option under different scenarios, thus forcing them to think counterfactually.

Even though economists do not pay attention to subjective educational expectations, it is possible to incorporate their rationality assumptions for a better understanding of how expectations form and, particularly, how they change over time. In principle, all individuals hold beliefs, which can be more or less accurate, about the potential benefits and costs of taking one course of action over another. When it comes to the intentions of going to university in the future, it is likely that those students holding high expectations in this respect, will also consider that studying a degree is necessary for them to have a well-paid job in the future, that is, a more secure and comfortable life. Although we cannot expect to explain completely the educational expectations of individuals only by considering the benefits and costs that they attribute to pursuing a university degree over other potential alternatives, it is likely that knowing these beliefs would help to understand their expectations considerably.

One of the main criticisms of this approach is the common assumption that all individuals form their beliefs about the monetary returns of, for example, going to university, in a similar way (Manski, 1990). In this regard, several empirical investigations have shown that the degree of accuracy of these beliefs, or the weighting attributed to each of them to take a certain decision, also varies systematically depending on other factors, such as students' socio-economic status or ethnicity. Research carried out in the US has shown that African-American boys' college enrolment is not positively affected by the returns to schooling, as opposed to Whites (Beattie, 2002). Other scholars have focused on the high educational expectations of African-American teenagers and explained them in terms of their misperception of their opportunity structure to pursue a higher education degree, which would explain the subsequently lower realization of their expectations compared to Whites (Hanson, 1994).

Social psychologists have emphasized the limitations of traditional rational action approaches in explaining the formation of educational expectations, arguing that they develop during childhood through parental transmission and they remain quite stable after that (Haller, 1982). Therefore, children would have already adopted their parents' expectations well before they are able to consider the potential benefits and costs associated with different educational trajectories. That is, no rational thinking would be involved in their academic ambitions. With the available survey information, it is not possible to test whether the evaluation of costs and benefits comes before or after the expectation formation, although in the next chapter, I shed light on the process based on how students change their educational expectations during adolescence.

4.4. Describing the ethnic differentials in preferences for post-compulsory secondary education and likelihood of applying to university

The three indicators of students' educational expectations that are used in the chapter are the following:

- The first indicator is based on the answers given by students about their likelihood of applying to university in the future. There are five answer categories: very likely to apply, fairly likely to apply, not very likely to apply, not likely at all to apply and don't know whether will apply.

- The second is based on the answers regarding their likelihood of being admitted to university if they apply[57].

- Students that express a desire to stay in full-time education after age 16 are also asked about their preference for post-

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[57] Unfortunately, this second question is not asked to those students saying that they are 'not at all likely' to apply to university in the future.

compulsory secondary education (A levels in a sixth-form school or college, or some kind of vocational qualifications in a college)[58].

[table 4.1 and 4.2 about here]

The existing empirical evidence about the educational expectations of ethnic minority students and their families for the English case (Crozier & Davies, 2006; Leslie & Drinkwatr, 1999; Payne, 2003; Penn & Scattergood, 1992; Strand & Winston, 2008) confirms the findings of other scholars, particularly American, with respect to the higher educational expectations of immigrant and/or ethnic minority students and parents compared to the native majority[59] (Fuligni, 1997; Goyette & Xie, 1999; Kao & Tienda, 1995, 1998; Portes & Rumbaut, 2001). Tables 4.1. and 4.2. show the distribution of students in each ethnicity in terms of their expectations of applying to university and their preferred trajectories after GCSE examinations. In this regard, all ethnic minorities but Mixed students, report significantly higher expectations of applying to university than White British at age 13/14. The differential with White British is particularly wide for Indians and Black Africans: while 57% of Indians and 65% of Black Africans believe that it is very likely they will apply to university in the future, only 29% of White British students think so.

With regard to the preferred option for post-compulsory education, presented in table 4.2, the percentage of potential dropouts after age 16 among all ethnic minorities but the Mixed group is significantly smaller than among White British students, which is relatively high (16%). That is, ethnic minority students are less likely to report a

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[58] It is not clear whether this indicator measures expectations, aspirations or a combination of both. This is so because it was constructed from the answers given by those students that *want* to stay in full-time education after age 16 about what they *think* they will do.

[59] It is important to note that English scholars tend to focus on ethnicity and not on nativity or immigrant generation, in contrast to American researchers. Therefore, the former tend to compare ethnic minorities with the White British group, while the latter also consider differences between the first and the second generation within each ethnic group.

preference for leaving education at the age of 16. Moreover, the percentage of Indians (77%), Black Africans (74%), Pakistanis (69%) and Bangladeshis (63%) expressing a desire to continue to the sixth form is significantly higher than the percentage of White British with the same preference (52%)[60].

The percentage of students expressing their preference for vocational education in specialist or further education colleges is moderately high among Mixed (25%), Bangladeshis (27%) and Black Caribbean (29%) students compared to the White British group (22%), though the difference is only significant at 0.05 for the Black Caribbean group.

Both tables 4.1. and 4.2. reveal that Indians and Black Africans stand out from other minorities and from the White British majority for their extremely high and academic oriented educational expectations. Pakistani and Bangladeshi students are in an intermediate position, while Black Caribbean and Mixed students resemble more the White British students. Nonetheless, the Black Caribbean minority has, on average, significantly higher university expectations than White British students (42% of Caribbean students are very likely to apply compared to only 30% of White British), as well as a lower percentage of potential dropouts after age 16 (7%) compared to the White British group (16%).

The case of Black Caribbeans is surprising: while the percentage of students reporting a preference for the academic route (sixth form) is similar to that of White British, their expectations of applying to university are significantly higher. In addition, Black Caribbean students are also more likely to report a preference for post-16 vocational education. Considering that the most common route to university is through A levels studied in sixth-form schools or

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[60] Though not shown in the table, ethnic minorities show a stronger preference for sixth-form colleges instead of schools. This could be related to the fact that they are over-represented in schools that have no sixth form and, therefore, they need to transfer to a college when they finish KS4. In fact, while 60% of White British are enrolled at age 13/14 in schools with sixth form, only 54% of Indians, 51% of Pakistanis and Bangladeshis and 48% of Black Caribbeans are in the same situation (NPD/PLASC 2004).

colleges[61], is it therefore possible that the university expectations of Black Caribbean students are less grounded than those of White British? Not necessarily. In principle, their university expectations do not have to be less realistic, though the type of university they expect to go to might be quite different. That is, these students might already have in mind the idea of going to a lower-tier university, where there are access possibilities through vocational education and the degrees tend to be more applied and less demanding. The other alternative, that of Black Caribbean not being aware of the limitations of not going to a sixth-form institution to enter more prestigious universities, does not seem very realistic. In addition, it is possible that Black Caribbean students consider their chances of being accepted into sixth form at age 16 rather low given their poor results obtained at age 13/14 in KS3 examinations. The influence that students' grades at KS3 national exams have on these preferences is analysed in the multivariate models presented in this chapter.

To sum up, it is clear that ethnic minority students, especially South Asians and Black Africans, have on average significantly higher university expectations than White British students. However, Black Caribbeans are on average significantly more inclined to prefer the vocational college path for post-compulsory education, while the other minorities expect to continue into the academic route (sixth form), particularly Indians and Black Africans.

[table 4.3. about here]

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[61] Most universities require A level qualifications in order to apply for a degree. However, depending on the university, the requirements regarding the specific A levels and the grades that students should take in order to apply can be more or less flexible. The prestigious public universities, which are represented in the Russell Group, only accept applicants that have taken traditional academic A levels. For the so-called 'new universities', former polytechnic colleges before 1992, the entry requirements are generally less demanding. Poorer grades in traditional A levels, non-traditional A levels or vocational secondary education are usually accepted. Nowadays, some universities from the Russell Group also admit students coming from vocational education with the requirement of doing a foundation year before starting the degree.

Finally, table 4.3. presents evidence of the higher consistency between the expectations for applying to university on the one hand, and the expectations of being admitted on the other, for all ethnic minorities except the Mixed group compared to the White British majority. While only 49% of White British students report the same likelihood of applying as for being admitted, this percentage rises to 62% for Black Africans, 59% for Pakistanis and for Bangladeshis, 58% for Black Caribbeans, and 55% for Indians. On the contrary, the percentage of students who think that their likelihood of applying is higher than their likelihood of being admitted is significantly lower for Pakistanis, Bangladeshis, Black Caribbeans and Black Africans compared to White British. Therefore, it seems that the expectations of applying to university in the future for most ethnic minority students are more related to their perceived chances of being admitted than for White British students, who do not seem to condition their expectations of applying to their expectations of being admitted as much as ethnic minority students.

4.5. The psychological perspective: expectation-behaviour consistency and student-parent agreement in educational expectations

In this section, I examine whether there are significant differences across ethnicities in the associations between students' expectations of applying to university reported at age 13/14 and their school behaviours at that age. In addition, I also examine the degree of correspondence of students' expectations with those of their parents, which are also measured when students are age 13/14.

With regard to the consistency between students' educational expectations of applying to university and their attitudes and behaviours towards school, I expect to find a positive association for all ethnicities. That is, high educational expectations should somehow condition the present behaviour of students, since it is through this behaviour that these expectations will be realised in the future.

However, this relationship appears to be significantly weaker for ethnic minorities.

In terms of students' and parents' level of agreement in expectations, I find that parents of certain ethnic minorities appear to be, on average, more effective than White British parents in the transmission of those expectations to their children.

4.5.1. Ethnic variations in the consistency between expectations and present academic behaviour

Having presented the variations in expectations in the base year (age 13/14), I am able to illustrate the ethnic differences in the association between those educational expectations and a set of relevant academic behaviours and attitudes also measured when students are age 13/14. The first behaviour of interest is the number of weekdays that students spend doing their school homework. Even though I do not have information about the average hours per day dedicated to this activity, I expect that students reporting high expectations of applying to university will spend on average more days doing homework than those with lower expectations. The second indicator is the composite variable taste for school, which is formed by a set of items measuring the feelings and behaviours towards school and education in general[62].

[table 4.4 about here]

As expected, all correlations, which are shown in table 4.4, are positive: that is, the higher the expectations, the more positive school feelings and behaviours, and the more days a week spent doing homework. However, the correlations are weaker for Pakistani, Bangladeshi and Indian students and slightly weaker for the two Black minorities compared to the White British majority. Why is that the case?

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[62] See appendix of chapter 3 for details about the operationalization of this variable..

Table 4.4 helps to clarify these differences. It presents the results of two OLS regressions where taste for school (model 1) and number of days per week doing homework (model 2) are the dependent variables. The ethnicity categories are interacted with the expectations of applying to university reported by students, which have been simplified in three categories (very likely to apply, fairly likely to apply, and other answers). In addition, the usual background control variables are included in the two models[63]. The interactions[64] are significant at 0.05 for the three South Asian minorities in the two models, meaning that the relationships between university expectations and taste for school on the one hand, and homework behaviour on the other hand, are significantly different than in the White British group. In this regard, the decrease in the composite variable taste for school and number of days doing homework associated with having less ambitious expectations is more pronounced for White British than for South Asian students. Mixed, Black Caribbbean, and Black African students do not differentiate from White British in these two relationships. These results reveal that the three South Asian minorities have significantly more positive school attitudes and behaviours than White British students with the same level of expectations. Therefore, it seems that the attitude-behaviour relationship is, on average, less consistent for South Asian students, who seem to enjoy being at school more and put more effort into their school duties than comparable White British students with the same expectations.

4.5.2. Consistency between parents' and students' educational expectations

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[63] These are, gender, immigrant generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, and whether student lives in London.

[64] Table 4.5. only shows the main effects and the interactive term. The significance for each of the interactions has been calculated separately.

As has been already said, the interest of sociologists in the role of educational expectations in future achievement increased exponentially after the publication of the article by Sewell, Haller, and Portes in 1969 (Sewell, Haller, & Portes, 1969c). The socio-psychological models, of which the Wisconsin status attainment model has been the most influential example, have emphasized the prominent role of individuals' significant others, particularly the parents, in the formation and development of students educational expectations. From this psychological perspective, students' expectations would form quite early during childhood and they would remain considerably stable over time (Andrew & Hauser, 2011). Originally, the Wisconsin model hypothesised that the transmission of expectations occurs through three different psychological processes: imitation, self-reflection and, most importantly, adoption of significant others' aspirations towards oneself (Haller, 1982). In this regard, most students holding high educational expectations during adolescence would have adopted them from their parents during their childhood. As a consequence, these children would be more motivated and would put more effort into their studies to keep up with their (parents) expectations, transforming the latter into actual achievement in a kind of self-fulfilling prophecy. Indeed, "one could argue that the distinguishing feature of status socialization theory is the explicit modelling of future behaviour as the outcome of one's own expectations and how they are conditioned by the expectations of others" (Morgan, 2005, p. 45).

[table 4.6. about here]

Research mostly carried out in the US has shown that ethnic minority and immigrant parents tend to have higher educational expectations for their children than White native parents (Goldenberg, Gallimore, Reese, & Garnier, 2001; Louie, 2001; Raleigh & Kao, 2010). In the English case, not only do ethnic minority parents have significantly higher educational expectations compared to White British parents but they are also more effective in transmitting these expectations to their children. As can be seen in table 4.6, 65% of Black African and 59% of Indian students have exactly the same expectations of applying to

university as their parents at the age of 13/14, compared to only 50% of White British students. The other minorities do not differ significantly from White British in the overall percentage of parent-student agreement, although they do differ in their higher percentages of students and parents reporting very high expectations of applying to university (very likely to apply). That is, among those families where parents and students report the same level of university expectations, the percentage represented by those that consider it very likely to apply to university in the future is 86% for Black Africans, 74% for Indians, 64% for Bangladeshis, 62% for Pakistanis, 54% for Black Caribbean, and 50% for Mixed, but only 36% for White British. In addition, the three South Asian and Black African minorities also have significantly lower percentages of families where the parents report lower expectations than the students compared to the White British majority.

To sum up, it seems that Indian and Black African parents are more successful in the transmission of expectations to their children than the other ethnic groups, including the White British. However, it is important to bear in mind that the percentage of parents and students reporting the same high expectations among Mixed, Pakistani, Bangladeshi and Black Caribbean families is significantly higher than in White British families.

4.6. The rational perspective: perceived utility of university degrees

The perception that students from different ethnic backgrounds have about the benefits and costs of going to university might differ considerably, and this fact could explain the higher expectations of ethnic minority students compared to White British. One of the limitations of the LSYPE in that respect is that students are not asked about their subjective beliefs regarding the potential costs and benefits of going to university until they are age 16/17 and, more importantly, these questions are not asked to all students in the sample but only to those that have obtained at least 5 A*-C GCSEs in the final KS4 examinations. That implies that the information about the costs and

benefits of going to university is only available for a selected sample of students. For this reason, I only use a composite variable indicating the extent to which students believe that going to university is necessary to get a good job[65], given that these particular questions are asked to all individuals in the sample when they are age 16/17. I call this variable 'utility of university education'[66].

Considering that in this chapter, I am more interested in the ethnic differences in expectations in the base year (age 13/14), only having the information about the utility of university education at age 16/17 poses some limitations to the analysis. For this reason, my strategy consists in analysing the ethnic variations in the utility of going to university only for the sub-sample of students that does not change their university expectations from age 13/14 to age 16/17. The underlying assumption is that this group of students would be much more likely to have maintained not only their expectations, but also their beliefs about university during that period. The rest of the students, who have either increased or decreased their expectations during those years, have probably changed their beliefs accordingly, no matter whether as a cause or as a consequence of the former.

[table 4.7. about here]

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[65] The two items that formed the composite variable 'utility of education' are the following two:
- I need to have a university degree to get the kind of job I want to do
- The best jobs go to people who have been to university

[66] The LSYPE includes plenty of questions about the perceived advantages and disadvantages of going to university to be asked when students are age 16/17 and older. Unfortunately, the potential explanatory power of this information cannot be fully exploited, since these questions are only asked to students that obtain 5 A*-C GCSEs and, in some cases, also only to students with intentions of going to university. Nevertheless, several multivariate models about expectations of applying to university that included the available information about costs and benefits have been performed. These models were only run for the selected sample of students answering the questions on costs and benefits and yielded no significant or consistent results. From a descriptive point of view, all ethnic minorities except the Mixed group significantly differentiate from the White British majority in their tendency to mention non-economic costs of going to university, such as leaving family and friends or others that are not stated.

As shown in table 4.7, all ethnic minorities but the Mixed group attribute significantly higher utility in the labour market to university education than White British students. This finding is in agreement with the findings regarding the more positive attitudes to education of ethnic minority students compared to White British that were described in Chapter 3.

4.7. Multivariate analysis: ethnic differentials in educational expectations and level of parent-student agreement at age 13/14

From Sections 4.4. to 4.5., I have described in detail not only the ethnic differentials in students' university expectations, but also how ethnicities differentiate in several factors that are intimately related to how educational expectations form and develop. In this section, before moving on to the analysis of changes in expectations during adolescence in the following chapter, I present some statistical models that help to understand the ethnic differentials in educational expectations at the end of KS3 (age 13/14), having White British students as the reference group. In this regard, three dependent variables are considered:

- Firstly, the educational trajectory preferred by students after they finish compulsory education. The answers of students are organized into the following categories: leaving full-time education, vocational education in a specialist college or a college of further education, or academic A levels in a sixth-form college or school[67].

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[67] Students that want to continue full-time education but do not know what they will do together with those that still do not know if they will continue are grouped together in an additional category. However, the results for this category are not presented in the tables due to the small percentage of students in this category (8%) and because my research objective is to examine the ethnic differentials in expectations with regard to the three main options at age 16.

- Secondly, the likelihood of applying to university in the future reported by students at age 13/14. I consider this variable categorical instead of ordinal. The main reason I do so is because I do not want to exclude from the analyses those students that do not know whether they will apply to university or not, which are grouped in a separate category. In addition, the distribution of individuals across the categories is not normal. There are four different response categories: 'very likely', 'fairly likely' and 'not very/not at all likely' to apply to university, as well as a 'don't know' category. Given that the number of students reporting to be 'not very likely' or 'not at all likely' to apply is very small among ethnic minorities, I have decided to merge these two categories into a single one.

- Finally, I also analyse the level of agreement in the expectations of applying to university between parents and students at age 13/14. I compare between families where both parents and children report the same level of expectations with families where there is a discrepancy between them. In addition, I also compare the cases where both parents and students believe that it is very likely that the latter will apply to university with those cases where there is also an agreement in expectation but these are lower.

The objective of these empirical analyses is not to explain the process of students' expectation formation, since this process is likely to have started well before students are age 13/14. However, the models offer relevant information about the differences in expectations across ethnicities in early adolescence and about the relative importance of parents' expectations and school attainment in those differences.

4.7.1. Explanatory and control variables

The explanatory variables of the models where the various levels of expectations are compared are the following:

- Firstly, the parents' educational expectations, reported when students are age 13/14. This variable has three categories, namely parents believing their children are 'very likely' to apply to university, 'fairly likely' to apply, or 'not very/not at all likely' to apply.

- Secondly, the average score in English and Maths obtained at KS3 examinations, which take place when students are age 13/14.

- And finally, students' perceived labour market utility of going to university.

The first two are measured when students are age 13/14, but the third one is measured at the age of 16/17. As a consequence, only those students that have maintained the same university expectations from age 13/14 to age 16/17 form the sample of the model that includes the utility of university as the explanatory variable. In all models the objective is to analyse the extent to which the size and significance of the coefficients for ethnicities are driven by the explanatory variables.

With regard to the models that have the level of parent-student agreement in the expectations of going to university as the dependent variable, two explanatory variables are considered:

- Firstly, whether students spend most of their free time with family members. In principle, it is logical to expect that those students that spend most of their free time with their families are, on average, more controlled and influenced by their parents than those who do not. In this respect, South Asian and Black African students differ significantly from the other groups because they tend to spend most of their spare time with their family (see table 4.8).

[table 4.8 about here]

- And secondly, the average grade in English and Maths obtained at KS3 examinations (age 13/14).

The control variables that are introduced in the models are the following: the gender and immigrant generation of the student, whether the students are living in a single-parent family, whether the mother had the first child at age 21 or younger, the highest level of education among household members, whether any of the students' grandparents has a university degree, the family socio-economic status and whether the place of residence is London or not.

Preliminary multivariate models about the plans after age 16 and university expectations also included an indicator about the proportion of co-ethnics among school friends, given that having more co-ethnic friends at school might help to reinforce the ethnic differentials in expectations. However, the results reveal that having more or less co-ethnic friends, controlling for the proportion of students from the same ethnicity at school, yielded no significant results[68]

4.7.2. Method

All my outcome variables are nominal with more than two categories. Although there is some order across the categories, particularly in the likelihood of applying to university, I do not want to exclude from the analysis the students that do not know what they are going to do after age 16. Therefore, I use multinomial logistic regressions (MLR), in which the log-odds of the outcomes are modelled as a linear combination of the explanatory and control variables. The MLS can be thought of as a generalization of the binary logistic regression model, except that the probability distribution of the response is multinomial instead of binomial. If y has n categories, we have n-1 equations instead of one.

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[68] That is, the proportion of co-ethnics among the group of school friends could not account for the observed ethnic differentials in expectations. The contribution to the coefficient of confounding was, for all ethnicities, smaller than 4%.

I use the Karlson, Holm and Breen (KHB) decomposition method (Breen, Karlson, & Holm, 2011; Karlson & Holm, 2011; Kohler, Karlson, & Holm, 2011) in order to examine the changes in the ethnicity coefficients across nested models where firstly the ethnicity coefficients are introduced alone, and afterwards the explanatory and the control variables are added in two sequential steps. My objective is to identify the extent to which the ethnic differentials relative to White British students in the outcome variables can be accounted for by the explanatory variables that I have presented in the previous section. The KHB method allows me to measure the changes in the ethnicity coefficients that are due to confounding with the explanatory variables on the one hand, and due to the rescaling of the model on the other (Breen et al., 2011)

4.7.3. Results of empirical analysis

Before examining the results, it is necessary to clarify some aspects of the notation that I use. The tables present the ethnicity coefficients of the statistical models before and after introducing the explanatory variables, as well as the difference between both. Each of the ethnicity coefficients before introducing the explanatory variable represents the 'total effect'. The ethnic-specific effect that is not accounted for by the explanatory variables of the model is the 'direct effect'. And, finally, the 'indirect effect' is the confounding between the explanatory and the ethnicity variables.

Therefore, the tables present the following information:

- The decomposition of the ethnicity coefficients into direct and indirect effects. The direct effect captures those ethnic-specific factors that are associated with the outcomes and that cannot be accounted for by the explanatory variables. The indirect effect would be the part of the ethnicity coefficients that confounds with the explanatory variables.

- The summary of the confounding, which is presented in a different table, disentangles the contribution of each explanatory

variable (when there is more than one) to the coefficient of confounding. The sum of the contributions of each explanatory variable to the confounding, expressed in percentages, is 100. In addition, information about how much of the total effect of the ethnicity coefficients is due to confounding of the explanatory variables is also shown. This percentage varies depending on the degree of confounding[69].

4.7.3.1. Preferences for post-compulsory education

[table 4.9. about here]

Table 4.9. summarises the ethnicity coefficients of each model, decomposed into total, direct and indirect effects. Table 4.9a shows the contribution of each explanatory variable (KS3 scores and parental expectations) to the coefficient of confounding and to the total effect represented by the coefficients for each ethnicity. The models that have been estimated are the following:

- Models 1a and 1b have as the baseline category 'preference for leaving full-time education at age 16'. Model 1a presents the ethnicity coefficients for the outcome represented by the option of continuing post-compulsory education in a sixth-form school or college, while model 1b shows the ethnicity coefficients for the outcome of continuing education in a specialist or further education college. Both models 1a and 1b present the degree of confounding of the ethnicity variables with the explanatory variables. The control variables are added in a second step in models 2a and 2b.

- Models 1c and 2c have as the baseline category those students expressing a preference for continuing education in a specialist or further education college after age 16, while continuing in a

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[69] In this case, the size of the indirect effect of each explanatory variable relative to the total ethnicity effect can be larger than 100% and might also have a negative sign. This situation occurs when the direct and indirect effect have opposite signs (Buis, 2010).

sixth–form school or college is the outcome. Model 1c only includes the explanatory variables and model 2c adds all the control variables.

In model 1a, which compares the preferences at age 13/14 for continuing education in sixth-form schools or colleges instead of leaving full-time education, all ethnic minorities but the Mixed group have significant and positive log-odds of preferring the academic option at their first educational transition rather than leaving school compared to White British students. The coefficients are bigger for the three South Asian and the Black African minorities, while the size of the coefficient for Black Caribbean students is smaller in size and significance. The two explanatory and the control variables account for part of the observed ethnic differentials, ranging from 47% for Bangladeshis, 42% for Indians, 36% for Pakistanis, and 25% for Black Africans (see confounding percentages in table 4.9a). However, the ethnicity coefficients remain positive and significant at 0.05 after including all the explanatory and control variables. If we expressed the Average Marginal Effects (AMEs) [70], after controlling for all observable factors, Indians would have a probability 15% higher than White British of preferring the sixth-form option instead of leaving full-time education, Pakistanis would have a 14% higher, Bangladeshis 6%, and Black Africans 10%. For Black Caribbeans, the probability is close to zero and, therefore, non-significant. Therefore, though the two explanatory variables are able to account for part of the observed ethnic differentials, South Asian and Black African students remain significantly more likely to prefer sixth form rather than leaving full-time education.

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[70] Average Marginal Effects (AMEs) of each ethnicity relative to the White British group are calculated for the models that include the explanatory and the control variables and are presented in the appendix chapter. The AME of *x (e.g. ethnicity dummy variable)* is the derivative of the predicted probability with respect to *x* evaluated over the whole population. In a single equation model $E(y)=F(\beta x)$ where βx denotes the linear combination of parameters and variables and $F(\cdot)$ is the cumulative distribution function, the formula for the AME is the following: $AME_i = \dfrac{1}{n}\sum_{i=1}^{n}\{F(\beta x^k \mid x_i^k = 1) - F(\beta x^k \mid x_i^k = 0)\}$

With regard to the second outcome, that is, preference for continuing education in a vocational institution instead of leaving full-time education (models 1b and 2b), all ethnic minorities but the Mixed have, again, positive and significant log-odds of showing a preference for vocational education instead of leaving school at the age of 16 compared to the White British majority. This is particularly so for the three South Asian and the Black African minorities. As in model the previous outcome, the explanatory and the control variables are able to account for a substantial part of the ethnicity effect. However, the ethnicity coefficients remain significant at 0.05 after including the explanatory and control variables. It is important to note that when we calculate the AMEs, the only significant effects are those of Indians and Pakistanis, who have, on average, a 5% and 4% smaller probability of preferring the vocational option instead of leaving school compared to the reference group.

Finally, for the outcome indicating a preference for the academic route represented by sixth-form schools/colleges instead of the vocational option, only Indians, Pakistanis and Black Africans initially show a stronger preference for the academic over the vocational route. However, the two explanatory variables and the control variables account for the Black African differential and, therefore, only the coefficients for Indians and Pakistanis remain significant in the models that includes all the explanatory and control variables (model 2c).

Are the two explanatory variables able to account for the ethnic differentials in preferences?

[table 4.9a. about here]

Table 4.9a disentangles the contribution of the grades at KS3 and the parental expectations from the observed ethnic differentials in preferences for post-compulsory secondary education. In this respect, it seems that the differences with the White British group are mainly driven by the high educational expectations of ethnic minority parents. As shown in the descriptive section, ethnic minority parents, particularly South Asians and Black Africans, have significantly

higher expectations for their children compared to White British parents. As a consequence, most ethnic minority children show more ambitious preferences despite their average poorer or similar results at KS3 compared to White British students. That is, their preferences for post-16 education reported at age 13/14 are much more influenced by their parents than by the actual grades they obtain at KS3. Nevertheless, it is important to bear in mind that the explanatory and control variables are not completely able to account for the more ambitious preferences of Indian and Pakistani students.

4.7.3.2. *Likelihood of applying to university (grades at KS3 and parental expectations as explanatory variables)*

[table 4.10. about here]

The results for the likelihood of applying to university in the future are presented in table 4.10. The baseline category is represented by those students that at age 13/14 do not consider it very likely or not likely at all to apply to university in the future; that is, students with low expectations of applying. The two outcome categories that are paired with the baseline are the following: very likely to apply (models 1a and 2a) and fairly likely to apply (models 1b and 2b)[71]. As in the models for preferences, two models have been run: the first one only includes the coefficients for ethnicity, with parents' educational expectations and the average grade in English and Maths at KS3 exams as the explanatory variables (models 1a and 1b); and in a second step, all the control variables are also added (models 2a and 2b).

The results yielded by these models are quite similar to those relating to preferences for post-16 education. All ethnic minority students, particularly Indians and Black Africans, are significantly more likely to report very high expectations of applying to university compared to White British students. This is confirmed in models 1a and 2a of table

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[71] The students that do not know if they will apply to university have also been included in the estimation of the model but the results for this outcome are not presented in the table.

4.10. The two explanatory variables account for a substantial part of the differentials with White British, more than in the models for post-16 preferences (between 50% and 70% of the confounding). However, the coefficients for Indians, Pakistanis and Black Africans remain significant even after controlling for all the explanatory and control variables, as model 2a shows. Expressed in AMEs, Indians have a probability 11% higher than the White British majority of considering it very likely to apply to university, while Black Africans have 9% and Pakistanis 8%. For Bangladeshi, Black Caribbean and Mixed students the AMEs are no longer significant, given that the two explanatory variables are able to account for the initial differentials.

With regard to the outcome fairly likely to apply to university vs not at all or not very likely to do it, the explanatory variables are able to account for a substantial part of the ethnic differentials, which are smaller than in the previous outcome. In the final model 2b, that includes all the explanatory and control variables, only the coefficients for Indian and Pakistani remain highly significant. In AMEs, their probability with respect to White British is only 2% higher.

Are the two explanatory variables able to account for the ethnic differentials in expectations of applying to university?

[table 4.10a. about here]

The results shown in table 4.10a disentangle the contribution of parental expectations and grades at KS3 to the observed ethnic differentials in expectations. As in the models for post-16 preferences, the high expectations of ethnic minority students tend to reflect those of their parents and they do not seem to be conditioned by their grades in KS3 final examinations. This is confirmed through the decreases in size of all the ethnicity coefficients due to the confounding with parents' expectations (total versus direct effects). On the contrary, the average score at KS3 does not seem to help much to explain the higher ambition of ethnic minority students. To sum up, the ethnic differentials with White British in university expectations are,

similarly to the preferences for post-16 education, mostly driven by the also high expectations that their parents have for them.

4.8.3.2. Likelihood of applying to university (perceived utility of university degrees in the labour market as explanatory variable)

[table 4.11. and 4.11a about here]

Table 4.11. looks at the role of perceived utility of going to university in the labour market to account for the ethnic differentials in the expectations of applying to university. As has already been explained, the models for expectations at age 13/14 (1a and 2a) are only run for the sub-sample of students that maintain the same expectations from that age until age 16/17, when students are asked for the first time about how useful they think university degrees are in the labour market. The assumption is that those students that maintain their expectations are also more likely to have the same beliefs about the utility of university at age 13/14 and age 16/17. In addition, I also run the same models using, as a dependent variable, the likelihood of applying to university reported at age 16/17 for purposes of comparison (models 1b and 2b). In this case, the whole sample of students interviewed at that age are included.

The results show that being an ethnic minority student significantly increases the log-odds of being very or fairly likely to apply to university instead of not very/at all likely both at age 13/14 and 16/17, particularly for Indians and Black Africans. Around a third of this differential is explained by the higher utility that ethnic minority students attribute to university degrees compared to White British students, as the coefficients of confounding reveal. The degree of confounding seems to be slightly higher for the three South Asian minorities, particularly Pakistanis and Bangladeshis, compared to the rest (table 4.11a). However, even though all ethnic minorities consider, on average, university education as more useful in the labour market than White British do, these different perceptions cannot fully account for ethnic differentials in expectations.

4.7.3.3. Consistency between parents' and students' university expectations

[table 4.11. and 4.12a about here]

The last models that are reviewed in my analysis are presented in tables 4.12. and 4.12a. Models 1a and 2a have as the outcome category, the cases where parents and students agree on their university preferences and as the baseline category, those cases where there is a disagreement. In models 1b and 2b, the outcome category refers to the cases where both parents and students think that it is very likely that the latter applies to university. The baseline category is represented by those cases where both parents and students agree on their expectations but these are less ambitious[72]. In models 2a and 2b of table 4.12. all the control variables are added. As has been mentioned, the two explanatory variables are the average grade in English and Maths at KS3 exams and whether students report spending most of their free time with their families.

The results of model 2a reveal that, controlling for family background factors, being Indian or Black African significantly increases the log-odds of having the same expectations as the parent. However, when the outcome category is the agreement of parents and students in their very high expectations and the baseline is agreeing but having less ambitious expectations, being from any ethnic minority significantly increases the log-odds of having equally high expectations (as opposed to lower ones). Expressed in AMEs, and after including all the control explanatory variables, Black Africans still have a probability that is 30% higher than White British, Pakistanis 23% higher, Indians 20%, Bangladeshis 16%, Black Caribbeans 15% and Mixed students 12%.

The two explanatory variables –spending most free time with the family and average grade at KS3- do not account for much of the observed ethnic differentials in any of the models except in the case of

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[72] That is, they both answer that the likelihood that the student applies to university is either fairly likely, not very/at all likely or don't know.

Black Caribbean students, as table 4.12a shows. The variable about time spent with the family appears to be more relevant to account for the ethnic differentials in the case of the three South Asian minorities. This is not surprising, since these three minorities are those with the highest percentage of students that report spending most of their spare time with their families.

4.8. Summary of findings of the multivariate analysis

These preliminary analyses about the educational expectations of ethnic minority students at the beginning of adolescence signal the importance of family factors for understanding their considerably higher educational ambitions compared to the White British majority. That is, the level of expectations held by ethnic minority parents, particularly South Asian and Black African, is the main factor explaining the differentials with White British students and not the grades they have obtained in KS3 national examinations. Even though KS3 examinations have no practical effects in terms of tracking students into different routes, they nonetheless offer information to parents and students about the level of the latter in terms of the National Curriculum. That is, students are informed if their performance is below, above or at the expected level given their year. Therefore, the high expectations that ethnic minority students report at the age of 13/14 are even more surprising given the poorer results that some ethnic minorities achieve at KS3 (Pakistanis, Bangladeshis and Black Caribbeans particularly).

These high expectations are more pronounced among the South Asian and Black African minorities. In fact, Mixed students do not differentiate from the White British group, while Black Caribbeans are in between. That is, their differential with White British students is not as pronounced as in the other four minorities. This difference could be explained in terms of assimilation theory, which predicts that the population of immigrant origin will become indistinguishable from the

native majority the further back the generation goes. The migration flows that were the genesis of the Black Caribbean minority started earlier than those of the Indian, Pakistani and, particularly, the Bangladeshi and Black African minorities. Therefore, it may be possible that Black Caribbean students are more assimilated than other minority students and, as a consequence, they resemble more the White British majority. Unfortunately, this hypothesis cannot be tested with the available data from the LSYPE, since I only have information about the place of birth of the student but not of the parents or grandparents and, therefore, I cannot distinguish between second, third or more distant generations.

The high educational ambitions of Indian and, particularly, Black African families are partially accounted for by the relatively high educational levels of parents. However, Pakistani and Bangladeshi families are considerably disadvantaged, both in terms of socio-economic status and of education. Even though, these parents manage to transmit considerably high expectations to their children quite successfully, unlike White British working-class parents.

In the next chapter, I explore in more detail how the educational expectations of ethnic minority students change during adolescence compared to the White British group.

Table 4.1. Expectations of applying to university in the future, measured at age 13/14, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
Very likely to apply	28.8	35.6	56.8*	44.3*	41.1*	42.2*	65.1*
Fairly likely to apply	34.3	35.0	33.2	38.6	39.5*	36.2	25.8
Not very likely to apply	19.4	15.7	4.7*	8.1*	8.9*	13.2*	4.5*
Not at all likely/Will not apply	13.3	11.0	1.9*	4.2*	3.7*	4.3*	0.8*
Don't Know	4.3	2.7	3.4	4.9	6.8	4.0	3.8
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**9246**	**383**	**970**	**791**	**596**	**499**	**390**

N=13374

* Prob <0.05 for differences with White British

Table 4.2. Preferences for post-16 educational trajectory, measured at age 13/14, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
Sixth-form school or college	53.7	53.8	77.3*	69.3*	62.1*	54.9	73.8*
Specialist/FE College	21.6	24.9	13.9*	19.1	27.4	28.6*	17.6
Leaving FTE	16.2	11.2	2.6*	4.6*	2.5*	6.4*	1.5*
Don't know if will continue FTE/what to do	8.6	10.1	6.2	7.0	8.1	10.1	7.2
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**9246**	**383**	**970**	**791**	**596**	**499**	**390**

N=13374

* Prob <0.05 for differences with White British

Table 4.3. Mismatch between likelihood of applying and of being admitted to university in the future, measured at age 13/14, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
Same likelihood of applying and of being admitted	49.2	48.2	55.4*	58.9*	58.6*	57.8*	61.7*
Higher likelihood of applying than of being admitted	35.8	35.5	33.5	28.0*	27.3*	26.6*	27.2*
Lower likelihood of applying than of being admitted	9.1	9.7	4.9*	7.8	7.1	8.4	6.7*
Likelihood of applying specified but likelihood of being admitted not known	6.0	6.6	6.2	5.3	7.0	7.2	4.4
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**8848**	**374**	**939**	**749**	**556**	**479**	**480**

N= 12804 (Students that are not at all likely to apply to university are not asked about their likelihood of being accepted)
* Prob <0.05 for differences with White British

Table 4.4. Spearman's rank correlation coefficient between the variable taste for school and the number of weekdays doing homework with the expectations of applying to university, measured at age 13/14, by ethnicity

	Likelihood of applying to university[a]						
	Wh. Brit.	Mix.	Ind.	Pak.	Bangl.	Bl. Car.	Bl. Afr.
Homework	0.30*	0.26*	0.25*	0.19*	0.16*	0.24*	0.23*
Taste for school	0.33*	0.32*	0.19*	0.18*	0.17*	0.30*	0.26*
N	**9023**	**424**	**916**	**822**	**624**	**487**	**516**

N=13374
* Prob > |t| = 0.005
[a] Expectations are considered an ordinal variable (1: not very/at likely to apply to 4: very likely to apply). Students answering *don't know* are not included in the correlations.

Table 4.5. OLS regressions for the variables taste of school and number of days per week doing homework, controlling for survey design

| | Taste for school | | No. days per week doing homework (1 to 5) | |
| | (1) | | (2) | |
	β	(se)	β	(se)
Mixed	-0.0786	(0.0539)	-0.341*	(0.165)
Indian	0.107***	(0.0212)	0.402***	(0.0812)
Pakistani	0.119***	(0.0279)	0.393***	(0.105)
Bangladeshi	0.0787*	(0.0341)	0.387**	(0.150)
Black Caribbean	0.041	(0.0448)	0.0216	(0.143)
Black African	0.0610+	(0.0328)	0.190+	(0.113)
Other	-0.00536	(0.0393)	0.288*	(0.124)
Students' expectations of applying to university in the future (ref: very likely to apply)				
Fairly likely to apply	-0.139***	(0.0110)	-0.336***	(0.0414)
Not very/at all likely to apply & doesn't know if will apply	-0.325***	(0.0131)	-0.795***	(0.0459)
*Mixed*fairly likely*	0.148*	(0.0688)	0.325	(0.212)
*Indian*fairly likely*	0.012	(0.0306)	0.0206	(0.120)
*Pakistani*fairly likely*	0.0845*	(0.0345)	0.0332	(0.133)
*Bangladeshi*fairly likely*	0.0563	(0.0515)	0.0448	(0.155)
*Black Caribbean*fairly likely*	-0.0373	(0.0584)	-0.0455	(0.184)
*Black African*fairly likely*	-0.0159	(0.0543)	-0.165	(0.188)
*Other*not very/at all likely & dk*	0.0731	(0.0683)	0.282	(0.252)
*Mixed*not very/at all likely & dk*	0.165***	(0.0477)	-0.367	(0.238)
*Indian*not very/at all likely & dk*	0.0571	(0.0457)	0.0999	(0.214)
*Pakistani*not very/at all likely & dk*	0.249***	(0.0663)	0.221	(0.188)
*Bangladeshi*not very/at all likely & dk*	-0.0327	(0.0704)	-0.144	(0.217)
*Black Caribbean*not very/at all likely & dk*	-0.0585	(0.114)	0.131	(0.407)
*Black African*not very/at all likely & dk*	0.148*	(0.0688)	0.325	(0.212)
Constant	3.117***	(0.0351)	2.504***	(0.0914)
R²	0.115		0.171	
N	13774		13774	

Control variables included in both models: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London

Table 4.6. Level of agreement between parents and students' expectations of applying to university, measured at age 13/14, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
Parents' expectations = Students' expectations	50.1	52.9	59.2*	52.7	47.8	51.8	65.2*
Among those: % with very high expectations	*36.4*	*50.1**	*74.6**	*61.9**	*63.8**	*54.2**	*86.5**
Parents' expectations > Students' expectations	16.8	21.5	17.3	21.0	25.8*	21.1	19.5
Parents' expectations < Students' expectations	24.1	19.5	13.5*	13.3*	11.3*	18.7	8.6*
Parent and/or student don't know	9.0	6.1	10.0	13.0*	15.1*	8.4	6.7
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**9246**	**383**	**970**	**791**	**596**	**499**	**390**

N=13374

* Prob <0.05 for differences with White British

Table 4.7. Average utility of education, by ethnicity, only for the sub-sample of students that do not change their expectations of applying to university from age 13/14 to age 16/17

	Wh.Brit.	Mix.	Ind.	Pak.	Bangl.	Bl. Car.	Bl. Afr.
Average utility of education (min=1, max=4)	2.69	2.76	3.12*	3.14*	3.10*	2.96*	3.28*
N	**2883**	**117**	**441**	**306**	**224**	**146**	**187**

N=4528

* Prob > F < 0.05 for differences with White British

Table 4.8. Percentage of students saying that they spend most of their free time with their family, measured at age 13/14, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
Spend most free time with family (age 13/14))	17.7	15.1	49.4*	50.6*	50.9*	25.0*	29.5*
N	**9246**	**383**	**970**	**791**	**596**	**499**	**390**

N=13774

* Prob > F < 0.05 for differences with White British

Table 4.9. Ethnicity coefficients of multinomial logistic regressions using the rescaling method of Karlson, Holm and Breen. Outcome variable: preferences for post-compulsory education, measured at age 13/14.

| | Sixth form vs Leaving FTE | | | | FE/Specialist College vs Leaving FTE | | | | Sixth-form vs FE/Specialist College | | | |
| | (1a) | | (2a) | | (1b) | | (2b) | | (1c) | | (2c) | |
	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)
Mixed Total effect	0.456+	(0.269)	0.439	(0.271)	0.501+	(0.262)	0.426	(0.269)	-0.0448	(0.157)	0.013	(0.160)
Direct effect	0.212	(0.268)	0.187	(0.270)	0.303	(0.262)	0.242	(0.268)	-0.0914	(0.158)	-0.0554	(0.160)
Indirect effect	0.244	(0.194)	0.252	(0.189)	0.197+	(0.115)	0.184	(0.114)	0.0466	(0.0854)	0.0684	(0.0786)
Indian Total effect	2.280***	(0.285)	2.216***	(0.294)	1.274***	(0.297)	1.263***	(0.306)	1.006***	(0.149)	0.953***	(0.150)
Direct effect	1.278***	(0.287)	1.282***	(0.297)	0.600*	(0.300)	0.642*	(0.311)	0.678***	(0.150)	0.640***	(0.151)
Indirect effect	1.002***	(0.199)	0.934***	(0.193)	0.674***	(0.124)	0.621***	(0.123)	0.328***	(0.0888)	0.313***	(0.0823)
Pakistani Total effect	1.617***	(0.226)	2.049***	(0.228)	1.086***	(0.235)	1.329***	(0.241)	0.531***	(0.144)	0.720***	(0.153)
Direct effect	1.238***	(0.235)	1.307***	(0.234)	0.726**	(0.244)	0.793**	(0.247)	0.511***	(0.148)	0.514***	(0.155)
Indirect effect	0.379+	(0.199)	0.742***	(0.193)	0.359**	(0.123)	0.536***	(0.123)	0.0195	(0.0908)	0.206*	(0.0833)
Bangladeshi Total effect	1.747***	(0.417)	2.184***	(0.450)	1.657***	(0.412)	1.835***	(0.437)	0.0903	(0.181)	0.350+	(0.197)
Direct effect	1.219**	(0.416)	1.161**	(0.448)	1.214**	(0.411)	1.153**	(0.436)	0.00531	(0.184)	0.00786	(0.198)
Indirect effect	0.528**	(0.199)	1.023***	(0.194)	0.443***	(0.124)	0.682***	(0.124)	0.085	(0.0908)	0.342***	(0.0831)
Bl. Caribbean Total effect	0.992***	47%	0.725**	(0.232)	1.090***	(0.212)	0.869***	(0.236)	-0.0983	(0.148)	-0.144	(0.149)
Direct effect	0.711**	(0.228)	0.586*	(0.234)	0.815***	(0.217)	0.706**	(0.240)	-0.104	(0.150)	-0.121	(0.150)
Indirect effect	0.281	(0.196)	0.139	(0.190)	0.275*	(0.118)	0.163	(0.117)	0.00564	(0.0884)	-0.0238	(0.0811)
Bl. African Total effect	2.680***	(0.493)	2.168***	(0.565)	2.126***	(0.516)	1.833**	(0.595)	0.554***	(0.148)	0.335+	(0.174)
Direct effect	1.754***	(0.503)	1.618**	(0.569)	1.419**	(0.528)	1.403*	(0.600)	0.335*	(0.153)	0.216	(0.175)
Indirect effect	0.926***	(0.208)	0.550**	(0.195)	0.707***	(0.139)	0.430***	(0.127)	0.219*	(0.0945)	0.119	(0.0836)
N	13425		13425		13425		13425		13425		13425	

Control variables: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London.
(1a) Explanatory variable: average KS3 score in English and Maths and parental expectations. No controls
(1b) (1c) Explanatory variable: average KS3 score in English and Maths and parental expectations. No controls
(2a) Explanatory variable: average KS3 score in English and Maths and parental expectations. Control variables included
(2b) (2c) Explanatory variable: average KS3 score in English and Maths and parental expectations. Control variables included

Table 4.9a. Confounding ratios and percentages of models 2a, 2b, and 2c of Table 4.9.

Ethnic.	Explanatory variables	Sixth form vs. Leaving FTE (2a)		FE/Spec. College vs. Leaving FTE (2b)		Sixth form vs. FE/Spec. College (2c)	
		Contribution to confounding	*Confounding %*	*Contribution to confounding*	*Confounding %*	*Contribution to confounding*	*Confounding %*
Mixed	Average KS3 score in English &Maths	-13.4	-7.7	-8.2	-3.5	-27.5	-144.6
	Very likely to apply	137.3	78.9	130.6	56.4	155.2	816.5
	Fairly likely to apply	-14.5	-8.4	-14.2	-6.2	-15.3	-80.4
	Don't know if will apply	-9.4	-5.4	-8.2	-3.6	-12.4	-65.3
		100.0	**57.5**	**100.0**	**43.2**	**100.0**	**526.2**
Indian	Average KS3 score in English &Maths	10.6	4.5	7.1	3.5	17.6	5.8
	Very likely to apply	91.3	38.5	95.2	46.8	83.6	27.4
	Fairly likely to apply	-3.9	-1.6	-4.2	-2.1	-3.3	-1.1
	Don't know if will apply	2.0	0.8	1.9	0.9	2.2	0.7
		100.0	**42.1**	**100.0**	**49.2**	**100.0**	**32.8**
Pakist.	Average KS3 score in English &Maths	-11.7	-4.3	-7.2	-2.9	-23.5	-6.7
	Very likely to apply	97.2	35.2	93.4	37.7	107.2	30.7
	Fairly likely to apply	9.3	3.4	9.2	3.7	9.6	2.7
	Don't know if will apply	5.2	1.9	4.6	1.9	6.7	1.9
		100.0	**36.2**	**100.0**	**40.3**	**100.0**	**28.6**
Bangl.	Average KS3 score in English &Maths	10.5	4.9	7.0	2.6	17.6	17.2
	Very likely to apply	81.5	38.2	84.8	31.5	74.7	73.1
	Fairly likely to apply	4.1	1.9	4.4	1.6	3.5	3.4
	Don't know if will apply	3.9	1.9	3.8	1.4	4.3	4.2
		100.0	**46.8**	**100.0**	**37.1**	**100.0**	**97.7**
Bl. Car.	Average KS3 score in English &Maths	-186.5	-35.7	-70.7	-13.2	604.9	99.7
	Very likely to apply	207.6	39.8	122.9	23.0	-371.0	-61.2
	Fairly likely to apply	72.8	14.0	44.4	8.3	-121.1	-20.0
	Don't know if will apply	6.1	1.2	3.3	0.6	-12.8	-2.1
		100.0	**19.1**	**100.0**	**18.7**	**100.0**	**16.5**
Bl. Afr.	Average KS3 score in English &Maths	-36.4	-9.2	-20.6	-4.8	-93.2	-33.2
	Very likely to apply	158.7	40.2	140.6	33.0	224.0	79.8
	Fairly likely to apply	-18.0	-4.6	-16.4	-3.9	-23.6	-8.4
	Don't know if will apply	-4.3	-1.1	-3.6	-0.8	-7.2	-2.6
		100.0	**25.3**	**100.0**	**23.5**	**100.0**	**35.6**

N=13425

Table 4.10. Ethnicity coefficients of multinomial logistic regression using the rescaling method of Karlson, Holm and Breen.
Outcome variable: likelihood of applying to university, measured at age 13/14.

| | Likelihood of applying: Very likely vs. Not very or not at all likely | | | | Likelihood of applying: Fairly likely vs. Not very or not at all likely | | | |
| | (1a) | | (2a) | | (1b) | | (2b) | |
	β	(se)	β	(se)	β	(se)	β	(se)
Mixed Total effect	0.584**	(0.209)	0.574**	(0.212)	0.357+	(0.182)	0.384*	(0.182)
Direct effect	0.0917	(0.210)	0.0962	(0.212)	0.0633	(0.182)	0.101	(0.182)
Indirect effect	0.493+	(0.269)	0.478+	(0.266)	0.294*	(0.146)	0.283+	(0.148)
Indian Total effect	2.783***	(0.186)	2.801***	(0.188)	1.642***	(0.162)	1.642***	(0.166)
Direct effect	1.217***	(0.185)	1.304***	(0.186)	0.705***	(0.162)	0.744***	(0.166)
Indirect effect	1.566***	(0.272)	1.497***	(0.268)	0.937***	(0.150)	0.899***	(0.152)
Pakistani Total effect	1.771***	(0.192)	2.431***	(0.213)	1.200***	(0.161)	1.583***	(0.179)
Direct effect	0.776***	(0.193)	1.048***	(0.210)	0.529**	(0.162)	0.695***	(0.178)
Indirect effect	0.995***	(0.272)	1.383***	(0.269)	0.671***	(0.150)	0.888***	(0.152)
Bangladeshi Total effect	1.487***	(0.164)	2.195***	(0.197)	1.044***	(0.138)	1.444***	(0.166)
Direct effect	0.243	(0.166)	0.496*	(0.194)	0.247+	(0.142)	0.402*	(0.166)
Indirect effect	1.243***	(0.272)	1.699***	(0.269)	0.797***	(0.150)	1.042***	(0.152)
Black Caribbean Total effect	1.309***	(0.227)	0.980***	(0.244)	0.797***	(0.196)	0.619**	(0.207)
Direct effect	0.560*	(0.229)	0.448+	(0.245)	0.268	(0.195)	0.219	(0.206)
Indirect effect	0.748**	(0.270)	0.531*	(0.266)	0.529***	(0.148)	0.400**	(0.149)
Black African Total effect	3.261***	(0.283)	2.180***	(0.310)	1.671***	(0.273)	1.076***	(0.306)
Direct effect	1.358***	(0.284)	1.034***	(0.310)	0.562*	(0.276)	0.408	(0.308)
Indirect effect	1.903***	(0.275)	1.145***	(0.268)	1.109***	(0.156)	0.667***	(0.153)
N	**13374**		**13374**		**13374**		**13374**	

Control variables: gender, immigrant generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London.
(1a) (1b) (1c) Explanatory variables: average KS3 score in English and Maths and parental expectations. No control variables
(2a) (2b) (2c) Explanatory variables: average KS3 score in English and Maths and parental expectations. Control variables included

Table 4.10a. Confounding ratios and percentages of models 2a and 2b of Table 4.10

Ethnicities	Explanatory variables	(2a) Very likely vs. Not very/at all likely		(2b) Fairly likely vs. Not very/at all likely	
		Contribution to confounding	*Confounding %*	*Contribution to confounding*	*Confounding %*
Mixed	Average KS3 score in English & Maths	-4.5	-3.8	-3.1	-2.3
	Very likely to apply	114.9	95.6	117.5	86.7
	Fairly likely to apply	-5.6	-4.7	-7.7	-5.7
	Don't know if will apply	-4.7	-3.9	-6.7	-4.9
		100.0	83.2	100.0	73.8
Indian	Average KS3 score in English & Maths	1.8	1	1.2	0.7
	Very likely to apply	99.7	53.3	100.7	55.1
	Fairly likely to apply	-3.6	-1.9	-4.9	-2.7
	Don't know if will apply	2.1	1.1	3.0	1.7
		100.0	53.5	100.0	54.8
Pakistani	Average KS3 score in English & Maths	-6.3	-3.6	-3.9	-2.2
	Very likely to apply	96.0	54.6	90.7	50.9
	Fairly likely to apply	7.0	4	8.8	4.9
	Don't know if will apply	3.4	1.9	4.5	2.5
		100.0	56.9	100.0	56.1
Bangladeshi	Average KS3 score in English & Maths	4.1	3.1	2.6	1.9
	Very likely to apply	88.9	68.8	87.9	63.4
	Fairly likely to apply	5.2	4	6.9	5
	Don't know if will apply	1.9	1.5	2.6	1.9
		100.0	77.4	100.0	72.2
Black Caribbean	Average KS3 score in English & Maths	-27.9	-15.1	-14.8	-9.6
	Very likely to apply	85.2	46.2	68.7	44.3
	Fairly likely to apply	42.6	23.1	46.1	29.7
	Don't know if will apply	0.1	0	0.1	0.1
		100.0	54.2	100.0	64.5
Black African	Average KS3 score in English & Maths	-12.1	-6.4	-8.3	-5.1
	Very likely to apply	135.6	71.3	141.2	87.6
	Fairly likely to apply	-21.8	-11.5	-30.4	-18.9
	Don't know if will apply	-1.7	-0.9	-2.5	-1.5
		100.0	52.5	100.0	62.1

N=13374

Table 4.11. Ethnicity coefficients of multinomial logistic regression using the rescaling method of Karlson, Holm and Breen. Outcome variable: likelihood of applying to university, measured at age 13/14 and 16/17

	Likelihood of applying: Very likely vs Not very or not at all likely (age 13/14)[1]				Likelihood of applying: Very likely vs Not very or not at all likely (age 16/17)			
	(1a)		(2a)		(1b)		(2b)	
	β	(se)	β	(se)	β	(se)	β	(se)
Mixed								
Total effect	0.951*	(0.389)	1.240*	(0.489)	0.21	(0.233)	0.662**	(0.230)
Direct effect	0.752+	(0.389)	1.094*	(0.489)	-0.0201	(0.232)	0.348	(0.230)
Indirect effect	0.199	(0.428)	0.146	(0.459)	0.23	(0.314)	0.314	(0.329)
Indian								
Total effect	3.847***	(0.363)	4.771***	(0.409)	3.149***	(0.220)	3.679***	(0.253)
Direct effect	2.679***	(0.359)	3.616***	(0.400)	1.708***	(0.216)	2.228***	(0.247)
Indirect effect	1.167**	(0.431)	1.155*	(0.462)	1.442***	(0.317)	1.451***	(0.332)
Pakistani								
Total effect	2.447***	(0.433)	4.113***	(0.474)	2.060***	(0.201)	3.048***	(0.210)
Direct effect	1.340**	(0.427)	2.747***	(0.463)	0.850***	(0.200)	1.689***	(0.205)
Indirect effect	1.107*	(0.431)	1.366**	(0.463)	1.210***	(0.316)	1.359***	(0.331)
Bangladeshi								
Total effect	2.003***	(0.405)	4.025***	(0.485)	1.847***	(0.220)	3.214***	(0.272)
Direct effect	1.002*	(0.405)	2.560***	(0.479)	0.598**	(0.220)	1.693***	(0.269)
Indirect effect	1.001*	(0.430)	1.465**	(0.464)	1.249***	(0.316)	1.522***	(0.332)
Black Caribbean								
Total effect	1.875***	(0.433)	2.001***	(0.581)	1.623***	(0.234)	1.974***	(0.267)
Direct effect	1.329**	(0.432)	1.557**	(0.580)	1.004***	(0.234)	1.355***	(0.266)
Indirect effect	0.546	(0.429)	0.444	(0.460)	0.619*	(0.315)	0.619+	(0.330)
Black African								
Total effect	5.479***	(1.072)	4.344***	(1.088)	3.990***	(0.343)	3.875***	(0.354)
Direct effect	4.039***	(1.071)	3.396**	(1.089)	2.337***	(0.340)	2.499***	(0.353)
Indirect effect	1.440***	(0.432)	0.948*	(0.461)	1.653***	(0.317)	1.376***	(0.331)
N	**4389**[1]		**4389**		**9599**		**9599**	

[1] Includes only the subsample of students that did not change their expectations from age 13/14 to age 16/17.

Control variables: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London.

(1a) Dependent variable: expectations at age 13/14. Explanatory variable: utility of university education. Control variables not included

(2a) Dependent variable: expectations at age 13/14. Explanatory variable: utility of university education. Control variables included

(1b) Dependent variable: expectations at age 15/16. Explanatory variable: expected returns to university education. Control variables not included

(2b) Dependent variable: expectations at age 15/16. Explanatory variable: expected returns to university education. Control variables included

Table 4.11a. Confounding ratios and percentages of models 2a and 2b of Table 4.11.

Ethnicities	(2a) Very likely vs. Not very or not at all likely (age 13/14)		(2b) Very likely vs. Not very or not at all likely (age 16/17)	
	Contribution to confounding	*Confounding %*	*Contribution to confounding*	*Confounding %*
Mixed	100.0	11.8	100.0	47.5
Indian	100.0	24.2	100.0	39.4
Pakistani	100.0	33.2	100.0	44.6
Bangladeshi	100.0	36.4	100.0	47.3
Black Caribbean	100.0	22.2	100.0	31.3
Black African	100.0	21.8	100.0	35.5

N (2a)=4389
N (2b)=9599

Table 4.12. Ethnicity coefficients of multinomial logistic regressions using the rescaling method of Karlson, Holm and Breen. Outcome variable: parent and student agreement in expectations of applying to university, measured at age 13/14

	Parent & student equal expectations vs. different expectations				Parent & student very high expectations vs. other equal expectations			
	(1a)		(2a)		(1b)		(2b)	
	β	(se)	β	(se)	β	(se)	β	(se)
Mixed								
Total effect	0.221+	(0.123)	0.172	(0.123)	0.914***	(0.214)	0.876***	(0.204)
Direct effect	0.266*	(0.123)	0.187	(0.123)	1.140***	(0.213)	0.949***	(0.204)
Indirect effect	-0.0458	(0.0419)	-0.0152	(0.0377)	-0.225	(0.210)	-0.0736	(0.199)
Indian								
Total effect	0.419***	(0.0866)	0.321***	(0.0862)	2.114***	(0.140)	2.080***	(0.151)
Direct effect	0.340***	(0.0873)	0.240**	(0.0868)	1.886***	(0.142)	1.794***	(0.153)
Indirect effect	0.0797+	(0.0447)	0.0810*	(0.0405)	0.227	(0.212)	0.286	(0.201)
Pakistani								
Total effect	0.152+	(0.0908)	0.158	(0.0978)	1.385***	(0.145)	1.855***	(0.162)
Direct effect	0.240*	(0.0940)	0.148	(0.0996)	2.011***	(0.151)	1.947***	(0.166)
Indirect effect	-0.0883+	(0.0466)	0.0105	(0.0406)	-0.626**	(0.213)	-0.0919	(0.201)
Bangladeshi								
Total effect	-0.154	(0.114)	-0.207	(0.132)	1.535***	(0.158)	2.150***	(0.204)
Direct effect	-0.0945	(0.116)	-0.289*	(0.133)	2.020***	(0.164)	1.850***	(0.206)
Indirect effect	-0.0593	(0.0462)	0.0827*	(0.0403)	-0.485*	(0.213)	0.3	(0.201)
Black Caribbean								
Total effect	0.0895	(0.102)	-0.0618	(0.106)	1.130***	(0.185)	0.849***	(0.186)
Direct effect	0.197+	(0.103)	0.0315	(0.107)	1.702***	(0.188)	1.368***	(0.188)
Indirect effect	-0.107*	(0.0430)	-0.0933*	(0.0392)	-0.572**	(0.211)	-0.519**	(0.200)
Black African								
Total effect	0.669***	(0.103)	0.329**	(0.123)	3.063***	(0.231)	2.223***	(0.246)
Direct effect	0.745***	(0.105)	0.392**	(0.125)	3.535***	(0.233)	2.605***	(0.248)
Indirect effect	-0.0762+	(0.0434)	-0.0627	(0.0389)	-0.472*	(0.211)	-0.382+	(0.200)
N	**13444**		**13444**		**13444**		**13444**	

Control variables: gender, immigrant generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London

(1a) (1b) Explanatory variables: average KS3 score in English and Maths and student spends most free time with family (1=yes/0=no) . Control variables not included.

(2a) (2b) Explanatory variables: average KS3 score in English and Maths and student spends most free time with family (1=yes/0=no). Control variables included.

Table 4.12a. Confounding ratios and percentages of models 2a and 2b of Table 4.12.

Ethnicities	Explanatory variables	(2a) Parent & student equal expectations vs. different		(2b) Parent & student very high expectations vs. other equal expectations	
		Contribution to confounding	*Confounding %*	*Contribution to confounding*	*Confounding %*
Mixed	Average KS3 score in English and Maths	85.7	-7.6	94.2	-7.9
	Spends most free time with family	14.3	-1.3	5.8	-0.5
		100.0	-8.9	100.0	-8.4
Indian	Average KS3 score in English and Maths	46.9	11.9	70.8	9.7
	Spends most free time with family	53.1	13.4	29.3	4.0
		100.0	25.3	100.0	13.7
Pakistani	Average KS3 score in English and Maths	-316.5	-21.1	192.9	-9.6
	Spends most free time with family	416.5	27.8	-92.9	4.6
		100.0	6.7	100.0	-5.0
Bangladeshi	Average KS3 score in English and Maths	50.0	-20.0	73.2	10.2
	Spends most free time with family	50.0	-20.0	26.8	3.7
		100.0	-40.0	100.0	14.0
Black Caribbean	Average KS3 score in English and Maths	107.4	162.1	102.6	-62.8
	Spends most free time with family	-7.4	-11.1	-2.6	1.6
		100.0	151.0	100.0	-61.2
Black African	Average KS3 score in English and Maths	123.1	-23.4	107.4	-18.5
	Spends most free time with family	-23.1	4.4	-7.4	1.3
		100.0	-19.0	100.0	-17.2

N=13444

CHAPTER 5

ETHNIC DIFFERENTIALS IN THE EVOLUTION OF EDUCATIONAL EXPECTATIONS FROM AGE 13/14 TO AGE 17/18

This chapter tackles the issue of stability and change in educational expectations from the age of 13/14 up to age 17/18. In general, educational expectations have been considered relatively stable constructs that develop at an early stage of individuals' lives (Haller & Portes, 1973). However, adolescence is a critical period of transition to adulthood where many attitudes and behaviours change in a relatively short period of time. Therefore, my objective is to identify whether the educational expectations of ethnic minorities are more resistant to change than the White British category and, if this is so, to explain why that is the case. I also pay attention to the concept of 'anticipatory decision', which refers to those situations where the decision to follow a certain educational trajectory is taken well in advance of it being formalised. This would be the case for students and families who decide to go to university in future years before the student takes their GCSE examinations or A levels. In this regard, the expectations of students who have taken the anticipatory decision of applying to university are likely to be more stable across time.

5.1. Stability and change: how expectations develop over time

The previous chapter presented empirical evidence showing that students differ considerably in their expectations of applying to

university when they are age 13/14. Despite the general tendency to stability, some of these students either increase or decrease those initial expectations while others maintain them in the following years. The extent to which these variations are systematically associated with the ethnicity of the student, and the reasons accounting for this association are the main concern of this chapter. In addition, I analyse whether there are ethnic differentials in how students react to their academic attainment. That is, do students adapt their educational expectations to their attainment when they are contradictory? Following the same structure as the previous chapter, I focus on the evolution of preferences for post-compulsory education and on the expectations of applying to university. The analysis follows the students from age 13/14 until they are 17/18, when many of them start the application process for a university place[73].

The analysis of this evolution is structured in two periods of time:

- The first period focuses on the expectations for post-16 trajectories and for applying to university, starting when students are age 13/14 until they are 15/16 and are about to sit or have just sat GCSE national examinations. Therefore, it comprises the last two years of compulsory education.

- The second period spans the last year of compulsory education, when students are 15/16, until they are 17/18. Obviously, in this period, I only examine the changes in university expectations, since all students have already taken the decision to start a certain post-compulsory education trajectory. The analysis of this second period is slightly more complex than the former, since the achievements in GCSE national exams heavily conditions the possibilities of being accepted to any university in the future. This allows me to see the extent to which students are able to adapt their university expectations to their GCSE

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[73] 37% of the LSYPE sample have already started the university application process when they are interviewed at age 17/18, transforming their expectations into actual decisions. However, I still analyse the expectations of those that have not applied to university yet.

achievements at age 15/16. As will be seen, ethnic minority students are more resistant to changing their high expectations even when their objective probabilities of entering university in the future are quite low.

As has been already mentioned, psychologists stress the high stability of expectations, as well as the limits of rational arguments, to explain cross-individual differences in educational expectations. From this point of view, the expectations about one's future educational trajectory would form during early childhood, a period when children tend to adopt their parents' expectations through various psychological mechanisms. Despite all the external influences during adolescence, these educational expectations remain considerably stable. However, even though it is not common to find dramatic changes in expectations across time, at least for some students, a certain degree of change occurs. This is likely to happen during adolescence, since it is precisely during this period when individuals start thinking about their future and become aware of the potential, though subjective, costs and benefits of choosing one option over another. In this regard, the evolution of educational expectations of students from different ethnicities during adolescence is analysed throughout the chapter, mainly in terms of the following two factors:

- Firstly, the academic performance, since those students with an already poor attainment or those experiencing a substantial worsening of their performance are likely to adapt their initial expectations if there is an inconsistency between both. That is, a discrepancy between academic attainment and expectations cannot be sustained for long - therefore, students will try to find a new equilibrium between both by either changing their attainment or modifying their initial expectations. As will be seen, there are significant differences across ethnicities in their speed of adaptation[74].

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[74] The idea of adapting expectations to the available information - mostly academic attainment - is linked to the rational and not to the psychological perspective, where expectations are mainly adopted by the student at an early age and have a limited scope for adaptation (Andrew & Hauser, 2012). The costs and

Secondly, the stability of parental expectations across time and the extent to which students agree with their parents' expectations. In the previous chapter, I have shown that not only do ethnic minority parents have significantly higher expectations for their children than White British parents, but also that, among Indians, Pakistanis and Black Africans, the proportion of parent-child agreement in expectations is also significantly higher. The adoption of these high parental expectations has proved to be the main factor accounting for the ethnic differentials in expectations at age 13/14. In this chapter, I am also examining the extent to which the degree of stability of parental expectations, from the student age of 13/14 until they are 16/17, is also intimately associated with the evolution of expectations of the students themselves[75].

5.2. Describing the evolution of educational expectations during the last two years of compulsory education (age 13/14 to 15/16)

The empirical analyses presented in the previous chapter have shown that ethnic groups vary considerably in their educational expectations about their future. However, ethnicities not only differ in their level of expectations at the beginning of secondary education, but also in how these evolve across time. Although educational expectations tend to be considerably stable over time, there are significant differences across ethnicities in the percentage of students that maintain them, as well as in the prevalence of one or another pattern of change. In this first part

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benefits of taking one decision such as applying to university might change across time and also influence the evolution of a student's educational expectations. Unfortunately, the LSYPE poses clear limitations in that respect, since the questions on this topic are only asked to students that have obtained at least 5 A*-C GCSEs and/or think that they are very/fairly likely to apply to university. Therefore, I only consider students' academic performance as the main source of information that students take into account to adapt their expectations.

[75] Parents are only asked about their expectations for their children applying to university when students are age 13/14 and 16/17.

of the chapter, I describe in detail the cross-ethnic differences in the evolution of preferences for post-compulsory education and the expectations of applying to university during the last two years of compulsory education, from age 13/14 to age 15/16.

The evolution of the preferences for post-compulsory secondary on the one hand, and of university expectations on the other, are analysed in sections 5.2.1 and 5.2.1. In this regard, three main patterns of change are presented[76]:

- Firstly, students that have maintained the same preferences or level of expectations from age 13/14 to age 15/16.
- Secondly, students who have lowered their preferences/expectations during these two years.
- And finally, students that have raised their preferences/expectations during the same period.

5.2.1. Evolution of preferences for post-16 education across ethnicities

[table 5.1 about there]

As shown in table 5.1., the percentage of students among Indians (72%), Black Africans (68%), Pakistanis (64%), and Black Caribbeans (61%) that maintain the same preferences for their post-16 trajectory during the last two years of compulsory education, is significantly higher than among White British students (58%). Moreover, of those that do not modify their preferences from age 13/14 to 15/16, the percentage favouring the sixth-form option is significantly higher among Indian (92%), Black African (88%), Pakistani (85%) and

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[76] The patterns of change basically differentiate between students who maintain, increase, or decrease their expectations. In the post-compulsory education trajectories the previous classification is based on the academic prestige of each possible trajectory. From highest to lowest academic prestige, the order is the following: sixth-form school, sixth-form college, specialist or further education college, and leaving full-time education. Those students expressing a preference for a sixth-form school or college have been grouped together in a single category to facilitate the empirical analysis.

Bangladeshi (81%) than for White British (69%), Mixed (66%) or Black Caribbean (63%) students.

In addition, all ethnic minorities except the Mixed have a significantly smaller percentage of students lowering their preferences compared to the White British majority. The most common pattern among those with decreasing preferences is that of students that, at age 13/14, believe they will go on to the sixth form but at age 15/16 they think they will go to a specialist or further education college.

Finally, the percentage of students increasing their preferences is particularly high among Bangladeshis (26%), Black Caribbeans (25%), and the White British majority (23%). Obviously, the percentage of those with more ambitious expectations at age 15/16 than at age 13/14 should be lower among Indians and Black Africans, since most of these students already report a preference for the most prestigious academic option at age 13/14; therefore, they have no room to increase them.

5.2.2. Evolution of the expectations of applying to university across ethnicities

[table 5.2 about there]

The patterns of change in the expectations of applying to university during the same time period are presented in table 5.2. Corresponding to the preferences for post-16 education, the percentage of students maintaining their expectations during KS4 is also significantly higher among Black Africans (67%), Indians (60%), Black Caribbeans (53%) and Mixed (50%), compared to White British (45%). However, there are significant differences across ethnicities in terms of the composition of the group of students that hold their expectations steady. In this regard, the Pakistani, Bangladeshi and, especially, the Indian and Black African minorities stand out for having more than 80% of students in this group saying that it is very likely that they will apply to university in the future, compared to only 43% among White British and 48% among Caribbean and Mixed students. Therefore,

maintaining the same expectations appears to be very positive for South Asian and African students but not so much for the White British, Caribbean and Mixed students, where a considerable percentage of those maintaining their expectations are students that have low educational ambitions.

With respect to those that reduce their expectations of applying to university from age 13/14 to age 15/16, the highest percentages are found among the White British (27%), Pakistani (23%) and Mixed (22%) groups. Therefore, not only do a considerable percentage of White British and Mixed students maintain their low expectations, but also part of those with initially higher expectations decrease them during this two-year period.

Finally, the percentage of students that increase their expectations of applying to university is similar across ethnicities (around 20%), though this similarity is not fully comparable across groups due to the different levels of expectations from which they depart. It is also important to note that the percentage of students reporting that they don't know if they will apply to university is moderately high among Bangladeshis (11%) and Mixed (9%) compared to the other ethnicities, and it is logically more frequent at age 13/14 than at age 15/16.

[table 5.3. about here]

Table 5.3. complements the information in table 5.2., since it details the direction of the changes across time, given the university expectations reported by students at age 13/14. In this respect, ethnic groups significantly differ in the evolution of their expectations:

▪ Indians and Black Africans stand out for having the highest percentage of students that have high expectations at age 13/14 and that are also able to maintain them until age 15/16. In addition, they also have a significantly higher percentage of students that increase their expectations compared to White British.

- Pakistanis and Bangladeshis differ from White British because they have a significantly higher percentage of students that increase their expectations from ages 13/14 to 15/16. Particularly, among students with low expectations (those reporting a low likelihood of applying) the increase is quite spectacular - around 60% of Pakistanis with low expectations at age 13/14 report higher expectations at age 15/16, while only 30% of White British do so.

- White British and Mixed students are very similar in their patterns of change in university expectations, having both the lowest percentage of students with initially high expectations that are able to maintain them, as well as the highest percentage of students lowering them regardless of their initial ambitions.

- With respect to Black Caribbean students, their profile is somewhat between that of Pakistanis and Bangladeshis on the one hand, and White British and Mixed students on the other. That is, Black Caribbeans increase their expectations significantly more than White British but lower than Pakistanis and Bangladeshis.

To sum up, the patterns of change in expectations for post-16 education and university application are very similar for all ethnicities. This is not surprising, since the type of education undertaken from age 16 to 18 heavily conditions the options of being accepted to university later.

In general, Indians, Black Africans, Pakistanis and Bangladeshis, though particularly the first two minorities, report significantly more ambitious educational expectations compared to White British students in the base year (age 13/14), as shown in Chapter 6. But, more importantly, Tables 5.1., 5.2. and 5.3. suggest that these minorities are also able either to maintain or to increase their expectations more successfully than White British and Mixed students. In the multivariate analyses of the following section, I examine the factors that might account for these differences.

5.3. Multivariate analysis: ethnic differentials in the patterns of change of educational expectations from age 13/14 to age 15/16

Overall, the previous descriptive tables confirm, regardless of the differences across ethnicities, the high stability of educational expectations across time, since around 50% of students are able to maintain them during the last two years of compulsory education. However, there are significant differences across ethnicities in the degree of stability, as well as in the patterns of change, that need to be examined in more detail.

5.3.1. Method

The multivariate analysis for the patterns of change of preferences and expectations are estimated with multinomial logistic regressions, using the decomposition method of Karlson, Holm and Breen (KHB) (Karlson & Holm, 2011; Kohler et al., 2011) to compare the ethnicity coefficients across nested models. The objective is to identify the extent to which the ethnic differentials, relative to the White British majority in choices after compulsory education, are accounted for by several explanatory variables that are presented in the following section. The KHB method allows me to measure the changes in the ethnicity coefficients that are due to confounding with the explanatory variables on the one hand, and due to the rescaling of the model on the other.

A total of four multinomial logistic regressions -two for the patterns of change in post-16 preferences and another two for the evolution of university expectations- have been implemented with the following structure:

- The first one has as the baseline category those students that do not change their preferences for post-16 education or their university expectations, and those who lower them during this

period are the outcome category. I include a covariate indicating whether students choose the categories 'leaving full-time education' or 'not at all likely to go to university' as their expectations at age 13/14 to control for the floor effect. That is so because ethnic groups have significantly different percentages of students with very low expectations in the base year, who can only maintain or increase them during this period.

- The second one also has as the baseline category those students that do not change their preferences/expectations, with those who raise them during this period as the outcome category. I include a covariate indicating whether students choose the categories 'sixth form' or 'very likely to go to university' as their expectations at age 13/14 to control for the ceiling effect, following the same logic as before.

5.3.2. Explanatory and control variables

Two main explanatory variables are considered in the analysis:

- Firstly, the average progress in English and Maths from KS3 to KS4 examinations. In this regard, this measure is preferred over an indicator of the average KS3 score because, as shown in Chapter 5, the three South Asian and Black African minorities, make significantly stronger progress from KS3 to KS4 than White British, Mixed and Black Caribbean students do. The objective in this regard is to investigate the extent to which students adapt their initial expectations to the progress (or lack of) they make during these two years. Therefore, this first variable would represent a rational perspective to account for changes in expectations -adaption instead of adoption. That is, the information about attainment received by students at school conditions their predictions about future educational trajectories. The progress of each student is expressed in value-added scores.

- Secondly, parents' university expectations for students reported when they were age 13/14[77]. In this respect, I want to analyse whether the level of parents' expectations when students are age 13/14 has an influence on the degree of expectation maintenance of their offspring. The results of Chapter 6 show that the initial level of expectations from which students depart is heavily conditioned by that of their parents, but in this chapter, I also examine whether they also condition their evolution across time. The parental expectations would represent the psychological perspective on which the status socialisation theory is based (adoption instead of adaption).

The control variables that are considered in all the models are the following: the gender and immigrant generation of the student, whether the student is living in a single-parent family, whether the mother had the first child at age 21 or younger, the highest level of education among household members, whether any of the students' grandparents has a university degree, the family socio-economic status and whether the students lives in London.

5.3.3 Results of empirical analysis (I): post-16 preferences

The results of the multivariate analysis are presented in table 5.4., which shows the ethnicity coefficients for each outcome, and in table 5.4a, which disentangles the contribution of each explanatory variable to the confounding with the ethnicity coefficients. The models presented in table 5.4. compare the outcome categories 'increasing' or 'lowering' preferences vs maintaining them from ages 13/14 to 15/16. The models for each pair of baseline-outcome categories are nested: in the first one (models 1a and 1b), the progress from KS3 to KS4 and the parental expectations are included as explanatory variables; the second (models 2a and 2b) adds a control for the floor or ceiling effect;

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[77] Unfortunately, parents are not asked again about the educational expectations they have for their children until students are 16/17.

finally, the third one (models 3a and 3b) includes all the control variables.

[tables 5.4 and 5.4a about here]

First of all, the changes in the ethnicity coefficients from models 1a to 2a and 1b to 2b reveal that there are small floor effects but strong and highly significant ceiling effects. For example, in the comparison between increasing preferences over maintaining preferences, ethnic groups do not significantly differentiate (or they have negative coefficients such as Indians) from White British (model 1b). However, when in model 2b I take into account the fact that those students with a preference for sixth-form education at 13/14 cannot increase their preferences, being Indian, Pakistani, Bangladeshi or Black African significantly increases the log-odds of increasing the preferences vs maintaining them. That is, South Asian and Black African students are not only more likely to maintain their initially higher ambitions but they are also more prone to increase them compared to White British students.

With regard to lowering vs maintaining the preferences, the results of model 2a show that Indians, Pakistanis, and Black Africans have significant and negative log-odds of lowering their preferences compared to White British students. When the controls are introduced in model 3a, the coefficients remain negative and significant only for the three South Asian minorities, though for Bangladeshis it is only significant at 0.1. If we express the results of model 3a in Average Marginal Effects[78] (AMEs), Indians would have 7% less probability than White British of lowering their initial preferences over

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[78] Average Marginal Effects (AMEs) are calculated separately for the ethnicity coefficients that are significant. The AME of *x (e.g. ethnicity dummy variable)* is the derivative of the predicted probability with respect to *x* evaluated over the whole population. In a single equation model $\mathbf{E(y)=F(\beta x)}$ where βx denotes the linear combination of parameters and variables and $F(\cdot)$ is the cumulative distribution function, the formula for the AME is the following:

$$AME_i = \frac{1}{n}\sum_{i=1}^{n}\{F(\beta x^k \mid x_i^k = 1) - F(\beta x^k \mid x_i^k = 0)\}$$

maintaining them, while Pakistanis and Bangladeshis would have 2% less probability than White British.

In addition, the three South Asian minorities have positive and significant log-odds of improving vs maintaining their initial plans for post-16 education compared to White British in the full model that includes the explanatory variables and the controls (model 3b). In AMEs, that would imply that Indians have a 9% higher probability than White British of improving vs maintaining their preferences, while Pakistanis would have 3% and Bangladeshis 5% higher.

After this general description of the findings, I examine the contribution of the two main explanatory variables to the confounding with the ethnicity coefficients ('contribution to confounding'); and their contribution to the total ethnic effect ('confounding'), which is all presented in table 5.4a[79]:

How much of the total ethnic effect is due to the confounding of the respective mediator (progress and parents' expectations)?

In this respect, it is important to bear in mind that the two explanatory variables, in addition to the controls, are not able to make all the ethnicity coefficients lose significance, though all of them considerably decrease in size.

On the other hand, the extent to which parental expectations and progress are able to account for the observed total effects –that is, the ethnicity coefficients- varies across groups. For the outcome of decreasing vs maintaining preferences (model 3a), the two explanatory variables are better able to account for the differentials of Bangladeshis, Pakistani and Black Africans with White British students. This is in fact, also reflected in table 5.4, since the ethnicity coefficients of these three minorities lose their significance when the explanatory variables are introduced into the model. That is, once the

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[79] The confounding percentages are only calculated for the models that include the two explanatory variables and all the background controls (models 3a and 3b of table 5.4.)

control and the explanatory variables are taken into account, only Indians have a significantly smaller probability of lowering their expectations relative to White British students.

However, for the outcome of increasing vs maintaining preferences, the extent to which the two explanatory variables are able to account for the observed ethnic differentials is more modest, particularly for Indians, with only 17% confounding. Nevertheless, after including the explanatory and control variables, the coefficient for Indians is, again, the only one that remains positive and significant.

How much does each mediator (academic progress and parents' expectations) contribute to the coefficient of confounding?

In this regard, the mediation appears to be much larger for parental expectations than for academic progress. That is, most of the confounding of the two explanatory variables with the ethnicity coefficients is driven by those parents reporting very high university expectations for their children, which represents a significantly larger proportion of parents among ethnic minorities than among the White British majority[80]. At least 63% of the total confounding is due to parents with very high expectations. That is, the significantly lower average probability of South Asians and Black Africans to lower their expectations vs maintaining them on the one hand, and the significantly higher average probability of South Asians to increase their expectations vs maintaining them on the other, is more related to the adoption of their parents` expectations than to their academic progress. Therefore, it seems that having parents with very high ambitions does have an impact on the evolution of students' expectations.

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[80] As has been mentioned earlier, the variable relating to parents' expectations is considered a nominal factor variable with 4 categories (parents thinking that it is very likely that their children apply to university, parents thinking that it is fairly likely, parents thinking it is not very/at all likely, and parents that do not know). Parents reporting that the child is not very/at likely to apply to university represent the reference category.

5.3.4. Results of empirical analysis (II): likelihood of applying to university

The results regarding the evolution of the expectations of applying to university from age 13/14 to age 15/16 are very similar to those regarding the preferences for post-16 trajectories that have just been described. The only relevant difference is for Black Caribbeans, who did not significantly differentiate from White British students in their average probability of lowering vs maintaining their preferences, but who have now significantly less probability of decreasing their university expectations compared to White British students. Due to the similarity of the findings, I am not discussing the results in any further detail[81].

5.4. Describing the evolution of the expectations of applying to university from age 15/16 to age 17/18

The years that follow from the end of KS4, when students are 15/16 years old, until they are 17/18, are extremely important to understand why some students finally realise their expectations of applying to university while others fail to do so. During compulsory education, pupils are not tracked into different pathways that constrain their trajectories like in other countries of continental Europe. Therefore, English students do not have any relevant transition in their educational trajectory until they are age 15/16 and sit national GCSE examinations. As has been mentioned, students that obtain 5 A*-C GCSE, including Maths and English, have more chances of being admitted into the academic track (A levels at sixth-form schools and colleges), which is the traditional route to enter university. Even though students can be admitted into low-tier universities with vocational qualifications, including vocational A levels, their chances

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[81] The models for patterns of change in university expectations are presented in the appendix of the chapter.

of being accepted are usually lower than those of students with academic A levels[82].

The grades that students obtain at GCSE examinations, together with the actual post-16 trajectories in which they finally enrol, are two important factors that will condition the evolution of university expectations during these years. With this in mind, I examine whether ethnic groups differ in their degree of adaptation of their expectations at age 16/17 to their past attainment at GCSE examinations. The degree of adaptation is logically expected to occur among students that experience a mismatch between their GCSE results and their university expectations at that time. In this regard, I investigate the evolution of those students with expectations that are inconsistent with their attainment at age 15/16: do they lower their expectations in the following years, when they are 16/17 or 17/18, or do they improve their achievement in order to catch up with their initial ambitions?

As will be seen, the percentage of students that manage to continue to A levels despite not being able to obtain the benchmark of 5 A*-C GCSEs, including English and Maths, is significantly higher among ethnic minorities than the White British group. In fact, this behaviour is evidence of the high level of educational ambitions of ethnic minority families and their persistence to realise them.

5.4.1. Evolution of expectations from ages 15/16 to 17/18 across ethnicities

[table 5.5. about here]

The evolution of expectations of applying to university from age 15/16 to age 17/18 of each ethnicity is presented in table 5.5. The table also

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[82] Some universities of the Russell Group have also opened a way of accessing higher education for students that have not followed the traditional academic path with the creation of foundation courses, designed to help them to catch up with students admitted through the conventional academic route. Therefore, students would enrol in these foundation courses for a whole year before starting the degree.

includes the evolution from age 15/16 to the following year, when students are 16/17, for purposes of comparison. As in the previous period, I differentiate between students that maintain, students that lower, and students that increase their expectations of applying. The main difference with the previous period is that a third of students have already initiated the university application process when they are interviewed at age 17/18 and, therefore, they are not asked about their expectations[83].

What is more important is that the percentage of applicants is not uniformly distributed across ethnicities: while 63% of Indians and 50% of Black Africans have already applied to university at this age, only 39% of Pakistanis and Bangladeshis, 37% of Black Caribbeans, 34% of White British and 30% of Mixed students have done so.

Among those that have not applied yet and, therefore, are asked about their expectations for applying in the future, their evolution from age 15/16 to 17/18 is partially similar to the previous period from age 13/14 to 15/16. That is, the percentage of students reporting to be very likely to apply to university at both time points is significantly higher among ethnic minorities than among White British: 33% of Mixed, Bangladeshis and Black Caribbeans, 50% of Pakistanis, 60% of Indians and 78% of Black Africans fall in this category compared to only 14% of White British.

However, the percentages of students in each ethnicity that maintain, lower, or increase their expectations varies compared to the previous period from age 13-14 to 15/16. This is mainly due to the significant differences across ethnicities in the percentage of students that have already applied. For example, Indians and Black Africans are no longer the minorities with the highest percentage of students

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[83] The reason why only a fraction of students have already applied at age 17/18 is partially explained by the fact that around 13% of students decide to take a gap year at age 17/18 and others are still doing the courses that will allow them to apply to university at that point. In the appendix, I also present the evolution from ages 15/16 to 16/17.

maintaining their expectations because most of them have already realised their initial ambitions of applying to university.

In order to include in the multivariate analysis of expectations all the students in the sample, regardless of whether they have already applied to university or not, I have made the following assumptions: firstly, students that report to be very likely to apply at age 15/16 and that have already applied at 17/18 are categorised as students that 'maintain their expectations'. And secondly, those students at 15/16 that are fairly/not very/at all likely to apply but have already applied to university at age 17/18 are categorised as students 'increasing their expectations'. After these transformations, the patterns of change of expectations from age 15/16 to 17/18 reveal that Indians and Black Africans are, again, the minorities with the highest percentage of students maintaining their expectations, while the other groups would resemble more the White British students in that respect. In addition, Indians, Bangladeshis, Black Caribbeans, and Black Africans would also have a significantly lower percentage of students that decrease their expectations of applying to university during this period compared to the White British group.

The evolution of expectations from age 15/16 to age 17/18 is fairly similar to the evolution from 15/16 to age 16/17, which is also shown in table 7.5. In this regard, the main difference would be the higher percentage of Pakistani students that lower their expectations when the evolution is examined for a longer period: 15% from 15/16 to 16/17, and 20% from 15/16 to 17/18, becoming very similar to the White British group.

The fact that the distribution of the patterns of change across ethnicities from age 15/16 to age 16/17 resembles considerably the distribution from age 15/16 to 17/18, which transforms the actual decisions of applying at age 17/18 into expectations and justifies doing the multivariate analysis with the latter information[84].

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[84] I am aware that attributing a certain level of expectations to students that have already applied to university at age 17/18 is not completely valid. This aspect is analysed in more detail in the following chapter, where I examine the differences

5.4.2. Mismatch between expectations of applying to university and attainment at GCSE examinations

As has been mentioned, the process of adaption of expectations to attainment is mainly observed for students that experience some degree of mismatch between the academic ambitions held during compulsory education and their final attainment at GCSE examinations. For others, their expectations have been consistent with their attainment since the beginning of compulsory education and therefore, no process of adaption of either one or the other is necessary[85].

In this section, I describe the ethnic variations in the evolution of expectations of applying to university that occur after sitting GCSE examinations when the latter are not consistent with the former. It could be argued that the process of adaptation starts before students sit GCSE examinations at age 15/16, since it is likely that they already have some idea about how their performance will be in those examinations, months before they take place. However, the patterns of change are very similar, even if I take the reported expectations at age 14/15 or at age 15/16 as the reference point.

[table 5.6. about here]

To examine the impact that the level of attainment in GCSE tests has on students' expectations of applying to university, I first identify those experiencing a mismatch between their expectations of applying to university at age 15/16 and their attainment in GCSE exams at that age. The benchmark is, following the English standard, obtaining 5 A*-C GCSE, including English and Maths. In this regard, three

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between students applying to university at the most common age (17/18) to those applying later.

[85] Given the lack of information about students' educational expectations during childhood, I cannot say much about the consistency between students' attainment and their educational ambitions before age 13/14. This section describes the changes in expectations after students receive the information about their attainment at GCSE examinations.

different types of students can be distinguished in terms of their consistency between their expectations and their attainment at age 15/16 (table 5.6.):

Firstly, students whose expectations are higher than their attainment. That is, they report to be very or fairly likely to apply to university when they are age 15/16 but, at the same time, they do not reach the benchmark of 5 A*-C GCSEs, including English and Maths, at GCSE exams. This group represents only 15% of White British students, but increases up to 27% of Mixed students, 31% of Indians, 43% of Bangladeshis, 46% of Pakistanis, 48% of Black Caribbeans, and 49% of Black Africans.

Secondly, students whose attainment is higher than their expectations. At age 15/16 these students think that it is not very/at all likely that they will apply to university or they do not know if they will apply; but, on the other hand, they obtain 5 A*-C GCSEs, including English and Maths, in GCSE exams. This type of student constitutes a small minority and they are almost non-existent among ethnic groups. Nonetheless, it comprises 8% of White British students.

Finally, students with expectations that match their level of attainment at GCSE tests. These could either be students with low expectations that did not reach the benchmark, or students with high expectations that achieved the benchmark. As expected, most students fall into this category, though they represent a significantly smaller percentage among ethnic minorities than in the White British group. In addition, ethnic minorities have a significantly smaller percentage of students with low expectations and low attainment, while this group of students represent 35% of White British. That is, White British students that do not achieve the benchmark at GCSE examinations already have no expectations of applying to university. However, ethnic minority students, particularly South Asians and Black Africans, tend to report high ambitions regardless of their attainment.

5.4.2.1. Association between a mismatch at age 15/16 and expectations of applying to university at age 17/18

[table 5.7. about here]

The different patterns of evolution in terms of the initial mismatch at age 15/16 and the expectations of applying to university at 17/18 are presented in table 5.7.[86]. One of the most interesting patterns is that of students with high expectations and low attainment at age 15/16 and that manage to maintain their high expectations of applying to university two years after or they have already initiated the application process. These are students with an initial mismatch at age 15/16 that, contrary to what may be expected, do not lower their ambitions in the following years to adapt them to their poor results in GCSE exams, but they put more effort into their studies to be able to keep up with their initial educational plans of applying to university[87]. These students have modest chances of entering the more prestigious universities of the Russell Group, but they nevertheless apply or expect to apply to other higher education institutions.

This type of student is significantly more numerous among ethnic minorities than in the White British group. While only 35% of White British students with expectations higher than their attainment at age 15/16 report to be very or fairly likely to apply to university at age 17/18, the percentage increases to 43% for Indians, 52% for Bangladeshis, 57% for Pakistanis, 60% for Mixed and Black Caribbean and 68% for Black Africans. In addition, among this group with higher expectations and lower attainment at age 15/16, 41% of Indians and 26% of Black Africans and Black Caribbeans, have already applied to university when they are 17/18, while only 21% of White British have done so.

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[86] It is important to bear in mind that a third of students have already applied to university when they are interviewed at age 17/18. These students are also included here in the description, since it is relevant to identify all types of students at age 15/16 in terms of the expectations-attainment mismatch.

[87] They usually do that by either re-taking the GCSE examinations the year after or by enrolling in a vocational education route that allows them to apply to certain universities later.

5.4.3. Summary of descriptive findings

Tables 5.5 to 5.7. have shown that not only do ethnic minority students maintain their significantly higher expectations after compulsory education compared to White British students, but they also manage to do so despite the poorer results at GCSE level of some minorities (Pakistanis, Bangladeshis, Black Caribbeans) compared to White British. This phenomenon does not take place with the same magnitude among White British students, since their educational ambitions are in accordance with their attainment. Surprisingly, it seems that for ethnic minorities, particularly Pakistanis, Bangladeshis, Black Caribbeans and Black Africans, the ambitions they report at the end of compulsory education remain constant for the following years regardless of their attainment in GCSE examinations. That is, they do not embark on a process of adjustment of educational expectations to attainment. Quite the contrary, these students manage to adapt their attainment to their initial expectations –not vice versa- by working harder on their education after age 16: some students re-take GCSE courses while at the same time doing A levels, while others enrol in vocational education that could allow them to apply to university later. The actual post-16 trajectories chosen by students is analysed extensively in the next chapter.

In the following section, I examine the evolution of parents' educational ambitions for their children, from the age of 13/14 until they are 16/17. Not surprisingly, the evolution of parents' expectations parallels that of their children.

5.5. Evolution of parental expectations and consistency with students' expectations at age 16/17

[tables 5.8. and 5.9. about here]

The evolution of parents' expectations for their children from the age of 13/14 until they are 16/17 is extremely similar to the evolution of students' expectations during the same period, as can be seen in tables 5.8. (for parents) and 5.9. (for students[88]). The main difference is that, for all ethnicities, the percentage of students' increasing their expectations is slightly higher than that of parents.

That implies that ethnic minority parents, particularly South Asians and Black Africans, maintain their ambitions for their children despite the average modest results that some of these minorities get in GCSE examinations. Overall, it suggests that the stronger attachment towards the initial plans of going to university does not only apply to ethnic minority students but also to their parents.

Similarly to Chapter 4, the differences across ethnicities in the consistency between parents' and students' expectations of applying to university are also examined. At age 13/14, the percentage of families with parents and students reporting exactly the same expectations of applying was significantly higher in the Black African, Indian and Pakistani minorities compared to the White British group. Moreover, among those cases with parent-student agreement, the percentage represented by those holding very high expectations is also significantly higher in ethnic minority families.

At the age of 16/17, the main change in terms of parent-student consistency occurs among White British families: while only 55% of students have the same expectations as their parents at age 13/14, this level of agreement increases to 68% at the age of 16/17 (see table 5.10). At this age, only among Indians and Black Africans is there a significantly higher percentage of parent-child agreement in expectations than in the White British group (74% and 72%). The other ethnic minorities have maintained a stable distribution of levels of agreement during those years, so it is mainly in the White British group where the percentage of parent-student agreement has

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[88] Table 5.9. presents the evolution of students' expectations for applying to university from age 13/14 to 16/17 for purposes of comparison, since parents are only asked about their expectations when student are 13/14 and 16/17.

increased[89]. Nevertheless, the cases where both parents and children report high educational ambitions are still significantly more numerous among ethnic minorities than among White British families.

5.5.1. Is there an anticipatory decision among ethnic minority families?

In this regard, I refer to 'anticipatory decision' in this context to those situations where both parents and students embrace the decision of applying to university well in advance of this moment taking place. This seems to be the most common situation among ethnic minorities, particularly the South Asian and the Black African. Their attachment to this anticipatory decision is so strong that it is maintained regardless of students' attainment at the end of compulsory education. This is particularly the case of Bangladeshis and Pakistanis; despite the substantial academic progress they make during the last 2 years of compulsory education, their average level of attainment at GCSE examinations is significantly lower than that of White British students. Nevertheless, the consistently high expectations reflect the motivation to follow a certain educational trajectory, to which both parents and students commit their present behaviour. It also seems to be a family decision, as reflected in the higher levels of parent-student agreement among ethnic minorities.

A clear example of the extraordinary level of commitment to this anticipatory decision was shown in table 5.7. Among White British students, 44% of those holding expectations higher than their attainment at age 15/16, react to this initial mismatch by lowering their expectations in the following years. However, among ethnic minorities, the percentage of students behaving similarly is

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[89] In the appendix, I present the evolution of the agreement between parents' and students' expectations from age 13/14 to 16/17 for the White British majority, since it is the group that experiences more changes in that respect. The higher percentage of agreement between White British parents and students at age 16/17 than at age 13/14 is mostly driven by the changes in expectations of students that at age 13/14 reported to be fairly likely to apply to university, and that at age 16/17 have either raised or lowered their expectations.

significantly lower: 5% of Black Africans, 12% of Black Caribbeans, 15% of Indians, 21% of Bangladeshis, 25% of Mixed, and 30% of Pakistanis with this initial mismatch lower their expectations afterwards, while the rest either maintain them or apply to university.

In the following section, I present the multivariate analysis for the ethnic differentials in the patterns of change of expectations from age 15/16 to 17/18.

5.6. Multivariate analysis: ethnic differentials in the evolution of expectations from age 15/16 to age 17/18

As has been previously described, a third of the students have already started the university application process when they are interviewed at age 17/18. Therefore, to avoid excluding them from the analysis, I have estimated their expectations at age 17/18 from their actual behaviour[90]. For the other two-thirds of students that have not applied yet when they are interviewed at age 17/18, their pattern of change is based on their reported expectations at ages 15/16 and 17/18.

5.6.2. Explanatory and control variables

Those students that have not obtained 5 A*-C GCSEs, including English and Maths, in KS4 national examinations at age 15/16 have undoubtedly fewer chances of being admitted into a prestigious university. Even though some students manage to catch up later, the performance in GCSE examinations continues to be a determinant in the educational trajectory of students. In terms of educational

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[90] Those students that at age 15/16 reported to be very likely to apply to university in the future that have already applied at age 17/18, are included in the category of students that maintain their expectations. And those that at age 15/16 report to be fairly, not very or not at all likely to apply, or do not know if they will apply, that at age 17/18 have already started the application process to university, are included in the category of students that increase their expectations.

expectations, not being able to reach the benchmark at GCSE level might also act as a depressant of the initial ambitions. That is, it is likely that only the most motivated students among those that do not reach the benchmark will continue in education and will maintain their initial expectations. Therefore, a dichotomous variable indicating whether students achieved 5 A*-C GCSEs including English and Maths or not is included in the model as one of the main explanatory variables.

The other explanatory variable that is included in the analysis is the expectations of parents that their children go to university, asked when students are age 16/17[91].

These two explanatory variables represent, as in the previous multivariate analysis from ages 13/14 to 15/16, the psychological and rational perspective. That is, are the changes or the stability of students' expectations after age 16 more related to the grades obtained at GCSE examinations or to the parents' ambitions for them?

The control variables that are considered in all the models are the following: the gender and immigrant generation of the student, whether students are living in a single-parent family, whether the mother had the first child at age 21 or younger, the highest level of education among household members, whether any of the students' grandparents has a university degree, the family socio-economic status and whether the place of residence is London or not.

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[91] An alternative model including the evolution of parents' expectations instead has also been tried. However, a measure of parents' expectations reported when students are age 16/17 appears to be better able to account for the ethnic differentials in the evolution of students' expectations from age 15/16 to 17/18. This is likely to be related to the larger time-span of the measure about parents' evolution, who have been asked about their expectations for their children only when they are 13/14 and 16/17 years old.

5.6.3. Method

The evolution of students' expectations is analysed with binary and multinomial logistic regressions. The binary logistic regression is performed for the first outcome variable, which takes the value 1 when students maintain their initial expectations reported at age 15/16, and 0 otherwise. Afterwards, a multinomial logistic regression is implemented, taking as the baseline category those students that maintain their expectations and as the outcome categories, students that raise or lower their initial plans during those years. In the model of increasing vs maintaining expectations, I introduce a variable indicating whether the student reported very high expectations in the base year in order to control for the ceiling effect. The same strategy is followed for the model for lowering vs maintaining the initial expectations, where I take into account if students report very low expectations at age 15/16 to control for the floor effect.

I implement the decomposition method proposed by Karlson, Holm and Breen (Breen et al., 2011; Karlson & Holm, 2011) to measure the changes in the ethnicity coefficients in the pairs of nested models for each outcome variable: the first model only includes the two explanatory variables and the second adds all the control variables. In addition, I present a table that details the contribution of each explanatory variable to the confounding and to the total ethnic effect.

5.6.4. Results of empirical analysis

The ethnic coefficients for the three outcome categories (maintaining, increasing and decreasing expectations) are presented in table 5.11., while the contributions of parental expectations and achievement in GCSE exams to account for the ethnic differentials are shown in table 5.11a.

[table 5.11 and 5.11a about here]

The first models (1a and 2a) compare the outcome maintaining vs increasing/decreasing expectations of applying to university from ages

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15/16 to 17/18. The only two significant coefficients are those of Indians and Black Africans, which hardly change when the control variables are introduced in model 2a. Before adding the control variables, being Indian increases by 16% the average marginal probability [92] of maintaining the expectations, while being Black African increases it by 21%. These results are not surprising, since Indians and Black Africans are the minorities reporting on average the most ambitious educational plans, and also those showing more stability in their high expectations across time.

With regard to the outcome of increasing vs maintaining the expectations of applying to university in the future (models 1b and 2b), the three South Asian and Black African minorities are, as presented in the descriptive section, significantly more likely to increase them instead of maintaining them compared to White British students. However, parents' expectations and attainment at GCSE level almost fully account for the ethnic differentials, with only the Pakistani coefficient remaining significant and positive at $p<0.05$. While the coefficient for Black Caribbeans is only marginally significant ($p<0.1$), the sign is negative, meaning that they have on average, a smaller probability than White British to increase their expectations instead of maintaining them.

Finally, models 1c and 2c reveal that all ethnic minorities except the Mixed, have an average smaller probability of decreasing their expectations relative to White British students. As in the previous model, the two explanatory variables are able to account to a large extent for these ethnic differentials.

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[92] Average Marginal Effects (AMEs) are calculated separately for the ethnicity coefficients that are significant. The AME of x (e.g. *ethnicity dummy variable)* is the derivative of the predicted probability with respect to x evaluated over the whole population. In a single equation model $\mathbf{E(y)=F(\beta x)}$ where βx denotes the linear combination of parameters and variables and $F(\cdot)$ is the cumulative distribution function, the formula for the AME is the following:

$$AME_i = \frac{1}{n}\sum_{i=1}^{n}\{F(\beta x^k \mid x_i^k = 1) - F(\beta x^k \mid x_i^k = 0)\}$$

How much of the total ethnic effect is due to the confounding of the respective mediator (GCSE benchmark and parents' expectations)?

The extent to which each explanatory variable is able to account for the total ethnic effect is detailed in table 5.11a (columns for 'confounding'). As expected, GCSE attainment and parents' expectations explain to a great extent, though not completely, the ethnic differentials in the evolution of students' educational plans.

Nevertheless, it is important to note that there are some variations in the extent to which the two explanatory variables confound with the ethnicity coefficients across ethnic minorities.

How much is the contribution of each mediator (GCSE benchmark and parents' expectations) to the coefficient of confounding?

More importantly, parental expectations appear to be much more relevant to explain the ethnic differentials in the evolution of students' expectations than the grades they obtain in GCSE examinations. This is exactly the same pattern observed in the multivariate analysis for the period ranging from age 13/14 to 15/16. Indeed, GCSE examinations do not seem to affect more, the expectations of ethnic minority students than KS3 exams. This is quite surprising, given that the exams students take at the end of KS3 have no impact on the educational trajectory but, on the contrary, GCSE examinations condition the range of alternatives among which students can choose the following year.

5.7. Going to university as a family strategy among ethnic minorities

The analyses of the evolution of students' university expectations are remarkably similar for the two time periods considered (13/14 to 15/16 and 15/16 to 17/18). The ethnic variations in the patterns of change, with respect to White British students, seem to be explained (though not completely) by the much higher percentage of ethnic minority

parents with high expectations for their children. This is particularly the case of the three South Asian and the Black African minorities and, to some extent, the Black Caribbean minority. However, Black Caribbean students, and particularly students of Mixed descent, resemble more the White British students in that respect.

The educational expectations are, on average, significantly higher among ethnic minority students, but they also appear to be more stable or more likely to increase across time compared to the White British majority. This stability seems to be more prevalent in families with parents reporting high ambitions for their children who, somehow, manage to transmit these expectations to their children more successfully. This is again the case of the South Asian and Black African minorities, which carry on with their initial educational plans regardless of their final attainment at the end of compulsory education.

As has been mentioned earlier in the dissertation, immigrant families in England tend to hold more familial or collectivist values. Though the LSYPE does not provide specific indicators to properly measure these value orientations, it is quite likely that ethnic minority students tend to adopt to a higher degree, their parents expectations for them. Nevertheless, the higher agreement between parents and students in that respect could also be a consequence of the positive selectivity of the migration flow, which would explain the stronger drive for success and perseverance of ethnic minority students.

The main limitations of my analysis are the identification of factors that, for those students modifying their expectations, trigger the changes in one direction or another. This also raises the question whether, for those students that do not modify their expectations across time, the factors behind that stability are the same as those accounting for the change experienced by other students. It may have been easier to identify the cause when the changes in educational expectations are driven by an external shock that alters the benefits and costs of taking one decision, such as a public policy lowering or subsidising university fees. However, it becomes extremely difficult to disentangle the factors that motivate those changes when these are not related to

any particular external event that can be controlled. However, that should not underestimate the relevance of this analysis, since it has shed light on the possible factors behind the ethnic differentials in expectation change.

Table 5.1. Changes in preferences for post-compulsory education from age 13/14 to age 15/16, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
No change	56.7	54.2	71.4*	63.4*	57.5	56.4	67.3*
Of those that maintain preferences, % of 6th form	*66.5*	*65.1*	*92.7**	*84.1**	*80.1**	*66.3*	*87.9**
Decrease	20.6	21.6	12.2*	17.4	16.2*	18.9	12.8*
Increase	22.7	24.2	16.4*	19.3	26.3*	24.7*	20.0
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**7168**	**284**	**775**	**620**	**484**	**363**	**330**

N=10430

$F(11.80, 7000.24) = 4.8940$ $P = 0.0000$

* Prob <0.05 for differences with White British

Table 5.2. Changes in expectations for applying to university from age 13/14 to age 15/16, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
No change	44.1	47.5	59.7*	46.9	44.3	54.4*	61.9*
Of those that do not change expectations, % saying very likely to apply	*41.2*	*50.0*	*75.4**	*61.0**	*57.5**	*49.9*	*80.7**
Increase	20.5	17.7	20.9	22.9*	26.5*	20.1	22.0*
Decrease	28.2	26.7	14.9*	22.5*	19.1*	18.8*	10.5*
Don't know	7.2	8.1	4.5*	7.7	10.1*	6.8	5.6
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**7168**	**284**	**775**	**620**	**484**	**363**	**330**

N=10430

$F(16.81, 9966.28) = 6.6269$ $P = 0.0000$

* Prob <0.05 for differences with White British

Table 5.3. Distribution of students maintaining, increasing and decreasing their expectations of applying to university from age 13/14 to age 15/16 depending on expectations at age 13/14, by ethnicity

Exp. 13/14	Exp. 15/16	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
Very likely	Maintain	63.9	53.6	77.4	62.0	59.1	58.0	70.9
	Decrease	31.7	33.9	16.8	33.6	32.7	29.5	14.9
	don't know	4.4	12.5	5.8	4.4	8.2	12.5	14.2
	Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Fairly likely	Maintain	32.6	38.8	34.1	39.1	38.9	46.5	31.8
	Decrease	33.0	23.4	5.9	13.0	11.3	10.8	4.0
	Increase	27.6	21.7	52.3	37.5	39.3	25.3	47.3
	don't know	6.8	16.1	7.7	10.4	10.5	17.4	16.9
	Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Not very likely	Maintain	30.7	28.1	11.0	6.8	23.0	24.3	13.7
	Decrease	33.0	32.1	22.7	19.2	15.9	14.0	10.0
	Increase	27.1	25.0	45.9	57.2	54.2	44.8	56.2
	don't know	9.2	14.8	20.4	16.8	6.9	16.9	20.1
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Not likely at all	Maintain	57.2	38.7	26.8	22.8	13.5	30.8	0.0
	Increase	29.6	39.3	55.0	58.6	67.0	46.2	37.9
	don't know	13.2	22.0	18.2	18.6	19.5	23.0	62.1
	Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
N		7168	284	775	620	484	363	330

N=10430

Table 5.4. Ethnicity coefficients of multinomial logistic regressions using the rescaling method of Karlson, Holm and Breen
Outcome variable: change in preferences for post-compulsory education from age 13/14 to age 15/16

	Lowering vs. maintaining preferences						Rising vs. maintaining preferences					
	(1a)		(2a)		(3a)		(1b)		(2b)		(3b)	
	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)
Mix.												
Total effect	0.183	(0.196)	0.121	(0.201)	0.00296	(0.207)	0.131	(0.184)	0.145	(0.236)	0.0534	(0.252)
Direct effect	0.314	(0.196)	0.262	(0.201)	0.138	(0.207)	0.302	(0.184)	0.0781	(0.236)	-0.00209	(0.251)
Indirect effect	-0.13	(0.0827)	-0.141	(0.0992)	-0.135	(0.0913)	-0.170*	(0.0673)	0.067	(0.0421)	0.0554	(0.0378)
Indian												
Total effect	-0.836***	(0.156)	-0.921***	(0.159)	-0.911***	(0.165)	-0.576***	(0.134)	0.970***	(0.273)	0.980***	(0.282)
Direct effect	-0.370*	(0.156)	-0.396*	(0.159)	-0.461**	(0.165)	-0.161	(0.135)	0.758**	(0.276)	0.803**	(0.286)
Indirect effect	-0.466***	(0.0875)	-0.524***	(0.103)	-0.449***	(0.0950)	-0.415***	(0.0726)	0.211***	(0.0514)	0.177***	(0.0491)
Pak.												
Total effect	-0.277*	(0.136)	-0.367**	(0.138)	-0.503**	(0.153)	-0.226+	(0.136)	0.392*	(0.196)	0.485*	(0.197)
Direct effect	0.0245	(0.139)	-0.0359	(0.140)	-0.118	(0.156)	0.0814	(0.140)	0.228	(0.198)	0.31	(0.199)
Indirect effect	-0.301***	(0.0854)	-0.331**	(0.101)	-0.385***	(0.0943)	-0.308***	(0.0701)	0.164***	(0.0470)	0.174***	(0.0474)
Bangl.												
Total effect	-0.274+	(0.150)	-0.382*	(0.154)	-0.537**	(0.190)	0.175	(0.167)	0.612**	(0.224)	0.638*	(0.250)
Direct effect	0.0646	(0.154)	-0.00881	(0.157)	-0.0882	(0.193)	0.492**	(0.169)	0.406+	(0.229)	0.424+	(0.254)
Indirect effect	-0.339***	(0.0862)	-0.373***	(0.101)	-0.448***	(0.0954)	-0.317***	(0.0710)	0.207***	(0.0505)	0.214***	(0.0518)
Bl. Car.												
Total effect	-0.231	(0.224)	-0.316	(0.235)	-0.315	(0.251)	0.0451	(0.166)	0.00185	(0.204)	-0.194	(0.219)
Direct effect	-0.0477	(0.225)	-0.11	(0.236)	-0.189	(0.252)	0.276+	(0.168)	-0.125	(0.206)	-0.273	(0.220)
Indirect effect	-0.183*	(0.0840)	-0.206*	(0.0999)	-0.125	(0.0919)	-0.231***	(0.0685)	0.127**	(0.0452)	0.0791*	(0.0400)
Bl. Afr.												
Total effect	-0.631**	(0.219)	-0.725**	(0.221)	-0.536*	(0.266)	-0.286+	(0.162)	0.686*	(0.288)	0.341	(0.332)
Direct effect	-0.0666	(0.220)	-0.108	(0.222)	-0.166	(0.267)	0.245	(0.168)	0.425	(0.294)	0.194	(0.334)
Indirect effect	-0.564***	(0.0906)	-0.618***	(0.105)	-0.370***	(0.0940)	-0.530***	(0.0762)	0.261***	(0.0606)	0.147**	(0.0482)
N	**10361**		**10361**		**10361**		**10361**		**10361**		**10361**	

Control variables: gender, immigrant generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London.
(1a) (1b) Explanatory variables: parental expectations and progress in English and Maths from KS3 to KS4 (in VAS). No controls
(2a) Explanatory variables: parental expectations and progress in English and Maths from KS3 to KS4 (in VAS). Control variable: preference for leaving FTE at age 13/14 (floor effect)
(3a) Explanatory variables: parental expectations and progress in English and Maths from KS3 to KS4 (in VAS). Control variables: preference for leaving FTE at age 13/14 and background factors
(2b) Explanatory variables: parental expectations and progress in English and Maths from KS3 to KS4 (in VAS). Control variable: preference for Sixth Form at age 13/14 (ceiling effect)
(3b) Explanatory variables: parental expectations and progress in English and Maths from KS3 to KS4 (in VAS). Control variables: preference for Sixth Form at age 13/14 and background factors

Table 5.4a. Confounding ratios and percentages of models 3a and 3b of Table 5.4.

Eth.	Explanatory variables	(3a) Lowering vs maintaining preferences for post-compulsory education		(3b) Increasing vs maintaining preferences for post-compulsory education	
		Contribution to confounding %	Confounding %	Contribution to confounding %	Confounding %
Mix.	Average progress in English & Maths from KS3 to KS4	7.0	-56.1	9.3	6.4
	Very likely to apply (ref: not very/at all likely)	83.6	-670.9	87.5	59.8
	Fairly likely to apply (ref: not very/at all likely)	11.9	-95.4	18.1	12.4
	Don't know if will apply (ref. not very/at all likely)	-2.4	19.5	-14.9	-10.2
		100	-802.9	100	68.4
Indian	Average progress in English & Maths from KS3 to KS4	32.3	15.8	35.0	6.3
	Very likely to apply (ref: not very/at all likely)	73.8	36.1	71.4	12.8
	Fairly likely to apply (ref: not very/at all likely)	-6.2	-3	-7.5	-1.4
	Don't know if will apply (ref. not very/at all likely)	0.0	0	1.1	0.2
		100	48.9	100	17.9
Pak.	Average progress in English & Maths from KS3 to KS4	29.0	22.1	28.8	10.4
	Very likely to apply (ref: not very/at all likely)	67.0	51.1	59.2	21.5
	Fairly likely to apply (ref: not very/at all likely)	3.0	2.3	5.7	2.1
	Don't know if will apply (ref. not very/at all likely)	1.0	0.7	6.4	2.3
		100	76.2	100	36.3
Bangl.	Average progress in English & Maths from KS3 to KS4	37.4	32.5	35.7	12.8
	Very likely to apply (ref: not very/at all likely)	62.9	54.7	55.2	19.8
	Fairly likely to apply (ref: not very/at all likely)	-1.7	-1.5	0.6	0.2
	Don't know if will apply (ref. not very/at all likely)	1.4	1.3	8.5	3
		100	87	100	35.8
Bl. Car.	Average progress in English & Maths from KS3 to KS4	-7.8	-4.2	-1.8	0.8
	Very likely to apply (ref: not very/at all likely)	63.2	34.1	51.3	-21.6
	Fairly likely to apply (ref: not very/at all likely)	42.4	22.9	40.7	-17.1
	Don't know if will apply (ref. not very/at all likely)	2.2	1.2	9.8	-4.1
		100	54	100	-42
Bl. Afr.	Average progress in English & Maths from KS3 to KS4	25.3	16.5	28.5	12.8
	Very likely to apply (ref: not very/at all likely)	91.3	59.5	93.5	42
	Fairly likely to apply (ref: not very/at all likely)	-16.0	-10.4	-19.5	-8.8
	Don't know if will apply (ref. not very/at all likely)	-0.5	-0.3	-2.5	-1.1
		100	65.3	100	44.9

Table 5.5. Evolution of the expectations of applying to university from age 15/16 to age 17/18, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
From age 15/16 to 16/17							
No change[a]	55.8	52.2	71.0	59.5	57.3	53.6	74.0
Increase	19.0	18.3	14.2	19.7	17.3	24.1	10.3
Decrease	20.5	21.0	11.1	15.8	17.1	17.1	10.5
Don't know	4.8	8.5	3.7	5.0	8.2	5.2	5.2
Total	100	100	100	100	100	100	100
From age 15/16 to 17/18							
Already applied at 17/18:							
Very likely at 15/16	22.6	16.0	48.4	27.6	26.0	26.9	40.5
Fairly likely at 15/16	9.5	9.3	12.6	11.3	11.3	10.4	8.1
Not very/not at all likely at 15/16	2.9	3.2	0.9	1.2	2.2	0.5	0.9
Have not applied yet at 17/18:							
No change[b]	27.7	26.3	18.1	22.4	25.9	28.9	32.7
Increase	11.3	15.8	5.4	12.7	11.9	13.4	7.8
Decrease	21.8	24.2	11.7	19.5	14.2	15.3	7.8
Don't know	4.3	5.2	2.9	5.3	8.5	4.5	2.1
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**6658**	**241**	**712**	**544**	**411**	**293**	**241**

N=9458

[a] Among those that do not change their expectations, 46% of White British, 47% of Mix. (Bl & Wh), 83% of Indians, 66 % of Pakistanis, 60% of Bangladeshis, 57% of Black Caribbeans, and 87% of Black Africans maintain that they are very likely to apply to university

[b] Among those that do not change their expectations, 14% of White British, 33% of Mix. (Bl & Wh), 59% of Indians, 49 % of Pakistanis, 33% of Bangladeshis, 34% of Black Caribbeans, and 78% of Black Africans maintain that they are very likely to apply to university

Table 5.6. Distribution of students in terms of the mismatch between their expectations of applying to university at age 15/16 and their achievement at GCSE examinations, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
Expectations higher than attainment	14.6	27.0	29.5	44.8	42.6	48.0	48.2
Expectations lower than attainment	8.1	4.0	1.6	0.7	1.7	1.6	0.6
No mismatch (high expectations & high attainment)	44.8	37.4	61.4	40.3	40.2	32.4	46.9
No mismatch (low expectations & low attainment)	32.5	31.7	7.6	14.2	15.4	18.0	4.3
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**6658**	**241**	**712**	**544**	**411**	**293**	**241**

N=9458

Table 5.7. Expectations of applying to university at age 17/18 depending on the consistency between expectations and attainment at age 15/16, by ethnicity

		Expectations at age 17/18			
	Mismatch between expectations at and attainment at age 15/16	**Very/fairly likely to apply (%)**	**Not very/at all likely to apply/don't know (%)**	**Already applied (%)**	**Total (%)**
Wh. Brit.	Mismatch (expectations > attainment)	34.8	43.8	21.5	**100**
	Mismatch (expectations < attainment)	15.7	61.0	23.3	**100**
	No mismatch	15.4	46.9	37.7	**100**
Mix.	Mismatch (expectations > attainment)	60.7	24.8	14.6	**100**
	Mismatch (expectations < attainment)	42.3	46.3	11.4	**100**
	No mismatch	21.3	44.3	34.4	**100**
Indian	Mismatch (expectations > attainment)	43.4	15.1	41.5	**100**
	Mismatch (expectations < attainment)	0.0	38.0	62.0	**100**
	No mismatch	14.3	11.7	74.1	**100**
Pak.	Mismatch (expectations > attainment)	51.6	29.9	18.5	**100**
	Mismatch (expectations < attainment)	20.0	21.5	58.5	**100**
	No mismatch	23.0	19.4	57.6	**100**
Bangl.	Mismatch (expectations > attainment)	56.9	20.8	22.3	**100**
	Mismatch (expectations < attainment)	11.7	54.2	34.1	**100**
	No mismatch	29.8	16.4	53.9	**100**
Bl. Car.	Mismatch (expectations > attainment)	61.4	12.3	26.3	**100**
	Mismatch (expectations < attainment)	18.0	65.7	16.3	**100**
	No mismatch	23.8	27.4	48.7	**100**
Bl. Afr.	Mismatch (expectations > attainment)	68.1	5.5	26.4	**100**
	Mismatch (expectations < attainment)	0.0	44.6	55.4	**100**
	No mismatch	20.1	5.5	74.4	**100**

N=9458

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Table 5.8. Evolution of 'parents' expectations for their children applying to university from age 13/14 to age 16/17, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
No change	46.3	47.8	61.6	48.2	44.7	46.0	69.4
Among those: % saying very likely to apply	*45.4*	*51.6*	*84.1*	*78.3*	*77.1*	*62.1*	*88.0*
Increase	18.5	18.0	15.0	14.3	14.4	23.4	12.7
Decrease	27.4	25.8	13.1	21.9	22.5	21.4	12.9
Don't know	7.8	8.3	10.4	15.6	18.4	9.2	5.1
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**6658**	**241**	**712**	**544**	**411**	**293**	**241**

N=9458

Table 5.9. Evolution of 'students' expectations of applying to university from age 13/14 to age 16/17, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
No change	41.7	39.3	58.8	51.5	43.1	44.7	61.4
Among those: % saying very likely to apply	*47.6*	*54.3*	*82.3*	*65.6*	*59.0*	*60.1*	*86.2*
Increase	21.1	22.2	23.2	22.6	25.2	28.8	22.0
Decrease	31.3	32.7	14.0	18.3	20.9	21.8	10.9
Don't know	6.0	5.8	3.9	7.6	10.9	4.7	5.8
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**6658**	**241**	**712**	**544**	**411**	**293**	**241**

N=9458

Table 5.10. Level of agreement between 'parents' and 'students' expectations of applying to university at age 16/17, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
Expectations of parent match expectations of student	68.1	58.1	73.6	64.2	61.7	60.3	71.8
Among those: % with very high expectations	*41.5*	*48.7*	*81.3*	*65.4*	*62.6*	*61.2*	*86.2*
Expectations of parent higher than expectations of student	8.6	15.9	9.3	11.8	16.1	17.9	9.5
Expectations of parent lower than expectations of student	19.1	18.1	13.9	15.7	13.7	15.9	12.7
Parent and/or student don't know	4.2	7.9	3.2	8.3	8.5	6.0	6.1
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**6658**	**241**	**712**	**544**	**411**	**293**	**241**

N=9458

Table 5.11. Ethnicity coefficients of multinomial logistic regressions using the rescaling method of Karlson, Holm and Breen
Outcome variable: change in preferences for post-compulsory education from age 15/16 to age 17/18

	Maintaining vs. decreasing/increasing expectations				Increasing vs. maintaining expectations				Decreasing vs. maintaining expectations			
	(1a)		(2a)		(1b)		(2b)		(1c)		(2c)	
	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)
Mixed Total effect	-0.383*	(0.177)	-0.329+	(0.179)	0.561*	(0.284)	0.667*	(0.288)	0.328	(0.247)	0.183	(0.245)
Direct effect	-0.372*	(0.177)	-0.345+	(0.179)	0.533+	(0.284)	0.544+	(0.288)	0.282	(0.246)	0.243	(0.244)
Indirect effect	-0.0105	(0.118)	0.0156	(0.116)	0.0278	(0.152)	0.123	(0.149)	0.0454	(0.219)	-0.0608	(0.216)
Indian Total effect	0.788***	(0.124)	0.735***	(0.127)	0.470**	(0.160)	0.704***	(0.166)	-1.203***	(0.191)	-1.302***	(0.201)
Direct effect	0.415***	(0.124)	0.382**	(0.127)	0.166	(0.162)	0.301+	(0.168)	-0.707***	(0.192)	-0.716***	(0.201)
Indirect effect	0.373**	(0.120)	0.352**	(0.117)	0.304*	(0.153)	0.403**	(0.150)	-0.495*	(0.219)	-0.586**	(0.217)
Pakistani Total effect	-0.0449	(0.114)	0.0333	(0.127)	0.438**	(0.155)	0.838***	(0.174)	-0.0881	(0.164)	-0.394*	(0.177)
Direct effect	-0.175	(0.116)	-0.187	(0.128)	0.228	(0.158)	0.423*	(0.177)	-0.0227	(0.164)	-0.0608	(0.177)
Indirect effect	0.13	(0.120)	0.221+	(0.117)	0.211	(0.153)	0.414**	(0.150)	-0.0654	(0.220)	-0.334	(0.217)
Bangladeshi Total effect	0.0641	(0.126)	0.0951	(0.153)	0.165	(0.243)	0.719**	(0.279)	-0.477*	(0.212)	-0.821***	(0.240)
Direct effect	-0.0288	(0.128)	-0.118	(0.155)	-0.146	(0.245)	0.127	(0.281)	-0.414+	(0.214)	-0.423+	(0.241)
Indirect effect	0.093	(0.120)	0.213+	(0.118)	0.311*	(0.154)	0.591***	(0.151)	-0.0633	(0.220)	-0.397+	(0.217)
Bl. Caribbean Total effect	0.300+	(0.177)	0.272	(0.189)	-0.182	(0.258)	-0.222	(0.277)	-0.561+	(0.299)	-0.615*	(0.311)
Direct effect	0.21	(0.176)	0.229	(0.188)	-0.418	(0.259)	-0.481+	(0.279)	-0.516+	(0.297)	-0.529+	(0.309)
Indirect effect	0.0896	(0.120)	0.043	(0.117)	0.236	(0.154)	0.259+	(0.151)	-0.0454	(0.220)	-0.0856	(0.217)
Bl. African Total effect	1.105***	(0.196)	0.992***	(0.224)	0.391	(0.322)	0.54	(0.386)	-1.676***	(0.348)	-1.728***	(0.407)
Direct effect	0.691***	(0.200)	0.692**	(0.226)	0.122	(0.325)	0.239	(0.387)	-1.144**	(0.351)	-1.210**	(0.409)
Indirect effect	0.414***	(0.122)	0.299*	(0.118)	0.269+	(0.155)	0.301*	(0.151)	-0.532*	(0.221)	-0.518*	(0.218)
N	9458		9458		9458		9458		9458		9458	

Control variables: gender, immigrant generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London.
(1a) Explanatory variables: parental expectations and 5A*-C GCSE including English & Maths (Yes=1/ No=0). No controls
(2a) Explanatory variables: parental expectations and 5A*-C GCSE including English & Maths (Yes=1/ No=0). Controls included
(1b) Explanatory variables: parental expectations and 5A*-C GCSE including English & Maths (Yes=1/ No=0). Control: very high expectations at age 15/16 (ceiling effect)
(2b) Explanatory variables: parental expectations and 5A*-C GCSE including English & Maths (Yes=1/ No=0). Controls: very high expectations at age 15/16 and background factors
(1c) Explanatory variables: parental expectations and 5A*-C GCSE including English & Maths (Yes=1/ No=0). Control: very low expectations at age 15/16 (floor effect)
(2c) Explanatory variables: parental expectations and 5A*-C GCSE including English & Maths (Yes=1/ No=0). Controls: very low expectations at age 15/16 and background factors

Table 5.11a. Confounding ratios and percentages of models 2a, 2b and 2c of Table 5.11.

	Explanatory variables	(2a) Maintaining vs. decreasing/increasing expectations		(2b) Increasing vs. maintaining expectations		(2c) Decreasing vs. maintaining expectations	
		Contribution to confounding %	*Confounding %*	*Contribution to confounding %*	*Confounding %*	*Contribution to confounding %*	*Confounding %*
Mix.	5 A*-C GCSE including English & Maths	-28.8	1.4	-42	-7.8	-70.6	23.5
	Very likely to apply (ref: not very/at all likely)	372.7	-17.6	42.2	7.8	55.9	-18.6
	Fairly likely to apply (ref: not very/at all likely)	-158.5	7.5	80.9	14.9	101.4	-33.7
	Don't know if will apply (ref. not very/at all likely)	-85.5	4	18.9	3.5	13.3	-4.4
		100	-4.7	100	18.4	100.0	-33.3
Indian	5 A*-C GCSE including English & Maths	2.7	1.3	0.8	0.4	-0.5	-0.2
	Very likely to apply (ref: not very/at all likely)	98.9	47.4	88.4	50.6	107.3	48.3
	Fairly likely to apply (ref: not very/at all likely)	-2.2	-1.1	10	5.7	-6.3	-2.8
	Don't know if will apply (ref. not very/at all likely)	0.6	0.3	0.9	0.5	-0.5	-0.2
		100	47.9	100	57.2	100.0	45.0
Pakistani	5 A*-C GCSE including English & Maths	1.1	7.4	-6.8	-3.4	-13.0	-11.0
	Very likely to apply (ref: not very/at all likely)	119.4	790.8	73.8	36.5	106.2	89.9
	Fairly likely to apply (ref: not very/at all likely)	-10.1	-66.9	22.8	11.3	2.8	2.3
	Don't know if will apply (ref. not very/at all likely)	-10.4	-68.7	10.2	5.1	4.0	3.4
		100	662.6	100	49.5	100.0	84.6
Bangladeshi	5 A*-C GCSE including English & Maths	4.1	9.2	4.4	3.6	-4.3	-2.1
	Very likely to apply (ref: not very/at all likely)	128.5	288.1	56.3	46.3	80.7	39.1
	Fairly likely to apply (ref: not very/at all likely)	-21.8	-48.8	32.1	26.4	20.2	9.8
	Don't know if will apply (ref. not very/at all likely)	-10.9	-24.4	7.3	6	3.4	1.6
		100	224.1	100	82.3	100.0	48.4
Bl. Caribbean	5 A*-C GCSE including English & Maths	-23.1	-3.7	-38.3	44.8	-106.8	-14.9
	Very likely to apply (ref: not very/at all likely)	258.2	40.8	56.9	-66.5	60.6	8.4
	Fairly likely to apply (ref: not very/at all likely)	-112.4	-17.7	74.6	-87.2	139.9	19.5
	Don't know if will apply (ref. not very/at all likely)	-22.7	-3.6	6.8	-8	6.3	0.9
		100	15.8	100	-116.9	100.0	13.9
Bl. African	5 A*-C GCSE including English & Maths	-0.2	-0.1	-26.9	-15	-10.3	-3.1
	Very likely to apply (ref: not very/at all likely)	108.2	32.7	101.7	56.8	114.3	34.2
	Fairly likely to apply (ref: not very/at all likely)	-2.8	-0.9	14.3	8	-5.6	-1.7
	Don't know if will apply (ref. not very/at all likely)	-5.2	-1.6	10.9	6.1	1.7	0.5
		100	30.1	100	55.9	100.0	30.0

APPENDIX

Table A5.1. Correlations between error terms from binary logistic regressions of likelihood of applying to university at age 13/14, 14/15, 15/16 and 16/17

		$e_{exp\ 13/14}$	$e_{exp\ 14/15}$	$e_{exp\ 15/16}$
White British	$e_{exp\ 13/14}$	1.0000		
	$e_{exp\ 14/15}$	0.2701*	1.0000	
	$e_{exp\ 15/16}$	0.1579*	0.3476*	1.0000
Mixed	$e_{exp\ 13/14}$	1.0000		
	$e_{exp\ 14/15}$	0.2968*	1.0000	
	$e_{exp\ 15/16}$	0.1961*	0.3717*	1.0000
Indian	$e_{exp\ 13/14}$	1.0000		
	$e_{exp\ 14/15}$	0.4011*	1.0000	
	$e_{exp\ 15/16}$	0.2132*	0.3571*	1.0000
Pakistani	$e_{exp\ 13/14}$	1.0000		
	$e_{exp\ 14/15}$	0.2664*	1.0000	
	$e_{exp\ 15/16}$	0.0764	0.2955*	1.0000
Bangladeshi	$e_{exp\ 13/14}$	1.0000		
	$e_{exp\ 14/15}$	0.2453*	1.0000	
	$e_{exp\ 15/16}$	0.1753*	0.3200*	1.0000
Black Caribbean	$e_{exp\ 13/14}$	1.0000		
	$e_{exp\ 14/15}$	0.2104*	1.0000	
	$e_{exp\ 15/16}$	0.1197*	0.2509*	1.0000
Black African	$e_{exp\ 13/14}$	1.0000		
	$e_{exp\ 14/15}$	0.2479*	1.0000	
	$e_{exp\ 15/16}$	0.0168	0.2313*	1.0000

N=10744

Models with the following explanatory variables: place of birth, gender, family structure, teenage mother, highest level of qualifications and highest SES in the household, London, parental expectations at wave 1 and 4, grades at KS3 and KS4.

The correlation structure of the residuals of the estimated expectations of going to university at age 13/14, 14/15 and 15/16 for each ethnic group is presented in table A6.1. The objective of this analysis is to examine whether expectations are serially correlated even when controlling for relevant factors that are known to influence them, particularly parental expectations and past attainment. If that is the case, it could be evidence that other factors that are not included in the model determine the formation of educational expectations, or it could also indicate the existence of an underlying dynamic causal process

that links expectations across time (Morgan, 2005:85). In addition, a diverse correlation structure across ethnicities might reveal that the omitted variables do not have the same impact for all ethnicities. Each of the 21 logistic regressions have as the dependent variable students' expectations (1=very/fairly high expectations, 0=otherwise), and as explanatory variables the average score at KS3 examinations, the parents' university expectations for students at age 13/14 and all background controls. The results suggest significant differences across ethnicities in the extent to which observable and non-observable factors are able to account for changes of expectations varies across ethnicities. In fact, for all groups except Indians and Black Africans, the correlations between expectations at age 14/15 and 15/16 are higher than those between age 13/14 and 14/15. An explanation for this difference could be that for White British (and for all minorities except Indians and Black Africans) the relevance that the omitted variables have in their expectations increase along KS4. It is quite likely that a worsening of the academic performance during KS4 is one of these omitted factors. However, while this explanation would apply to the White British, Mixed and Black Caribbean groups, it does not match for Pakistanis and Bangladeshis. Another important aspect is that the correlation of residuals between ages 13/14 and 15/16 is not significant for Bangladeshis and Black Africans. Therefore, the omitted factors affecting their expectations at age 13/14 and 15/16 might be entirely different.

Table A5.2. Ethnicity coefficients of multinomial logistic regressions using the rescaling method of Karlson, Holm and Breen
Outcome variable: decreasing and increasing expectations of applying to university from age 13/14 to age 15/16

	Lowering vs. maintaining university expectations						Rising vs. maintaining university expectations					
	(1a)		(2a)		(3a)		(1b)		(2b)		(3b)	
	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)
Mixed Total effect	-0.158	(0.191)	-0.251	(0.208)	-0.377+	(0.202)	-0.24	(0.179)	-0.0415	(0.206)	-0.105	(0.211)
Direct effect	-0.0588	(0.192)	-0.109	(0.208)	-0.245	(0.203)	-0.112	(0.180)	-0.0872	(0.207)	-0.156	(0.212)
Indirect effect	-0.0996	(0.0752)	-0.142	(0.0976)	-0.132	(0.0906)	-0.128*	(0.0622)	0.0457	(0.0515)	0.0509	(0.0498)
Indian Total effect	-0.998***	(0.161)	-1.171***	(0.164)	-1.25***	(0.170)	-0.250*	(0.119)	0.670***	(0.153)	0.696***	(0.162)
Direct effect	-0.593***	(0.163)	-0.629***	(0.165)	-0.79***	(0.171)	-0.00038	(0.120)	0.454**	(0.154)	0.494**	(0.162)
Indirect effect	-0.405***	(0.0791)	-0.542***	(0.101)	-0.46***	(0.0940)	-0.25***	(0.0678)	0.216***	(0.0555)	0.202***	(0.0546)
Pak. Total effect	-0.298*	(0.116)	-0.440***	(0.119)	-0.63***	(0.127)	0.0346	(0.119)	0.483***	(0.137)	0.556***	(0.149)
Direct effect	-0.0465	(0.118)	-0.0734	(0.121)	-0.221+	(0.129)	0.214+	(0.121)	0.328*	(0.138)	0.370*	(0.151)
Indirect effect	-0.252**	(0.0773)	-0.366***	(0.0990)	-0.41***	(0.0933)	-0.179**	(0.0655)	0.155**	(0.0545)	0.186***	(0.0548)
Bangl. Total effect	-0.370*	(0.172)	-0.518**	(0.174)	-0.831***	(0.193)	0.310*	(0.123)	0.686***	(0.163)	0.679***	(0.199)
Direct effect	-0.0762	(0.173)	-0.094	(0.175)	-0.358+	(0.193)	0.487***	(0.126)	0.475**	(0.166)	0.434*	(0.202)
Indirect effect	-0.294***	(0.0779)	-0.423***	(0.0997)	-0.473***	(0.0943)	-0.177**	(0.0665)	0.211***	(0.0567)	0.245***	(0.0578)
Bl. Car. Total effect	-0.606**	(0.188)	-0.757***	(0.197)	-0.832***	(0.213)	-0.181	(0.176)	0.146	(0.210)	-0.0103	(0.230)
Direct effect	-0.471*	(0.189)	-0.543**	(0.198)	-0.705***	(0.213)	-0.0485	(0.177)	0.0738	(0.211)	-0.05	(0.230)
Indirect effect	-0.135+	(0.0763)	-0.214*	(0.0981)	-0.127	(0.0909)	-0.133*	(0.0638)	0.0723	(0.0529)	0.0397	(0.0509)
Bl. Afr. Total effect	-1.315***	(0.191)	-1.496***	(0.192)	-1.505***	(0.209)	-0.361*	(0.180)	0.680**	(0.244)	0.433	(0.273)
Direct effect	-0.822***	(0.191)	-0.847***	(0.192)	-1.117***	(0.208)	0.0041	(0.181)	0.414+	(0.247)	0.255	(0.274)
Indirect effect	-0.492***	(0.0820)	-0.648***	(0.103)	-0.388***	(0.093)	-0.365***	(0.0711)	0.266***	(0.0585)	0.178***	(0.0538)
N	**10361**		**10361**		**10361**		**10361**		**10361**		**10361**	

(1a) (1b) Explanatory variable: parental expectations and progress in English and Maths from KS3 to KS4 (in VAS). No controls
(2a) Explanatory variable: parental expectations and progress in English and Maths from KS3 to KS4 (in VAS). Control variable: not likely at all to apply to university
(3a) Explanatory variables: parental expectations and progress in English and Maths from KS3 to KS4 (in VAS). Control variables: not likely at all to apply to university and background factors
(2b) Explanatory variable: parental expectations and progress in English and Maths from KS3 to KS4 (in VAS). Control variable: very likely to apply to university
(3b) Explanatory variables: parental expectations and progress in English and Maths from KS3 to KS4 (in VAS). Control variables: very likely to apply to university and background factors

Table A5.2a Confounding ratios and percentages of models 3a and 3b of table A5.2

Ethnicities	Explanatory variables	(3a) Lowering vs. maintaining post-16 preferences		(3b) Rising vs. maintaining post-16 preferences	
		Contr. to confounding	*Confounding %*	*Contr. to confounding*	*Confounding %*
Mixed	Progress KS3-KS4 (va scores)	5.8	-264.3	7.9	8.3
	Very likely to apply (ref: not very/at all likely)	84.1	-3835.0	87.4	90.8
	Fairly likely to apply (ref: not very/at all likely)	12.4	-564.8	18.4	19.1
	Don't know if will apply (ref. not very/at all likely)	-2.3	102.6	-13.8	-14.3
		100.0	-4561.38	100.0	103.91
Indian	Progress KS3-KS4 (va scores)	32.6	16.1	34.3	6.2
	Very likely to apply (ref: not very/at all likely)	73.3	36.2	71.6	12.9
	Fairly likely to apply (ref: not very/at all likely)	-6.0	-3.0	-7.0	-1.3
	Don't know if will apply (ref. not very/at all likely)	0.0	0.0	1.1	0.2
		100.0	49.34	100.0	18.03
Pakistani	Progress KS3-KS4 (va scores)	29.5	22.6	28.4	10.2
	Very likely to apply (ref: not very/at all likely)	66.9	51.2	59.8	21.5
	Fairly likely to apply (ref: not very/at all likely)	2.7	2.0	5.4	1.9
	Don't know if will apply (ref. not very/at all likely)	0.9	0.7	6.4	2.3
		100.0	76.55	100.0	35.98
Bangladeshi	Progress KS3-KS4 (va scores)	38.1	31.9	35.4	11.9
	Very likely to apply (ref: not very/at all likely)	61.9	51.7	55.0	18.5
	Fairly likely to apply (ref: not very/at all likely)	-1.4	-1.2	1.1	0.4
	Don't know if will apply (ref. not very/at all likely)	1.4	1.2	8.5	2.9
		100.0	83.56	100.0	33.55
Bl. Caribbean	Progress KS3-KS4 (va scores)	-11.8	-4.7	-3.8	1.5
	Very likely to apply (ref: not very/at all likely)	60.2	24.0	48.9	-19.9
	Fairly likely to apply (ref: not very/at all likely)	49.0	19.5	43.9	-17.9
	Don't know if will apply (ref. not very/at all likely)	2.5	1.0	10.9	-4.5
		100.0	39.82	100.0	-40.73
Bl. African	Progress KS3-KS4 (va scores)	25.8	17.8	28.1	12.1
	Very likely to apply (ref: not very/at all likely)	90.8	62.6	93.1	40.2
	Fairly likely to apply (ref: not very/at all likely)	-16.2	-11.2	-18.8	-8.1
	Don't know if will apply (ref. not very/at all likely)	-0.5	-0.3	-2.4	-1.0
		100.0	68.98	100.0	43.16

N=10361

Table A5.3. Evolution of 'parents and students' agreement in the expectations of applying to university, from age 13/14 to age 16/17, in the White British group (in percentages)

	Likelihood of applying to university at 16/17							
	AGREEMENT			**DISAGREEMENT**				
Likelihood of applying to university at 13/14	Student & parent very likely	Student & parent fairly likely	Student & parent not very likely	Student & parent not at all likely	Parents' expectations > students'	Parents' expectations < students'	Either one or the other doesn't know	**TOTAL**
AGREEMENT								
Parents & students very likely	72.2	5.2	2.9	2.1	5.3	10.3	2.0	100
Parents & students fairly likely	27.5	14.3	10.4	10.3	10.4	22.6	4.5	100
Parents & students not very likely	5.3	9.3	13.9	30.5	10.8	25.5	4.8	100
Parents & students not at all likely	1.1	2.3	6.8	65.0	8.4	14.3	2.2	100
DISAGREEMENT								
Parents' expectations > Students'	30.0	9.6	8.5	21.3	11.6	14.8	4.3	100
Parents' expectations < Students'	15.6	8.0	10.1	29.6	6.6	26.0	4.0	100
Either one or the other doesn't know	10.8	8.6	10.1	29.6	10.5	20.5	10.0	100

N=10361

CHAPTER 6

ETHNIC DIFFERENTIALS IN EDUCATIONAL TRANSITIONS AFTER AGE 16

6.1. Introduction

In this chapter, I analyse the educational trajectories of ethnic minority students after they finish compulsory education at the age of 15/16, taking the White British majority as the reference group. At that age, students make the first transition of their educational career, by either choosing to continue in academic-oriented full-time education (FTE) at sixth-form colleges or schools, to continue in vocational FTE, or to leave FTE altogether. At the age of 17/18 or older, students that had chosen to continue their studies might, on the one hand, start a university degree or another diploma in a higher education institution or, on the other hand, leave FTE and enter the labour market.

As expected, the choice that students make in their first transition conditions their probability of making the second transition. However, the English system is, in this respect, considerably more flexible than other educational systems in continental Europe, allowing students to access university education through several pathways (Shavit & Mueller, 2000). But, despite this open access to tertiary education, the higher education system in England is highly stratified, in contrast to other European countries. Even though the formal separation between universities on the one hand, and polytechnics and colleges of higher education on the other, was formally abolished in 1992, most of the so called 'post-1992 universities' still hold a poor reputation among students and usually appear in the bottom of university rankings (e.g. the Guardian university ranking). Therefore, not only is it important to

examine whether there are systematic differences across ethnicities in levels of enrolment to higher education institutions, but also to examine the eventual variations in prestige of the institutions they access.

As has been explained in previous chapters, ethnic groups differ greatly in the progress they make during the last two years of compulsory education and in their attainment in GCSE examinations at age 15/16, and in their reported educational expectations for their future. Indians obtain, on average, better results than White British students at GCSE examinations; Black Africans obtain slightly lower results, while the other minorities perform, on average, significantly worse than the White majority[93] (see table 6.1). However, all ethnic minority students make significantly stronger academic progress compared to the White British group during the last two years of compulsory education, particularly the three South Asian and Black African minorities. In addition, with respect to their intentions of applying to university in the future, all ethnic minority students consistently report significantly more ambitious expectations than the White British during adolescence (from age 13/14 to 19/20), particularly Black Africans and Indians. Therefore, it is important to examine whether ethnic minority students manage to realise their initially high university expectations at the same rate as White British students and, in that case, to identify the trajectories they follow until they are finally admitted.

[table 6.1. about here]

Using survey data from the LSYPE, this chapter shows that ethnic minority students are as able as White British students to realise their initial expectations of going to university. This finding contrasts with

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[93] These are absolute differences, that is, without controlling for any background factor. When relevant family demographic and socio-economic control variables are kept constant, Indians and Bangladeshis perform significantly better, Pakistani do not significantly differentiate from White British, and Mixed, Black Caribbean and Black African perform significantly worse (particularly Black Caribbean).

some of the empirical evidence coming from the American context, where scholars have consistently found lower correlations between initial educational expectations and future attainment among certain ethnicities like the African Americans (K. L. Alexander et al., 1994; Hanson, 1994; Mickelson, 1990). In contrast, this chapter confirms the findings highlighted by Erikson and Rudolphi (Erikson & Rudolphi, 2010), Jackson, Jonsson and Rudolphi (Jackson, Jonsson, & Rudolphi, 2012) and Jackson (Jackson, 2012), who find that most ethnic minorities in England and Sweden tend to be disadvantaged in their performance during compulsory education compared to the native group but, on the other hand, they partially compensate for this disadvantage with their higher continuation rates in education. In this regard, it seems that driven-choice educational systems such as those prevalent in England or Sweden help to reduce the ethnic inequalities in education, as ethnic minority students counterbalance their average poorer performance with their more ambitious educational choices after compulsory education. This hypothesis has also been supported by Buchmann and Dalton (Buchmann & Dalton, 2002), suggesting that in highly stratified systems like those of Germany or the Netherlands, the aspirations of students are constrained by the school, allowing less room for interpersonal influences (including those of parents) in the formation of these aspirations.

All ethnic minorities have higher continuation rates in the first transition than White British students, controlling for prior performance in GCSE examinations at the age of 15/16. On the other hand, they are also more likely to make the second transition to university than White British students, though some minority groups tend to make this transition at an older age.

Despite the higher propensity of ethnic minority students to make the transition to higher education compared to the White British majority, this differential is not reproduced when it comes to attendance to prestigious universities included in the Russell Group. In this regard, South Asian and Black African students do not differentiate from White British students in their probability of enrolment. In contrast, Mixed and Black Caribbean students are less likely to enrol in Russell

Group universities compared to the White majority. This result is particularly striking for the Indian minority, considering that they have significantly higher academic attainment and more ambitious expectations during secondary education than the White native group. Finally, regarding the field of study, the two Black minorities and the Mixed group are less likely than the White British to enrol in scientific degrees while the opposite tendency is observed for Pakistani students.

6.2. Primary and secondary effects of inequalities in education

In the past few years, European scholars have renewed their interest in the classical distinction between primary and secondary effects put forward by Boudon in his book *Education, Opportunity, and Social Inequality* (Boudon, 1974). This chapter pays attention to the so-called secondary effects of inequalities in education, which are the effects that the social background of students, such as their family socio-economic status or their ethnicity in this case, has on the choices they make during their educational career, controlling for their prior academic performance. Researchers have consistently found that students with similar academic performance but different family socio-economic background make different decisions at key transition points of their educational trajectory (Erikson et al., 2005). That is, the variations in choices that are not related to prior attainment are the secondary effects of the students' background. On the other hand, primary effects refer to the early differences in academic performance that relate to the students' background. To sum up, primary effects measure attainment, while secondary effects measure choice, conditional on attainment. Primary and secondary effects are usually studied in terms of family socio-economic inequalities, but a growing number of scholars are also paying attention to the primary and secondary effects of ethnicity (Jackson, 2012; Kilpi-Jakonen, 2011; Kristen, Reimer, & Kogan, 2008), that is, to the net [94] ethnic differentials in educational performance and choice. The causal

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[94] Net ethnic effect is the differential that remains after controlling for relevant socio-demographic and socio-economic background factors.

mechanisms behind the disadvantages of educational performance, particularly during the first stages of education, are more difficult to identify than those related to educational choices (secondary effects), and the contribution of the latter to the overall inequality is usually bigger (Nash, 2003).

In Chapter 4, I have paid attention to the primary effects of ethnicity, that is, to the ethnic differentials in academic progress. In this chapter, I focus on the secondary effects of ethnicity, that is, on how the choices that students make at two important transition points relate systematically to their ethnicity.

6.2.1. Calculation of the secondary effects of ethnicity

As suggested by Erikson and Jonsson (Erikson & Jonsson, 1996), the proportion of students from ethnicity i that decide to continue in education in a transition point can be modelled as

$$P_{ii} = \int f_i(x) g_i(x) dx$$

where $f_i(x)$ is the distribution of performance and $g_i(x)$ is the probability to continue in education at performance x. The performance is assumed to follow a normal distribution and the transition propensities follow a logistic curve (Erikson, 2007). If $g_i(x)$ is substituted by the corresponding function for ethnicity j –$g_j(x)$-, we get the counterfactual proportion, where the distribution of performance is assumed to be that of ethnicity i, but the transition propensities are those of ethnicity j:

$$P_{ij} = \int f_i(x) g_j(x) dx$$

This way, it is possible to estimate the primary and secondary effects of ethnicity on educational achievement. Therefore, the odds ratio for the propensities to continue in education of ethnicity i as compared to ethnicity j can be written as

$$Q_{ii.jj}=\frac{\dfrac{P_{ii}}{1-P_{ii}}}{\dfrac{P_{jj}}{1-P_{jj}}}$$

The synthesized odds of transition, when using performance characteristics of ethnicity j and choice characteristics of ethnicity i and vice versa, can be written as

$$Q_{ii.ji}=\frac{\dfrac{P_{ii}}{1-P_{ii}}}{\dfrac{P_{ji}}{1-P_{ji}}}$$

and

$$Q_{ii.ij}=\frac{\dfrac{P_{ii}}{1-P_{ii}}}{\dfrac{P_{ij}}{1-P_{ij}}}$$

Therefore, $Q_{ii.jj} = Q_{ij.jj}\, Q_{ii.ij}$ and $Q_{ii.jj} = Q_{ii.ji}\, Q_{ji.jj}$

If $L = \log Q$, $L_{ii.jj} = L_{ij.jj}\, L_{ii.ij}$ and $L_{ii.jj} = L_{ii.ji}\, L_{ji.jj}$, where the terms on the right-hand side refer to situations with different performance distributions but similar transition propensities (primary effects) and the second term to situations with similar performance distributions but different transition propensities (secondary effects), both effects are estimated as follows (Erikson, 2007):

$$Primary\ effects=\frac{L_{ij.jj}+L_{ii.ji}}{2}$$

$$Secondary\ effects=\frac{L_{ii.ij}+L_{ji.jj}}{2}$$

This way it is possible to identify the indirect effect of performance and the direct effect of individual preferences on the continuation decisions of students from different ethnicities.

6.3. Theoretical approaches to explain the secondary effects of ethnicity

Two main groups of theories have been developed to explain the differentials in continuation rates across students from various socio-economic backgrounds: the rational action and the cultural capital theories (van de Werfhorst & Hofstede, 2007). However, when the focus is on the ethnic and not on the social class differentials in continuation rates, additional explanations should be considered, as the mechanisms through which ethnicity might influence educational choices could be entirely different. Some scholars have pointed to the effects of (perceived) discrimination in the labour market (Jackson et al., 2012), which might act as an incentive for ethnic minority students to obtain higher qualifications to compensate for the expected ethnic penalty. In addition, the selectivity of the migration flow might also be relevant to account for different transition rates of ethnic minority groups with respect to the native population. The available empirical evidence has supported the positive selectivity of ethnic minority groups of immigrant origin, as they are selected samples of the population of their countries of origin in terms of education or ambition (Chiswick, 2000; Feliciano, 2005). Therefore, the positive selection of migration flows that have shaped English ethnic minorities could explain the higher propensity of ethnic minority students to continue in education compared to native students[95].

In the following two sections I review the theoretical approaches that have been put forward to account for the existence of the secondary effects of ethnicity in education, such as the relative risk aversion or the theory of anticipated discrimination.

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[95] The LSYPE does not include information about the place of birth or year of arrival of students' parents, meaning that it is not possible to build any selectivity measure.

6.3.1. Rational action approaches: the relative risk aversion (RRA) theory

The proponents of rational action theories explain students' choices in terms of their estimated probabilities of completing each of the alternatives and of the benefits and costs that they attribute to completing each of them. The Relative Risk Aversion (RRA) theory, proposed by Breen and Goldthorpe (Breen & Goldthorpe, 1997), is one of the most successful theories in the sociology of education that is based on rational action assumptions. The RRA explains the differences in school continuation decisions across students from different backgrounds (that is, in secondary effects) in terms of avoidance of downward mobility. That is, when individuals reach an educational level that allows them to reproduce the same socio-economic position of their parents, the costs of continuing in education outweigh their perceived utility. Similarly to Boudon's theory, Breen & Goldthorpe use the structural theory of aspirations of Keller and Zavalloni (Keller & Zavalloni, 1964) to sustain the claims of the RRA approach[96].

As pointed out by Stocké, primary effects work through differences in the success probability, while secondary effects are reflected in the perceived costs and returns to education (Stocké, 2007a). The subjective benefits associated with continuing in education would be shaped by the motivation to achieve the minimum level of education required to avoid downward mobility. In this regard, the social class of students' parents would be the reference point for their decisions and, according to RRA, students would not try to maximize their chances of

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[96] Keller and Zavalloni interpret the different levels of educational aspirations across social classes in relative and not in absolute terms. According to this perspective, the value that children place on education is based on where they start in the social structure. As a consequence, the diverse aspirations of students of different social backgrounds would not be explained in terms of differences in levels of cultural capital across families. In the words of Keller and Zavalloni "the 'relative distance' of a social class from a given goal […] determines the saliency of that goal for its members, and this saliency in turn constitutes an intervening variable between individual ambition and social achievement" (Keller & Zavalloni, 1964, p. 58).

upward mobility but only to minimize their risk of downward mobility. Some studies have found empirical evidence supporting the RRA (Breen & Yaish, 2006; Davies R., Heinese, & Holm, 2002; Jæger & Holm, 2012; Stocké, 2007b), although in most cases the lack of data has limited the scope of the analyses.

6.3.1.1. RRA theory and continuation decisions of ethnic minority students

So far, no study has tested all the propositions put forward by the RRA theory to explain the different transition rates between natives and immigrant minorities. This is, in most cases, related to the lack of information about parents' social class in the country of origin. But, since immigrants experience a process of downward mobility after their arrival, using their labour market position in the destination country might not be reliable. Moreover, the social class structure of Western societies might not be fully comparable to those existing in many of the countries where immigrant minorities come from (A. F. Heath et al., 2008). As a consequence, even when using the labour market position or level of education in the country of origin, the measures might still not be comparable. That is why scholars have proposed relative measures, which compare the level of education (or any other indicator of status) of immigrants with that of non-migrant co-nationals with the same characteristics. This indicator of the selectivity of the migration flow would give information about the relative position of immigrant individuals in their country of origin, and it would allow measuring the extent to which they experience a process of downward mobility in the destination country. Without this information, it is not possible to know whether the children of immigrants have their parents' former socio-economic status in their country of origin or their new position in the destination country as the reference point on which they base their aspirations and educational choices.

Unfortunately, the same shortcomings in the data faced by other researchers are also present in my research. The LSYPE does not provide any information about the former class position or the year of

migration of parents. In addition, the LSYPE does not include specific questions that allow the operationalisation of some of the propositions of the RRA theory. Therefore, I only include a composite variable that measures the extent to which the decision to apply to university is based on the perceived utility of university degrees in the labour market[97]. This might explain, from a rational choice perspective, why some students are more likely to continue in education than others, controlling for their prior performance.

6.3.2. Ethnic minority specificity: high educational expectations and anticipated discrimination

In terms of educational expectations, Chapters 4 and 5 have shown that ethnic minority students have, on average, significantly higher academic ambitions than White British students when they start secondary education at the age of 13/14. They are also more likely to maintain or increase their expectations compared to the White British majority, particularly South Asian and Black African students. Indeed, the university ambitions are also maintained by minorities that obtain poor grades at the end of KS4, such as Pakistanis or Bangladeshis. In contrast, the expectations of White British students tend to match their levels of attainment. Therefore, I expect ethnic minority students to have higher continuation rates than the White British majority, in both the first and the second transition, given their more ambitious educational plans. However, as presented in the previous chapter, minority students that are not able to catch up after compulsory schooling might face difficulties to access higher education despite their high ambitions. That could be the case of Pakistanis, Bangladeshis and Black Caribbeans, whose level of attainment at GCSE examinations is significantly lower than that of White British students.

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[97] The variable *utility of university* has been constructed based on the answers given to the following items:
- I need to have a university degree to get the kind of job that I want to do.
- The best jobs go to people who have been at university

As mentioned in the analysis of academic progress in Chapter 3, students that are aware of the discrimination that their ethnic group faces in English society might consider that achieving high levels of education is the only way to counteract the eventual discrimination in the labour market (Sanders, 1997). Therefore, if a mechanism of anticipated discrimination is at work, I expect that minorities that feel, on average, more discriminated against would have higher continuation rates than those who do not, controlling for prior academic performance and background characteristics.

6.3.4.1. Relationship between expectations and continuation decisions among ethnic minorities. Is the link weaker compared to the White British majority?

American scholars have been puzzled by the smaller predictive power of expectations for future achievement of ethnic minorities, particularly African Americans, compared to the White majority (Hill & Torres, 2010; Mickelson, 1990; Morgan, 2004). In this regard, ethnic minority students tend to report more ambitious educational expectations than Whites but they are less able to realise them compared to the latter. Several hypotheses have been advanced to explain this paradox. The concrete vs abstract expectations developed by Mickelson has received considerable attention (Mickelson, 1990). According to this hypothesis, the social desirability and mainstream acceptance of the importance of education for future achievement compels students to report higher than their true expectations when these questions are asked in a general and abstract manner. On the other hand, the lower correlations between educational expectations and future attainment for certain ethnic minorities could be related to a misperception of the opportunity constraints at the time when their expectations form (Hanson, 1994).

However, as will be shown later, English ethnic minorities do not appear to realise their educational expectations less often than White British students do. In fact, the continuation rates of the three South Asian and Black African minorities are significantly higher than those

of the White British, even when their past performance at KS4 is not taken into account.

6.4. Secondary effects of ethnicity in the transition to post-compulsory education (1st transition)

As mentioned at the beginning of this chapter, students make their first transition at the age of 15/16, right after sitting national GCSE examinations. At this point, students can choose between continuing in education studying A levels at sixth-form schools/colleges (academic route), going to vocational institutions, or leaving full-time education[98].

[table 6.2 about here]

The different transition rates for each ethnic group are presented in table 6.2. In this regard, the percentage of students making the transition to A levels is significantly higher among Indians (65%), Black Africans (55%), Bangladeshis (53%) and Pakistanis (51%) than in the White British group (40%). In contrast, the percentage of A level takers among the Black Caribbean and the Mixed minorities is smaller (34%) than in the White British group, though the difference is not significant at $p<0.05$. With respect to the transition to vocational education, only two minorities significantly differentiate from the White majority: Indians, with an average lower percentage of students enrolling in vocational studies, and Black Caribbeans, with a higher

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[98] The choices made by students in their first transition have been simplified into three different categories: firstly, students that only take A levels form the first category. Therefore, this category excludes students that are enrolled in less than three A levels, which is the standard number. In most cases, they are also in vocational education or they are re-taking GCSE courses. Secondly, students enrolled in a vocational institution are grouped together in a different category. As has been just mentioned, some of them are also taking one or two A levels or GCSE courses. Finally, students that are not in full or part-time education, most of whom are working, form the last category.

percentage of students taking this option. Finally, the percentage of school dropouts after compulsory education among the main ethnic minorities is significantly lower than in the White British group (21%).

[table 6.3. about here]

Table 6.3. presents the predicted and counterfactual proportions of continuing to A levels vs choosing any other option (vocational education or dropping out) for each ethnicity, given the distribution of average grades in English and Maths obtained at GCSE examinations[99] (Buis, 2010; Erikson et al., 2005). The cells in the diagonal represent the predicted proportions, based on both factual distributions of performance at GCSE (rows) and factual conditional probabilities of making the transitions into A levels (columns). For example, if Pakistani students had the distribution of attainment at GCSE of White British students, 60% of them would make the transition to A levels instead of the actual 51%. However, if Pakistanis had the same conditional probabilities as the White British group but the same distribution of grades, only 32% would enrol in A levels.

Although there are variations across ethnicities, all minority groups have higher propensities to make the transition to A levels compared to the White British majority. This is shown in the first column of table 6.3., which presents the counterfactual transitions of each ethnic minority if they had the transition propensies of the White British group. For all ethnicities, the counterfactual proportions of the first column are lower than the predicted proportions shown in the diagonal, suggesting that ethnic minority students are more prone to continuing in academic education than White British students, controlling for their prior performance. The difference in the propensity to enrol in A level courses is remarkable for the South

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[99] The counterfactual and predicted proportions have been calculated with the `ldecomp` package, which has been developed by Buis for decomposing a total effect into direct and indirect effects in binary logistic regressions (Buis, 2010). In table 6.3. the counterfactual and predicted proportions have been calculated without including any control variables.

Asian and Black African minorities. These results confirm the findings of recent investigations (Jackson et al., 2012; Jackson, 2012), which have also pointed out the higher continuation rates of ethnic minority students in the first transition compared to the White British majority.

In the following section I introduce the multivariate analysis of the secondary effects of ethnicity in the first transition. As has been mentioned earlier, I have simplified the choices in the following three categories: only enrolling in A level courses, enrolling in vocational education or dropping out school.

6.4.1. Multivariate analysis of the secondary effects of ethnicity in the first transition

Similarly to the analyses of educational expectations, the multivariate models for the first transition are estimated with multinomial logistic regressions, using the decomposition method of Karlson, Holm and Breen (KHB) (Karlson & Holm, 2011; Kohler et al., 2011) to compare the ethnicity coefficients across nested models. The objective is to identify the extent to which the ethnic differentials, relative to the White British majority in choices after compulsory education, are accounted for by several explanatory variables that are presented in following section. The KHB method allows me to measure the changes in the ethnicity coefficients that are due to confounding with the explanatory variables on the one hand, and due to the rescaling of the model on the other.

The first multinomial logistic regression has as the baseline category, those students leaving education after GCSE examinations at age 15/16. The outcome categories are those that choose to continue to A levels on the one hand, and those that enrol in vocational education on the other. The second multinomial logistic regression has as the baseline category, students going to a vocational institution, with those enrolling in A levels as the outcome category. The results for the remaining category, leaving education, are not show in the table.

6.4.1.1. Explanatory variables

Table 6.3 has presented empirical evidence about the different propensities of ethnic minority students to continue in post-compulsory academic education (A levels). However, this analysis did not take into account any background characteristics of students or any other explanatory variables that could help to understand the different educational preferences of ethnic minorities, controlling for their prior attainment.

The multinomial logistic regressions include the following explanatory variables:

- Firstly, a measure of attainment at GCSE examinations, which distinguishes between students achieving the benchmark of 5 A*-C GCSE, including English and Maths, and those who did not reach this level. In this respect, the KHB decomposition will allow me to see if there are ethnic differentials in the influence that GCSE results have on academic choices.

- Secondly, a variable that measures students' perceived utility of university degrees in the labour market, reported at the age of 15/16.

- Thirdly, a variable indicating how discriminated against students think they are in education and/or in the labour market because of their ethnicity, race or religion.

- Finally, students' and parents' university expectations reported when the former are 15/16 years old. In this respect, I have created a nominal variable with four different categories: in the first one, both parents and students think that it is very likely that the latter will apply to university in the future; the second category refers to cases where both think that it is fairly likely that the student applies; the third category includes the cases where parents' expectations are more ambitious than those of

students; and finally, in the fourth category, are cases where parents' expectations are lower than those of students.

6.4.1.1. Results of multivariate analysis

Following the structure of the previous chapters, the results are presented in two separate tables. Table 6.4. presents the decomposition of the ethnicity coefficients into total and direct effects. The total effects are the ethnicity coefficients without taking into account the confounding with the explanatory variables. That is, the coefficients yielded by a model that does not include any of the aforementioned explanatory variables. The direct effects are the ethnicity coefficients that remain after including the explanatory variables. The outcomes of the two multinomial logistic regressions are the following: in the first model, the outcomes enrolling in A levels (models 1a and 2a) or enrolling in vocational education (models 1b and 2b) versus dropping out school, which is the baseline category. And, in the second model, the outcome is enrolling in A levels and the baseline category is choosing vocational education (models 1c and 2c). Models 1a, 1b and 1c do not include any control variables, which are added in models 2a, 2b and 2c.

Table 6.4a. shows the contribution to the confounding with ethnicity of each explanatory variable, as well as the overall confounding. The results shown in the table refer only to the models that include the control variables (2a, 2b and 2c).

[table 6.4. about here]
[table 6.4a. about here]

Continuing to A levels vs leaving education

The ethnicity coefficients of model 2a, which includes all the explanatory and control variables, confirm to a great extent the results presented in table 6.3. That is, the three South Asian and Black African minorities have a higher propensity to continue in academic education instead of dropping out of school after age 16 compared to the White

majority. This is reflected in the positive and highly significant coefficients of these four minorities. The coefficient for the Black Caribbean ethnicity is also positive and significant at 0.05 when the explanatory variables are not included in the model, but the coefficient loses its significance once they are added.

Table 6.4a shows that more than half of the South Asian differential with the White British group is accounted for by the explanatory variables. However, the same variables are less able to account for the differentials of the two Black minorities. As expected, the high university expectations reported by ethnic minority students and their parents drive almost entirely, the size and significance of the ethnicity coefficients. That is, the average higher propensity of ethnic minorities to continue on the academic path instead of leaving school compared to the White majority does not appear to be related to the perceived discrimination or the expected utility of university degrees in the labour market, but to the educational ambitions of ethnic minority families (measured at the age of 15/16).

The expected discrimination in the labour market seems to be completely irrelevant to account for the A level preference instead of dropping out of school, as reflected in table 6.4a. More importantly, except for the Black Caribbean minority, the attainment at GCSE examinations does not explain the ethnic differentials with White British in the propensity to choose A levels instead of dropping out of school. In contrast, Black Caribbean students resemble more to the reference group in the factors behind their preference, since their attainment at age 15/16 appears to be the variable most associated to their choice.

Continuing to vocational studies vs leaving education

All ethnic minorities except the Mixed group have significant and positive coefficients in model 1b though, after including the explanatory variables, only the coefficients for Indians, and the two Black minorities remain significant (model 2b). The explanatory variables account for almost all the total South Asian differentials. In

contrast, for the two Black minority groups, their higher propensity to continue in vocational education over leaving school compared to the White British majority might be related to other factors that are not considered in the model. That is, the explanatory variables are only able to account for a third of the total effect for the two Black minorities, while they account for more than two-thirds of the South Asian total effects.

Similarly to models 1a and 2a, the ambitious educational plans of ethnic minority students and their parents represent the most relevant variable driving the ethnic differentials with White British students in the preference to continue in vocational education. However, discrimination also appears to be relevant to explain the Black Caribbean differential (discrimination contributes 10% to the coefficient of confounding, compared to only 3% in the previous outcome). In this regard, the higher propensity of Caribbean students to continue in vocational education instead of dropping out of school is positively associated to perceiving more discrimination against their minority group in education and in the labour market, confirming the hypothesis put forward by the anticipatory discrimination approach.

Continuing to A levels vs going to vocational education

Only the coefficients for the three South Asian minorities are positive and significant at 0.01 in model 2c, which includes all the control variables (the coefficient for the Black African minority is marginally significant at 0.1 only when the explanatory variables are not added to the model). These results confirm the higher propensity of South Asian students, compared to the White majority, to choose the academic over the vocational path after the age of 16. As expected, the explanatory variables account for a substantial part of the ethnic differentials, though the degree of confounding is smaller than in the two previous outcomes (models 2a and 2b). In addition, the perceived utility of university degrees in the labour market seems to be more relevant to account for the higher propensity of South Asian students to enrol in A levels instead of vocational studies. Nevertheless, parents' and

students' ambitions are still the main factors accounting for the ethnic differentials with White British students.

6.5. Do ethnic minority students realise their university expectations less often than White British students?

Before examining the actual choices that students of different ethnicities make at the age of 18 or older, I pay attention to one of the debates that has attracted more attention among American sociologists of education. As previously mentioned, this debate relates to the finding of average lower correlations between expectations and final attainment among ethnic minority students in the US (for a critical review of these findings see Morgan, 2004). In particular, African Americans seem to be less able to realise the educational plans reported during adolescence. In contrast to the American case, this pattern is not reproduced for any of the main English minority groups. That is, ethnic minority students do not appear to realise their expectations less often than White British students.

To illustrate the findings, I have performed a binary logistical regression to analyse the probability of making the transition to higher education. The variable indicating those students that reported to be very likely to apply to university in the future at age 13/14 is interacted with ethnicity. All the control variables, together with a measure indicating if students obtain 5 A*-C GCSE, including English and Maths, are included.

[table 6.5. about here]

The coefficients are shown in table 6.5. The interactions between ethnicity and high university expectations of the last model (3), which includes all the control variables and GCSE attainment, are significant for the South Asian and Black African minorities. That is, early expectations are, for these four minorities, more predictive of their future higher education enrolment than for the White British majority.

With regard to the Black Caribbean minority, their expectations are as predictive of their future educational trajectory as for the White British group.

6.6. Secondary effects of ethnicity in the transition to higher education (second transition)

In this section of the chapter I analyse the ethnic differentials with the White British majority in the transitions to higher education at the age of 17/18 or later. Students are expected to make the transition to higher education the year they turn 18 years of age, given that A levels, the most common qualifications to access university, last only two years. However, many students make the transition at an older age, either because they have retaken some courses, because they have taken a gap year or because they have been studying part-time.

[table 6.6. about here]

As table 6.6. shows, most students make the transition at the age of 18/19 or later. Unfortunately, the LSYPE finishes when students turn 20 and, therefore, it is not possible to know how many students make the transition to higher education after that point [100]. Therefore, transitions to higher education have been organized according to students' situation at the age of 19/20. In this respect, three main categories have been considered: firstly, students making the transition to university to study a degree or a foundation degree on the one hand, or to another higher education institution (not university) on the other. Secondly, students that are enrolled in lower levels of education, mostly vocational studies. And finally, students that are not in education at the age of 19/20 and, therefore, they did not make the transition.

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[100] This information could be relevant if some ethnicities were, on average, more likely to make the transition to higher education at an older age than others. Table 6.6. gives some evidence in favour of this hypothesis, as the percentage of students that make the transition at age 19/20 is, albeit small, significantly higher among Indians, Pakistanis and Black Africans than in the White British group.

The distribution of students in terms of these three categories across ethnic groups is presented in table 6.7. As expected, the percentage of students in higher education is higher among South Asian and Black African minorities than the White British majority: 77% of Indians, 72% of Black Africans, 61% of Bangladeshis and 57% of Pakistanis are enrolled in higher education at the age of 19/20, compared to 45% of Black Caribbean, 42% of White British and 40% of Mixed students. In contrast, Black Caribbean students are over-represented in lower level studies, mostly vocational qualifications, at that age (24%). Finally, the percentage of students that are not in education is significantly smaller among all ethnic minorities compared to the White British group. The only exception is the Mixed minority, with almost the same percentage of individuals that are not studying (40%) as the White British, and the Black Caribbean minority, with 31% of individuals that are not in education (though the difference with White British is only significant at p<0.1).

It is important to bear in mind that students do not necessarily complete the educational paths that they initiated at the first transition. In this regard, table 6.8. shows the level of qualifications achieved at the age of 19/20 depending on the choice made at the first transition (only A levels, vocational studies or dropping out of school). For example, 28% of students that enrolled in sixth-form schools or colleges after the age of 16 either do not obtain the benchmark of 3 A levels or they have switched to vocational studies at some point. In this regard, the grades obtained at post-compulsory secondary education might be particularly relevant for explaining the ethnic differentials in access to prestigious universities. Universities of the Russell Group do not generally accept students with an average grade lower than A*-B in their A level examinations.

In this respect, table 6.9. shows the distribution of grades in post-compulsory education across ethnicities, measured when students are age 19/20. The levels of attainment presented in the table are organized in the following categories: firstly, students that are not in post-compulsory education or those whose data has not been recorded; secondly, those that either did less than 3 A levels or they were doing vocational studies; thirdly, students with A levels with an average grade of D-G; fourthly, students with A levels with an average grade of C; and finally, students with an average grade higher than B. In this respect, it is clear that the percentage of students obtaining good grades in A level examinations is significantly higher among the White British (10%) or Indian minority (14%) than in the Bangladeshi (6%), Pakistani (5%) or Black Caribbean (4%) minority groups.

Finally, table 6.10 presents the distribution of students in higher education institutions across ethnicities. In this respect, it seems surprising that despite the high percentage of South Asian and Black African students in higher education, their presence in universities of the Russell Group is not significantly different from the White British majority. Only for the Indian minority the percentage of students enrolled in universities of the Russell Group (13%) is higher than among the White British majority (9%), though the difference is only marginally significant ($p<0.1$). In addition, the Black Caribbean and Mixed minorities, with only 3% of their students enrolled in prestigious universities, are under-represented compared to White natives in these higher-tier institutions.

6.6.1. Multivariate analysis of the secondary effects of ethnicity in the second transition

Similarly to the analysis of the first transition, the models are estimated with multinomial logistic regressions, using the decomposition method of Karlson, Holm and Breen (KHB) (Karlson

& Holm, 2011; Kohler et al., 2011) that allows the direct comparison of ethnicity coefficients across nested models.

Students that are not in education at the age of 19/20 form the baseline category of the first multinomial logistic regression. The outcome categories are the following two: on the one hand, students making the transition to higher education; and, on the other, those that are in a lower level of education, usually vocational studies. Students that are in vocational education form the baseline category of the second multinomial logistic regression, while the outcome refers to students going to a higher education institution, mainly universities.

6.1.1. Explanatory variables

Similarly to the analysis of the first transition, I consider parents' and students' university expectations at age 16/17[101] as one of the main explanatory variables. In addition, I include the same composite measure about students' perceived utility of university degrees in the labour market, measured also when the they were 16/17 years old. The variable about discrimination refers exclusively to the ethnic penalty (or premium) which students expect to find when they enter the labour market, reported when they are 17/18 years old[102]. Finally, I include two indicators of achievement in post-compulsory education: the average score and whether students have obtained at least 3 A levels with an A*-C grade.

6.1.2. Results of multivariate analysis

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[101] This is the last time at which parents report about the university expectations they have for their children.

[102] Students answer to the following question: "Do you think that your race/religion/ethnicity would make it more difficult to get a job?"

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Models starting with number 1 (1a, 1b and 1c) do not include the control variables[103], which are added in models beginning with number 2 (2a, 2b and 2c).

[table 6.11 about here]
[table 6.11a about here]

Higher education vs leaving education or vocational education

The coefficients presented in table 6.11 show a clear preference of South Asian and Black African students, particularly Indians and Black Africans, for higher education. In fact, the ethnicity coefficients for the first outcome (higher education vs not in education, models 1a and 2a) are very similar to those for the third outcome (higher education vs vocational education, models 1c and 2c). In addition, the explanatory variables account for a substantial part of the observed ethnic differentials with the White British group. Black Caribbean students are only slightly more prone to going on to higher education instead of dropping out of the educational system compared to the White British majority (model 1a), but do not differ from the reference group in their propensity to go on to higher education instead of vocational studies. In addition, the Black Caribbean differential with the White British in the propensity to go on to higher education instead of dropping out is no longer significant once the explanatory variables are taken into account.

Surprisingly, the high university expectations at age 16/17 of ethnic minority parents and adolescents appear to be more important than their actual performance in post-compulsory education to understand the differentials in transition propensities with the White British group, at least for the three South Asian and Black African minorities (see table 6.11a). That is, parents and students' expectations are the main factors accounting for the gap with the White British in higher education enrolments. This explanatory variable accounts for at least

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[103] Gender, immigrant generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student living in London.

40% of the confounding with the ethnicity coefficients, while the average score is only responsible for 20% or less of the confounding with the ethnicity coefficients.

The expected discrimination in the labour market does not appear to have an influence on the differentials in levels of enrolment in higher education for any minority. In contrast, the expected utility of university degrees in the labour market accounts for 15% to 20% of the total ethnic differentials with the White British group.

Vocational education vs leaving education

With regard to continuing vocational studies instead of leaving the educational system (models 1b and 2b in table 6.11), there are almost no differences between ethnic minorities and the White British group. Only the Black Caribbean minority seems to be significantly different from the reference group, being slightly more prone to continuing in vocational education instead of dropping out. However, the differential loses significance when the explanatory and control variables are included in the model (2b). What is more important about the Black Caribbean coefficient is that it seems to be highly associated with the discrimination that these students expect to encounter in the labour market (see table 6.11a, model 2b). Therefore, results in models 1b and 2b suggest that Black Caribbean students that have not been successful in compulsory education prefer to continue in education doing vocational studies instead of dropping out of school to counteract the expected ethnic penalty in the labour market. That is, having an additional qualification would help these students to compete in a better position with low achieving White British individuals.

6.6.2. Secondary effects of ethnicity on enrolling at prestigious universities

The final multivariate analysis of this chapter focuses on the prestige of the institutions of higher education that ethnic minority students attend compared to the White British group. As mentioned earlier, I

distinguish between two main categories of universities: on the one hand, those belonging to the Russell Group, which are the most prestigious public universities in the UK, including Oxford and Cambridge; and on the other, all the remaining higher education institutions outside the Russell Group.

[table 6.12 about here]

Table 6.12 presents the distribution of students in higher education institutions across ethnicities. In this respect, it seems surprising that despite the high percentage of South Asian and Black African students in higher education, their presence in the universities of the Russell Group is not significantly different from the White British majority. Only for the Indian minority is the percentage of students enrolled in universities of the Russell Group (13%) higher than among the White British majority (9%), though the difference is only marginally significant ($p<0.1$). In addition, the Black Caribbean and Mixed minorities, with only 3% of their students enrolled in prestigious universities, are under-represented compared to White natives in these higher tier institutions.

For the empirical analysis, I perform a multinomial logistic regression, with students going to a higher education institution outside the Russell Group as the baseline category. The two outcome categories are students that enrol in universities from the Russell Group on the one hand, and those that do not make the transition to higher education on the other, though only the results for the first outcome are presented.

6.1. Explanatory variables

In contrast to the previous analysis, in this section, I only consider the following three explanatory variables:

Firstly, students' performance in post-compulsory secondary education, that is, their average score and whether they have obtained 3 A levels with a grade of A*-C.

[table 6.13. about here]

Secondly, whether students live at home with their families while studying at university (see table 6.13). Students might prefer to stay at home with their family while studying at university for several reasons, such as a lack of economic resources to rent a place on their own or a preference to continue living in the same environment. Some of the Russell Group universities are located outside London, in small towns or in cities with a small ethnic minority population. Therefore, ethnic minority students might prefer to go to a university that is close to their home without considering whether it is a Russell Group institution or not. In fact, the percentage of students that live with their family among the White British (9%) is significantly lower than in ethnic minority groups like Indians (39%), Pakistanis (37%), Bangladeshis (52%) or the two Black minorities (22%).

Thirdly, whether students are enrolled in the institution that was their first choice. In this respect, only Indians and Black Africans differentiate significantly from the White British group for having a higher percentage of students declaring that their current university was their first choice (25% of White British vs 37% of Indians and 33% of Black Africans).

6.2. Results of empirical analysis

[table 6.14. about here]

Similarly to table 6.13, table 6.14 presents the predicted and counterfactual proportions of enrolling in a university of the Russell Group given the distribution of grades in post-compulsory education. The cells on the diagonal represent the predicted proportions, based on both factual distributions of grades (rows) and factual conditional probabilities of making the transition to a high tier university (columns). The first column shows the counterfactual transitions of each ethnic minority if they had the transition propensities of the

White British group but maintain their distribution in terms of achievement in post-compulsory education. In this regard, it seems that the transition propensities of all ethnic minorities are very similar to those of the White British majority. The main differences are for two minorities: firstly, the Bangladeshi, whose transition rate to Russell Group universities is 7% but it would be 10% if they had the same level of achievement as the White British. And finally, the Black Caribbean minority, whose transition rate is 5% but it would be 7% if they had the same performance as the White British in post-compulsory education.

[table 6.15. and 6.15a about here]

Table 6.15 presents the ethnicity coefficients for the outcome of going to a university of the Russell Group vs going to other higher education institution, which represents the baseline category. Model 1a only includes the prior achievement as an explanatory variable. In model 2a, I add the two variables indicating whether students are living with family and whether the university was the students' first choice. Finally, model 3a adds the control variables.

Firstly, when I only control for prior achievement at post-compulsory education (model 1a), the Mixed and Black Caribbean minority are the only two groups that differentiate significantly from the White British majority in their admission to Russell Group universities. However, when the two additional explanatory variables (living with family and university of choice) are included in model 2a, the coefficient for Indians increases in size and turns significant. That is, if we control for the fact that Indians tend to stay at home more than White British students while in higher education, then the Indian minority would have a higher propensity to go to Russell Group institutions than the White British majority. Finally, when all the control variables are added in model 3a, the coefficients for the other two South Asian minorities, Pakistanis and Bangladeshis, turn positive and significant. This change in the coefficients suggests that the low socio-economic status of these two minorities is responsible for their lower enrolment at Russell Group institutions.

6.8. Summary of findings

This chapter has examined the ethnic differentials in educational trajectories after compulsory education until the age of 19/20. I have paid attention to the choices in the first transition, at age 15/16 and to the transition to higher education, made at age 17/18 or later. My findings largely confirm recent studies by Jackson, Jonsson and Rudolphi (Jackson et al., 2012), and Jackson (Jackson, 2012), which point out the higher propensity of ethnic minority groups to continue in education despite their average lower performance. This higher propensity is supported by the role that early family academic expectations have on the decision to continue in education, as shown in the multivariate analyses. Contrary to what was hypothesised by some scholars, discrimination appears to have a marginal effect on the decision to continue in education, at least for the three South Asian minorities. Indeed, a mechanism of anticipated discrimination seems to be at work only for the Black Caribbean minority in the decision to continue in vocational education instead of dropping out of school (first transition).

Table 6.1. Level of achievement at KS4 national examinations (age 15/16) and academic progress from the end of KS3 to the end of KS4, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
5 A*-C GCSEs, incl. English & Maths	47.5	33.1*	61.1*	37.4*	38.6*	31.0*	42.5*
5 A*-C GCSEs but not in English & Maths	10.8	11.9	11.6	13.6*	16.3*	15.3*	11.1
No 5 A*-C GCSEs	41.6	55.1*	27.4*	49.0*	45.1*	53.7*	46.4*
Average VAS in English & Maths (KS3 to KS4)	-0.16	-0.17	0.20*	0.00*	0.10*	-0.15	0.22*
Total	100	100	100	100	100	100	100
N	6308	238	658	504	384	263	246

N= 8,942

* Different from White British at $p < 0.05$

Table 6.2. Continuation rates in the first transition at age 15/16, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
A-levels	40.2	34.3	65.5*	50.8*	53.3*	34.2	54.7*
Vocational	38.5	44.8	29.0*	36.8	37.2	57.5*	43.71
Leave FTE	21.3	20.9	5.6*	12.4*	9.6*	8.3*	1.6*
Total	100	100	100	100	100	100	100
N	6308	238	658	504	384	263	246

N= 8,942

$F_{(12.03, 7449.10)} = 15.0648 \quad P = 0.0000$

* Different from White British at $p < 0.05$

Table 6.3. Predicted and counterfactual proportions of continuing to A-levels across ethnicities given the distribution of average grades in English and Maths at GCSE examinations

Distribution of attainment at GCSE	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
White British	0.41	0.44	0.59	0.60	0.62	0.48	0.62
Mixed (Black & White)	0.36	0.39	0.54	0.56	0.58	0.43	0.57
Indian	0.47	0.50	0.66	0.67	0.69	0.55	0.68
Pakistani	0.32	0.35	0.49	0.51	0.52	0.39	0.52
Bangladeshi	0.36	0.39	0.55	0.56	0.58	0.44	0.58
Black Caribbean	0.32	0.35	0.51	0.52	0.54	0.40	0.54
Black African	0.38	0.41	0.57	0.58	0.60	0.46	0.59

N= 8,942

Table 6.4. Ethnicity coefficients of multinomial logistic regressions using the rescaling method of Karlson, Holm and Breen
Outcome variable: choice at first educational transition (age 15/16)

	Only A levels vs leaving education				Vocational education vs leaving education				Only A levels vs vocational education			
	(1a)		(2a)		(1b)		(2b)		(1c)		(2c)	
	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)
Mixed												
Total effect	-0.101	(0.341)	0.296	(0.341)	0.199	(0.289)	0.362	(0.288)	-0.3	(0.233)	-0.066	(0.236)
Direct effect	-0.0261	(0.345)	0.0844	(0.344)	0.0748	(0.293)	0.117	(0.291)	-0.101	(0.235)	-0.0326	(0.237)
Indirect effect	-0.0745	(0.483)	0.211	(0.460)	0.124	(0.260)	0.245	(0.254)	-0.199	(0.254)	-0.0334	(0.240)
Indian												
Total effect	2.762***	(0.291)	2.865***	(0.296)	1.585***	(0.267)	1.594***	(0.269)	1.177***	(0.174)	1.271***	(0.178)
Direct effect	1.029***	(0.287)	1.172***	(0.291)	0.576*	(0.263)	0.611*	(0.264)	0.453**	(0.174)	0.561**	(0.179)
Indirect effect	1.733***	(0.489)	1.693***	(0.466)	1.009***	(0.270)	0.982***	(0.264)	0.724**	(0.255)	0.710**	(0.240)
Pak.												
Total effect	1.347***	(0.247)	2.289***	(0.258)	0.648**	(0.241)	1.082***	(0.244)	0.698***	(0.131)	1.207***	(0.146)
Direct effect	0.672**	(0.250)	1.000***	(0.256)	0.0828	(0.240)	0.249	(0.239)	0.590***	(0.140)	0.751***	(0.153)
Indirect effect	0.674	(0.486)	1.289**	(0.465)	0.566*	(0.265)	0.833**	(0.262)	0.109	(0.256)	0.455+	(0.241)
Bangladeshi												
Total effect	1.427***	(0.334)	2.744***	(0.388)	0.788*	(0.346)	1.323***	(0.400)	0.639***	(0.149)	1.421***	(0.177)
Direct effect	0.748*	(0.338)	1.117**	(0.386)	0.248	(0.351)	0.385	(0.400)	0.500**	(0.155)	0.731***	(0.181)
Indirect effect	0.679	(0.486)	1.627***	(0.465)	0.540*	(0.264)	0.937***	(0.262)	0.139	(0.256)	0.690**	(0.242)
Bl. Car.												
Total effect	0.784*	(0.350)	0.791*	(0.360)	1.148***	(0.325)	1.112***	(0.329)	-0.363+	(0.203)	-0.32	(0.210)
Direct effect	0.502	(0.363)	0.503	(0.371)	0.726*	(0.334)	0.703*	(0.335)	-0.224	(0.215)	-0.2	(0.221)
Indirect effect	0.282	(0.489)	0.289	(0.465)	0.422	(0.269)	0.409	(0.262)	-0.14	(0.259)	-0.12	(0.245)
Bl. Afr.												
Total effect	3.256***	(0.608)	2.819***	(0.616)	2.810***	(0.610)	2.459***	(0.616)	0.446*	(0.175)	0.360+	(0.214)
Direct effect	1.716**	(0.614)	1.665**	(0.622)	1.695**	(0.614)	1.604**	(0.620)	0.0205	(0.186)	0.0613	(0.223)
Indirect effect	1.540**	(0.495)	1.154*	(0.468)	1.115***	(0.280)	0.855**	(0.267)	0.425	(0.260)	0.299	(0.244)
N	8366		8366		8366		8366		8366		8366	

Control variables: gender, first-generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socioeconomic status, student living in London.
(1a) (1b) (1c) Explanatory variables: 5 A*-C GCSEs incl. English & Maths (1=Yes, 0=No), discrimination in education/labour market, returns of university degree, level of agreement in university expectations between parents and students.
(2a) (2b) (2c) Explanatory variables: 5 A*-C GCSEs incl. English & Maths (1=Yes, 0=No), discrimination in education/labour market, returns of university degree, level of agreement in university expectations between parents and students. Control variables included

Table 6.4a. Confounding ratios and percentages of models 2a, 2b and 2c of Table 6.4

	Explanatory variables	(2a) Only A-levels vs. leaving education		(2b) Vocational education vs. leaving education		(2c) Only A-levels vs. vocational education	
		Contr. to confounding %	*Confounding %*	*Contr. to confounding %*	*Confounding %*	*Contr. to confounding %*	*Confounding %*
Mixed	5 A*-C GCSE including English & Maths	-79.9	-57.1	-12.8	-8.7	411.6	208.4
	Discrimination in education and/or labour market	6.4	4.6	21.1	14.3	114.1	57.8
	Doesn't know if discrimination in education/labour market	-7.3	-5.2	-2.4	-1.6	28.5	14.4
	Utility of university degree in labour market	24.9	17.8	5.0	3.4	-120.2	-60.9
	Parents & students very likely to apply to university	67.6	48.3	42.8	28.9	-114.4	-57.9
	Parents & students fairly likely to apply to university	36.9	26.4	21.4	14.5	-77.1	-39.0
	Parents' expectations higher than students	59.6	42.6	28.4	19.2	-168.8	-85.4
	Parents' expectations lower than students	-8.1	-5.8	-3.4	-2.3	26.3	13.3
		100.0	71.4	100.0	67.7	100.0	50.6
Indian	5 A*-C GCSE including English & Maths	17.4	10.3	5.6	3.4	33.8	18.9
	Discrimination in education and/or labour market	0.5	0.3	3.1	1.9	-3.2	-1.8
	Doesn't know if discrimination in education/labour market	-1.4	-0.8	-0.9	-0.6	-2.0	-1.1
	Utility of university degree in labour market	16.3	9.6	6.6	4.1	29.7	16.6
	Parents & students very likely to apply to university	70.3	41.5	88.7	54.6	44.8	25.0
	Parents & students fairly likely to apply to university	-1.8	-1.1	-2.1	-1.3	-1.4	-0.8
	Parents' expectations higher than students	1.3	0.8	1.2	0.8	1.4	0.8
	Parents' expectations lower than students	-2.5	-1.5	-2.1	-1.3	-3.0	-1.7
		100.0	59.1	100.0	61.6	100.0	55.9
Pak.	5 A*-C GCSE including English & Maths	3.0	1.7	0.8	0.7	6.8	2.6
	Discrimination in education and/or labour market	1.0	0.6	5.9	4.6	-8.0	-3.0
	Doesn't know if discrimination in education/labour market	-3.2	-1.8	-1.9	-1.4	-5.5	-2.1
	Utility of university degree in labour market	22.3	12.6	8.1	6.2	48.4	18.2
	Parents & students very likely to apply to university	71.0	40.0	80.4	61.9	53.8	20.3
	Parents & students fairly likely to apply to university	6.8	3.9	7.1	5.5	6.4	2.4
	Parents' expectations higher than students	2.2	1.3	1.9	1.5	2.8	1.1
	Parents' expectations lower than students	-3.2	-1.8	-2.4	-1.9	-4.7	-1.8
		100.0	56.3	100.0	77.0	100.0	37.7

Bangl.	5 A*-C GCSE including English & Maths	17.5	10.4	5.6	4.0	33.6	16.3
	Discrimination in education and/or labour market	0.7	0.4	4.4	3.1	-4.4	-2.2
	Doesn't know if discrimination in education/labour market	-3.4	-2.0	-2.2	-1.6	-4.9	-2.4
	Utility of university degree in labour market	16.9	10.0	6.9	4.9	30.5	14.8
	Parents & students very likely to apply to university	54.1	32.1	68.8	48.8	34.2	16.6
	Parents & students fairly likely to apply to university	11.4	6.7	13.2	9.4	8.8	4.3
	Parents' expectations higher than students	8.1	4.8	7.7	5.5	8.5	4.1
	Parents' expectations lower than students	-5.2	-3.1	-4.4	-3.1	-6.3	-3.1
		100.0	59.3	100.0	70.9	100.0	48.5
Bl.Car.	5 A*-C GCSE including English & Maths	-100.6	-36.7	-13.2	-4.8	197.1	73.8
	Discrimination in education and/or labour market	9.5	3.5	25.7	9.5	64.8	24.3
	Doesn't know if discrimination in education/labour market	-11.6	-4.2	-3.1	-1.2	17.2	6.4
	Utility of university degree in labour market	21.8	7.9	3.6	1.3	-40.1	-15.0
	Parents & students very likely to apply to university	91.0	33.2	47.1	17.3	-58.6	-21.9
	Parents & students fairly likely to apply to university	55.4	20.2	26.2	9.6	-44.0	-16.5
	Parents' expectations higher than students	39.6	14.4	15.4	5.7	-42.6	-16.0
	Parents' expectations lower than students	-5.0	-1.8	-1.7	-0.6	6.2	2.3
		100.0	36.5	100.0	36.7	100.0	37.4
Bl.Afr.	5 A*-C GCSE including English & Maths	-8.1	-3.3	-2.0	-0.7	-25.5	-21.1
	Discrimination in education and/or labour market	2.1	0.9	11.1	3.9	-23.5	-19.5
	Doesn't know if discrimination in education/labour market	-1.5	-0.6	-0.8	-0.3	-3.5	-2.9
	Utility of university degree in labour market	22.8	9.3	7.2	2.5	67.4	55.9
	Parents & students very likely to apply to university	87.9	36.0	86.9	30.2	90.8	75.4
	Parents & students fairly likely to apply to university	-2.0	-0.8	-1.8	-0.6	-2.6	-2.2
	Parents' expectations higher than students	2.9	1.2	2.2	0.8	5.0	4.2
	Parents' expectations lower than students	-4.2	-1.7	-2.7	-1.0	-8.2	-6.8
		100.0	41.0	100.0	34.8	100.0	83.0

Table 6.5. Binary logistic regressions for being enrolled in higher education at the age of 19/20

	(1)		(2)		(3)	
	β	(se)	β	(se)	β	(se)
Mixed	-0.0431	(0.184)	0.302	(0.208)	0.434+	(0.228)
Indian	1.542***	(0.132)	1.581***	(0.225)	1.694***	(0.220)
Pakistani	0.409**	(0.133)	0.682***	(0.172)	1.000***	(0.181)
Bangladeshi	0.681***	(0.138)	1.098***	(0.182)	1.476***	(0.195)
Black Caribbean	0.222	(0.185)	0.511	(0.314)	0.511+	(0.271)
Black African	1.082***	(0.181)	1.091***	(0.318)	1.007**	(0.360)
Other	0.782***	(0.144)	0.841***	(0.219)	0.907***	(0.220)
*Mixed*very likely to apply*			-0.336	(0.448)	-0.198	(0.468)
*Indian*very likely to apply*			-0.484+	(0.280)	-0.425	(0.282)
*Pakistani*very likely to apply*			0.175	(0.219)	0.252	(0.224)
*Bangladeshi*very likely to apply*			-0.491	(0.307)	-0.294	(0.290)
*Bl. Car.*very likely to apply*			-0.116	(0.390)	-0.0262	(0.365)
*Bl. Afr.*very likely to apply*			0.0822	(0.366)	0.197	(0.390)
*Other*very likely to apply*			-0.619*	(0.314)	-0.660*	(0.321)
Likelihood of applying to university (age 13/14) Ref: "not very/at all likely to apply")						
Very likely			1.773***	(0.091)	1.544***	(0.0933)
Fairly likely			0.967***	(0.089)	0.853***	(0.0917)
Don't know			0.483**	(0.164)	0.400*	(0.171)
Achieved 5 A*-C GCSEs, including English & Maths			2.356***	(0.081)	2.069***	(0.0810)
Constant	-0.50***	(0.039)	-2.96***	(0.087)	-2.67***	(0.199)
N	**9100**		**9100**		**9100**	

Control variables: gender, immigrant generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student living in London.

Table 6.6. Percentage of students making the transition to higher education at age 17/18, 18/19 and 19/20, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
Transition at 17/18	11.6	18.0*	19.6*	19.2*	17.8*	19.0*	25.8*
Transition at 18/19	27.6	21.1	53.7*	30.5	36.1*	25.0	38.6*
Transition at 19/20 (expected)	0.9	0.8	2.4*	2.6*	2.3	1.4	6.3*
No transition at 19/20	59.9	60.1	24.4*	47.7*	43.9*	54.7	29.3*
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**5064**	**169**	**584**	**420**	**311**	**205**	**185**

N=7220
* Different from White British at p <0.05

Table 6.7. Continuation rates in the second transition at age 19/20, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
Transitions at age 19/20[a]							
University degree/Other HE	41.8	39.9	77.2*	57.3*	61.0*	44.7	72.2*
Lower than HE	16.3	20.5	6.7*	13.5	13.6	24.1*	12.9
Not in education	41.9	39.7	16.1*	29.1*	25.4*	31.2+	14.9*
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**5064**	**169**	**584**	**420**	**311**	**205**	**185**

N=7220
* Different from White British at p <0.05
[a] 30% of these students have already made the transition at age 17/18, and 3% are expected to make it at the age of 19/20.

Table 6.8. Grades at age 19/20 by choice made at the 1st transition (age 15/16)

	1st transition: A levels	1st transition: vocational	1st transition: dropping out
Average score in post-compulsory secondary education[1]	189.0	102.0	9.8
At least 3 A levels with grade A*-C	41.1	10.1	0.2%
N	**3730**	**2741**	**978**

N=7449
[1] Students with no post-compulsory education have been also included in the calculation with the value 0

Table 6.9. Grades in post-compulsory secondary education, by type of university

	Transition to Russell Group university	Transition to other university	No transition
At least 3 A levels with grade A*-C	83.7	33.5	2.9
No 3 A levels with grade A*-C	16.3	66.5	97.1
Total	**100**	**100**	**100**
N	**852**	**2977**	**3616**

Table 6.10. Highest level of qualifications obtained at age 19/20, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
No PCSE/no grade records at age 19/20	42.5	52.7	19.7*	37.4	35.8	39.6	30.9*
At least 3 A*-C A levels (benchmark)	21.4	12.1*	28.5*	15.7	18.8	10.0*	17.4
Average score in PCSE [1]	118.8	94.6*	161.3*	124.3	122.2	113.8	138.8*
Average score in PCSE [2]	202.9	198.3	199.0	192.6*	180.8*	188.4*	194.8
N	**5115**	**176**	**594**	**431**	**323**	**267**	**253**

N=7449

 * Different from White British at $p < 0.05$

PCSE: Post-compulsory secondary education

[1] Students with no post-compulsory education have been also included in the calculation with the value 0

[2] Only students with post-compulsory education have been also included in the calculation of the average score

Table 6.11. Ethnicity coefficients of multinomial logistic regressions using the rescaling method of Karlson, Holm and Breen
Outcome variable: choice at second educational transition (age 19/20)

| | Higher education vs leaving education | | | | Vocational education vs leaving education | | | | Higher education vs vocational education | | | |
| | (1a) | | (2a) | | (1b) | | (2b) | | (1c) | | (2c) | |
	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)	β	(se)
Mixed Total effect	-0.115	(0.296)	0.0332	(0.309)	0.287	(0.294)	0.218	(0.308)	-0.402	(0.349)	-0.215	(0.360)
Direct effect	0.07	(0.298)	0.139	(0.311)	0.222	(0.299)	0.151	(0.313)	-0.152	(0.353)	-0.0423	(0.363)
Indirect effect	-0.185	(0.396)	-0.106	(0.396)	0.0656	(0.0515)	0.067	(0.0539)	-0.25	(0.407)	-0.172	(0.410)
Indian Total effect	2.497***	(0.203)	2.707***	(0.211)	0.0559	(0.234)	-0.0289	(0.240)	2.441***	(0.216)	2.706***	(0.231)
Direct effect	0.960***	(0.199)	1.143***	(0.207)	0.0305	(0.237)	-0.0339	(0.243)	0.930***	(0.214)	1.159***	(0.229)
Indirect effect	1.537***	(0.397)	1.565***	(0.397)	0.0254	(0.0594)	0.00501	(0.0640)	1.512***	(0.409)	1.547***	(0.412)
Pakistani Total effect	1.070***	(0.156)	1.972***	(0.168)	0.23	(0.181)	0.0248	(0.199)	0.839***	(0.193)	1.976***	(0.215)
Direct effect	0.329*	(0.161)	0.684***	(0.172)	0.132	(0.189)	-0.034	(0.205)	0.197	(0.200)	0.713**	(0.219)
Indirect effect	0.741+	(0.398)	1.288**	(0.399)	0.0987	(0.0661)	0.0588	(0.0731)	0.642	(0.410)	1.263**	(0.414)
Bangladeshi Total effect	1.463***	(0.163)	2.633***	(0.192)	0.317	(0.259)	-0.0157	(0.316)	1.146***	(0.286)	2.750***	(0.337)
Direct effect	0.610***	(0.168)	1.063***	(0.192)	0.224	(0.269)	-0.0533	(0.323)	0.385	(0.290)	1.091**	(0.336)
Indirect effect	0.853*	(0.399)	1.570***	(0.400)	0.0926	(0.0699)	0.0375	(0.0816)	0.761+	(0.411)	1.659***	(0.417)
Black Caribbean Total effect	0.563*	(0.227)	0.047	(0.241)	0.716***	(0.203)	0.537*	(0.254)	-0.154	(0.240)	-0.471	(0.294)
Direct effect	0.154	(0.226)	-0.0633	(0.243)	0.593**	(0.217)	0.386	(0.265)	-0.439+	(0.245)	-0.427	(0.299)
Indirect effect	0.409	(0.400)	0.11	(0.400)	0.123	(0.0799)	0.151+	(0.0859)	0.286	(0.413)	-0.0432	(0.416)
Black African Total effect	2.260***	(0.238)	1.637***	(0.290)	0.539+	(0.326)	0.224	(0.397)	1.722***	(0.257)	1.395***	(0.328)
Direct effect	0.892***	(0.241)	0.791**	(0.291)	0.421	(0.331)	0.0894	(0.397)	0.471+	(0.268)	0.677*	(0.330)
Indirect effect	1.368***	(0.403)	0.846*	(0.401)	0.118	(0.0930)	0.134	(0.0928)	1.251**	(0.416)	0.717+	(0.418)
N	**7449**		**7449**		**7449**		**7449**		**7449**		**7449**	

Control variables: gender, immigrant generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student lives in London.

(1a) (1b) (1c) Explanatory variables: A-levels, vocational education, discrimination in labour market, utility of university degree, level of agreement in university expectations between parents and students.

(2a) (2b) (2c) Explanatory variables: A-levels, vocational education, discrimination in labour market, utility of university degree, level of agreement in university expectations between parents and students. Control variables included

	Explanatory variables:	(2a) Higher education vs. leaving FTE		(2b) Vocational education (not HE) vs. leaving FTE		(2c) Higher education vs. vocational education	
		Contr. to confounding %	Confound. %	Contr. to confounding %	Confound. %	Contr. to confounding %	Confound. %
Mixed	Average score	138.8	-440.7	15.0	4.6	91.3	73.3
	At least 3 A-levels with grade A*-C	87.7	-278.4	47.6	14.6	72.3	58.1
	Discrimination in labour market	-0.5	1.5	40.2	12.4	15.5	12.4
	Utility of university degree in labour market	-23.2	73.7	2.7	0.8	-13.0	-10.4
	Parents & students very likely to apply to university	-57.2	181.7	4.2	1.3	-34.1	-27.4
	Parents & students fairly likely to apply to university	-42.9	136.2	2.8	0.9	-22.5	-18.1
	Parents' expectations higher than students	-60.5	192.0	9.3	2.9	-34.7	-27.9
	Parents' expectations lower than students	57.8	-183.5	-21.8	-6.7	25.3	20.3
		100.0	-317.6	100.0	30.7	100.0	80.3
Indian	Average score	27.3	15.8	-564.8	98.1	28.7	16.4
	At least 3 A-levels with grade A*-C	5.4	3.1	-542.0	94.1	6.9	3.9
	Discrimination in labour market	0.0	0.0	307.1	-53.3	-1.0	-0.6
	Utility of university degree in labour market	21.7	12.5	497.4	-86.4	20.2	11.6
	Parents & students very likely to apply to university	49.9	28.8	714.0	-124.0	48.3	27.6
	Parents & students fairly likely to apply to university	-0.2	-0.1	-2.8	0.5	-0.2	-0.1
	Parents' expectations higher than students	0.1	0.1	5.6	-1.0	0.2	0.1
	Parents' expectations lower than students	-4.2	-2.4	-314.5	54.6	-3.1	-1.7
		100.0	57.8	100.0	-17.4	100.0	57.2
Pakist.	Average score	24.0	15.7	-36.2	-86.0	26.4	16.9
	At least 3 A-levels with grade A*-C	2.1	1.4	-16.8	-40.0	3.1	2.0
	Discrimination in labour market	0.1	0.0	74.9	177.6	-3.5	-2.2
	Utility of university degree in labour market	26.6	17.3	44.1	104.7	25.8	16.5
	Parents & students very likely to apply to university	43.7	28.6	45.6	108.3	44.3	28.3
	Parents & students fairly likely to apply to university	3.0	2.0	3.3	7.8	3.1	2.0
	Parents' expectations higher than students	4.6	3.0	9.3	22.0	4.2	2.7
	Parents' expectations lower than students	-4.1	-2.7	-24.1	-57.2	-3.4	-2.1
		100.0	65.3	100.0	237.2	100.0	63.9
Bangl.	Average score	23.1	13.8	-71.9	171.5	25.5	15.4
	At least 3 A-levels with grade A*-C	4.9	2.9	-81.6	194.6	7.2	4.4
	Discrimination in labour market	0.1	0.0	122.1	-291.2	-2.7	-1.7
	Utility of university degree in labour market	25.6	15.3	80.2	-191.3	22.8	13.7
	Parents & students very likely to apply to university	43.1	25.7	89.7	-214.0	42.3	25.5
	Parents & students fairly likely to apply to university	5.2	3.1	10.5	-25.1	4.9	2.9
	Parents' expectations higher than students	5.4	3.2	22.8	-54.5	5.0	3.0
	Parents' expectations lower than students	-7.3	-4.4	-71.9	171.4	-4.9	-2.9

		100.0	59.6	100.0	-238.6	100.0	60.3

Bl. Car.	Average score	-34.2	-80.2	1.9	0.5	101.2	9.3
	At least 3 A-levels with grade A*-C	-165.9	-389.6	41.7	11.7	570.2	52.4
	Discrimination in labour market	1.0	2.2	39.5	11.1	136.8	12.6
	Utility of university degree in labour market	114.8	269.6	6.0	1.7	-261.4	-24.0
	Parents & students very likely to apply to university	41.4	97.3	1.2	0.3	-87.3	-8.0
	Parents & students fairly likely to apply to university	85.7	201.2	3.0	0.8	-210.8	-19.4
	Parents' expectations higher than students	47.9	112.5	3.3	0.9	-112.2	-10.3
	Parents' expectations lower than students	9.3	21.9	3.5	1.0	-36.5	-3.4
		100.0	234.9	100.0	28.1	100.0	9.2
Bl. Afr.	Average score	16.0	8.3	-6.6	-3.9	19.2	9.9
	At least 3 A-levels with grade A*-C	-14.4	-7.4	31.4	18.9	-23.1	-11.9
	Discrimination in labour market	0.1	0.1	48.4	29.1	-9.0	-4.6
	Utility of university degree in labour market	33.4	17.3	15.7	9.5	37.0	19.0
	Parents & students very likely to apply to university	65.7	34.0	19.1	11.5	74.7	38.4
	Parents & students fairly likely to apply to university	3.7	1.9	1.1	0.7	4.2	2.2
	Parents' expectations higher than students	2.8	1.4	1.7	1.0	3.1	1.6
	Parents' expectations lower than students	-7.4	-3.8	-11.0	-6.6	-6.2	-3.2
		100.0	51.69	100.0	60.06	100.0	51.45

N=7449

Table 6.12. Students going to Russell group universities at age 19/20, by ethnicity

	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
Russell Group universities	8.9	3.2*	12.7+	6.6	7.3	3.3*	7.1
Other universities	26.0	30.4	55.4*	38.8*	41.7*	33.2	51.3*
Not in higher education	65.1	66.5	31.9*	54.6*	51.0*	63.6	41.5*
Total	100	100	100	100	100	100	100
N	5115	176	594	431	323	267	253

N=7449

* Different from White British at $p < 0.05$

Table 6.13. Percentage of students enrolled in universities that were their first choice and living with their family while studying, measured at age 19/20, by ethnicity

	Wh. Brit. (%)	Mix. (Bl. & Wh.) (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
Lives at home with family	9.0%	10.5%	39.1%*	37.4%*	51.7%*	22.2%*	21.4%*
University was first choice	24.6%	15.8%*	37.5%*	25.0%	24.6%	19.7%	33.5%*

N=7449

* Different from White British at $p < 0.05$

Table 6.14. Predicted and counterfactual proportions of going to a Russell Group university given the distribution of grades at 19/20

Distribution of attainment at post-compulsory education	Wh. Brit. (%)	Mix. (%)	Ind. (%)	Pak. (%)	Bangl. (%)	Bl. Car. (%)	Bl. Afr. (%)
White British	0.12	0.09	0.12	0.12	0.09	0.09	0.12
Mixed (Black & White)	0.09	0.07	0.10	0.10	0.07	0.07	0.09
Indian	0.14	0.12	0.15	0.15	0.11	0.10	0.15
Pakistani	0.09	0.07	0.09	0.09	0.07	0.06	0.09
Bangladeshi	0.10	0.08	0.10	0.11	0.07	0.07	0.10
Black Caribbean	0.07	0.06	0.08	0.08	0.05	0.05	0.08
Black African	0.11	0.08	0.11	0.11	0.08	0.08	0.11

N=7449

Table 6.15. Ethnicity coefficients of multinomial logistic regression using the rescaling method of Karlson, Holm and Breen Outcome variable: prestige of institution at second educational transition (age 19/20)

| | Russell Group university vs. other higher education institution | | | | | |
| | (1a) | | (2a) | | (3a) | |
	β	(se)	β	(se)	β	(se)
Mixed Total effect	-1.103**	(0.347)	-1.512***	(0.374)	-1.323***	(0.364)
Direct effect	-0.761*	(0.346)	-0.800*	(0.364)	-0.784*	(0.358)
Indirect effect	-0.342	(0.236)	-0.713	(0.512)	-0.539	(0.533)
Indian Total effect	0.234	(0.207)	1.058***	(0.233)	1.306***	(0.275)
Direct effect	-0.189	(0.177)	0.143	(0.180)	0.203	(0.206)
Indirect effect	0.423+	(0.248)	0.916+	(0.530)	1.102*	(0.559)
Pakistani Total effect	-0.212	(0.240)	0.208	(0.263)	1.156***	(0.300)
Direct effect	-0.138	(0.239)	0.388	(0.276)	0.423	(0.289)
Indirect effect	-0.0742	(0.231)	-0.18	(0.509)	0.733	(0.549)
Bangladeshi Total effect	-0.256	(0.382)	0.38	(0.442)	1.807***	(0.529)
Direct effect	-0.229	(0.382)	0.686	(0.454)	0.787	(0.494)
Indirect effect	-0.0264	(0.230)	-0.305	(0.511)	1.021+	(0.564)
Black Caribbean Total effect	-0.992*	(0.386)	-0.835*	(0.365)	-0.852*	(0.390)
Direct effect	-0.741+	(0.387)	-0.42	(0.366)	-0.217	(0.394)
Indirect effect	-0.251	(0.230)	-0.415	(0.507)	-0.635	(0.532)
Black African Total effect	-0.227	(0.276)	0.000432	(0.271)	-0.193	(0.285)
Direct effect	-0.285	(0.271)	-0.368	(0.262)	-0.306	(0.279)
Indirect effect	0.058	(0.235)	0.368	(0.512)	0.113	(0.533)
N	7445		7253		7253	

(1a) Explanatory variables: average score, at least 3 A-levels with grade A*-C. No controls

(2a) Explanatory variables: average score, at least 3 A-levels with grade A*-C, university was first choice, living at home with family. No controls

(3a) Explanatory variables: average score, at least 3 A-levels with grade A*-C, university was first choice, living at home with family. Controls: gender, immigrant generation, single-parent family, mother had the first child at age 21 or younger, highest level of education in the household, grandparents' education, family socio-economic status, student living in London.

Table 6.15a. Confounding ratios and percentages of model 2a and 3a of Table 6.15

Ethnicities	Explanatory variables	(2a) Russell Group university vs. other higher education institution		(3a) Russell Group university vs. other higher education institution	
		Contr. to confounding %	*Confounding %*	*Contr. to confounding %*	*Confounding %*
Mixed	Average score	72.8	34.3	69.22	28.2
	At least 3 A-levels with grade A*-C	20.5	9.7	24.65	10.04
	University first choice	5.0	2.3	5.33	2.17
	Living at home with family	1.8	0.8	0.8	0.33
		100.0	47.1	100.0	40.74
Indian	Average score	108.9	94.3	102.49	86.53
	At least 3 A-levels with grade A*-C	13.2	11.4	11.06	9.34
	University first choice	5.0	4.4	5.16	4.36
	Living at home with family	-27.2	-23.5	-18.71	-15.8
		100.0	86.5	100.0	84.43
Pakist.	Average score	-82.0	70.9	118.75	75.25
	At least 3 A-levels with grade A*-C	51.3	-44.4	5.86	3.71
	University first choice	-0.3	0.2	4.8	3.04
	Living at home with family	130.9	-113.1	-29.4	-18.63
		100.0	-86.4	100.0	63.37
Bangl.	Average score	-30.9	24.8	113.31	64
	At least 3 A-levels with grade A*-C	14.0	-11.2	12.85	7.26
	University first choice	0.8	-0.6	4.54	2.57
	Living at home with family	116.2	-93.2	-30.71	-17.34
		100.0	-80.2	100.0	56.49
Bl. Car.	Average score	26.2	13.0	42.31	31.52
	At least 3 A-levels with grade A*-C	43.0	21.4	43.04	32.07
	University first choice	4.3	2.2	4.13	3.08
	Living at home with family	26.5	13.2	10.52	7.84
		100.0	49.7	100.0	74.51
Bl. Afr.	Average score	137.2	117001.6	279	-163.5
	At least 3 A-levels with grade A*-C	-17.2	-14700.4	-160.06	93.79
	University first choice	7.9	6711.5	28.93	-16.95
	Living at home with family	-27.9	-23754.9	-47.87	28.05
		100.0	85257.9	100.0	-58.61

N=744

CHAPTER 7

CONCLUSIONS

7.1. Introduction

This dissertation has tried to identify the main factors affecting the academic progress, the expectations and the educational choices of ethnic minority students in England, comparing them to the White British majority. In this final chapter, I will review the most relevant empirical findings of each of the three thematic sections that compose the dissertation, connecting them with the existing literature on ethnic inequalities, particularly in the UK. Finally, I will summarise the limitations of my research and suggest some lines for further investigation.

7.2. Academic progress from age 14 to 16

Some English scholars have pointed to the existence of ethnic differentials in academic progress (Wilson, Burgess & Briggs, 2005; Strand, 2008), although these previous studies have been less systematic and have mostly focused on the description of the phenomenon more than on the explanation. Most investigations have centred their attention on final measures of academic achievement instead of academic progress. This tendency is, as mentioned in Chapter 3, partially related to the lack of longitudinal and standardized data on attainment until quite recently. In the English case, the preference for studying students' achievement at the end of compulsory education has overlooked the important changes that take place during the last two years of this stage. Indeed, even though all ethnic minorities except Indians lag behind the White British group in

school examinations at the ages of 11 and 14, the gap with the latter reduces considerably or even reverses for some minorities in GCSEs examinations at the age of 16[104]. Several studies using data from the Millennium Cohort Study (Hansen et al., 2010) have shown that the ethnic gaps in education are wider during early childhood. In these investigations, Pakistani, Bangladeshi and Black children obtain significantly lower scores than White British children in cognitive and non-cognitive development at the ages of 3 and 5. Even though family socio-economic and demographic characteristics seem to account for a large amount of the observed gap for Bangladeshis and Pakistanis, a substantial part of this disadvantage remains for Pakistani and, particularly, for Black children. Even at the age of 15/16, the Pakistani, Bangladeshi and Black Caribbean minorities obtain significantly lower results at school compared to the White British group. Nevertheless, the substantial improvement of the academic performance of South Asians and Black Africans from age 13/14 to 15/16 compared to that of White British students means that these minorities are able to catch up –or at least to reduce the gap- with the White British group in a relatively short time.

In this respect, Chapter 3 has shown that not only do South Asian and Black African students progress at a faster rate during the last stage of compulsory education than in the previous years, but they also improve or maintain certain attitudes and behaviours that are highly related to academic performance, such as the amount of time devoted to homework, the importance given to education for their future or their educational plans. In contrast, White British students significantly worsen, on average, their school-related behaviours and attitudes and, therefore, they experience a decline in their academic performance that is only comparable to that of Black Caribbean and Mixed students. As a consequence, the differentials in attainment between South Asian and Black Africans on the one hand, and White British students on the other, are notably reduced by the end of compulsory education. In

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[104] It is still important to note that the Indian minority obtains, on average, similar scores to White British students at this stage. That is, they are not significantly advantaged over White British students, in contrast to subsequent educational stages.

contrast, the academic progress of Black Caribbean and Mixed students of white and black parents is similar to that of the White British and, therefore, the initial gap observed at earlier stages remains unchanged.

In Chapter 3, the ethnic differentials in progress have been examined in relation to the following groups of variables: firstly, students and parents attitudes, behaviours and expectations in relation to education and school; secondly, variables indicating the degree of acculturation and cultural difference of ethnic minorities relative to the White British majority, such as the degree of familism and religiosity; thirdly, students' perceived discrimination and feelings of unfair treatment by teachers at school. And finally, I examine the association between ethnic differentials in progress and several school characteristics as well as the ethnic composition of schools' student bodies, paying special attention to the proportion of co-ethnics among students' peer groups at school. One of the contributions of my empirical analysis is that, when the information is available, I take into account the variation over time of relevant variables that are related to academic progress. This way, I am able to show that the differentials between the White British group and the ethnic minorities in the explanatory variables are not only significant in the base year (at age 13/14), but also in the changes across time.

I have shown that the high value that South Asian and Black African families place on education is the most important factor accounting for the differentials in academic progress with the White British group. This high value is reflected in the ambitious parental expectations for their children, and in students' own educational plans as well as in their positive attitudes and behaviours (above all, the effort they put into their school work) towards school and education in general. Compared to the White British majority, not only do South Asian and Black African students display more positive attitudes towards school and try harder at the age of 13/14, but they also manage to maintain or even improve these attitudes and behaviours in the following years.

The significantly more positive and stable school attitudes and behaviours of certain ethnicities have been frequently explained in terms of cultural differences. In fact, using the cultural argument to explain variations across groups is tempting though difficult to sustain empirically. This dissertation has indeed shown significant variations in attitudes and behaviours towards education across ethnicities that are not related to other relevant socio-economic or demographic characteristics of the group. For example, South Asian and Black African students report significantly higher degrees of familism and religiosity than White British or Black Caribbean students, which are both positively associated with academic progress. Although not explicitly asked in the LSYPE, it is likely that spending more time with the family reinforces the control over students' activities, preventing them from engaging in anti-school behaviours that are more common during adolescence.

However, in parallel to the existence of cultural variations, the positive selectivity of the migration flows that have shaped ethnic minorities in England, is likely to be a key factor in explaining differences in attitudes and behaviours towards education. Otherwise it is difficult to understand why minorities coming from different geographical areas and cultural contexts (India, Pakistan, Bangladesh and sub-Saharan countries) consider the education of their children extremely important. In fact, a European study that is still ongoing[105] has pointed to the positive selectivity in terms of human capital of some of these English minorities, confirming previous research for the American case (Feliciano, 2005). Nevertheless, a positive selectivity of the migration flow in terms of other personal (and frequently unobserved) characteristics, such as the degree of ambition or determination, might be even more relevant to account for the more favourable attitudes towards education of ethnic minority families.

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[105] A recent presentation by Heath, van der Werfhorst and van Elsas (*Ethnicity and Education Conference*, Newcastle, UK, 2012) showed that, South Asians and Black Africans are particularly positively selected in terms of human capital. Results have not yet been published, so a detailed analysis of this factor is not yet possible.

Chapter 3 also considers the role that ethnic discrimination might have on the progress of ethnic-minority students. Experiences of discrimination or unfair treatment by teachers have been frequently considered in the English literature as one the main factors, if not the most important one, to explain the Black Caribbean disadvantage in education (D. Gillborn & Mirza, 2000b; D. Gillborn, 1998; David Gillborn, 1997). My analysis confirms previous empirical evidence, since Black and, to a lesser extent, Pakistani students, feel discriminated against by their teachers at school and in the labour market because of their ethnicity or religion. Although I cannot establish a strong link between the average academic progress of Black Caribbean students and their perceived discrimination, the latter is significantly associated with involvement in several anti-school behaviours. In this respect, my empirical analysis suggests the existence of a 'reactive ethnicity' (Portes & Rumbaut, 1996) among Black Caribbean students of low socio-economic backgrounds as a reaction to their perceived exclusion and marginalization in English society.

Finally, the ethnic composition of students' peer groups at school appears to be associated with the academic progress of Pakistanis and Black Caribbean students but not to that of the other minorities. Controlling for the school ethnic and socio-economic composition as well as for students' background characteristics, my empirical analysis suggests a negative association between the academic progress of Black Caribbean and Pakistani students and having more co-ethnic friends at school. This finding should not be interpreted in terms of causality, though it suggests the existence of anti-school behaviour among disadvantaged Black Caribbean and Pakistani children, which is likely to affect their academic progress. This result is in agreement with the fact that these two minorities are those that feel, on average, more discriminated against. Therefore, the negative association between academic progress and perceived discrimination on the one hand and peer-ethnic composition on the other suggests that a reactive ethnicity might have been developed among certain groups of Black Caribbean and Pakistani students.

Despite the relevance that experiences of discrimination might have on the learning processes of ethnic minority students, this chapter shows that the main factors accounting for the differentials in progress across groups are parents' and students' attitudes and behaviours in relation to school. In particular, the positive and more stable educational expectations of South Asian and Black African students seem to be the key factor behind their academic progress.

7.3. Evolution of educational expectations during adolescence

The second part of my dissertation has paid attention to one of the factors that is more strongly associated with academic progress as well as with final achievement: the educational expectations of students and their families. Chapter 4 has tried to disentangle the ambitious educational plans of ethnic minority students in early adolescence, connecting them with their behaviours at school, their grades, and the expectations that their parents have for them. The most relevant finding in this respect has been the average low correlations between South Asian and Black African students' expectations and their school grades. That is, these minority students report considerably more ambitious educational plans than would be expected given their grades. In addition, and contrary to White British students, the three South Asian minorities have significantly more positive school attitudes and behaviours than White British students with the same level of expectations for their future. Therefore, it appears South Asian students enjoy being at school more and put more effort into their school duties than White British students with the same level of expectations.

In Chapter 5, where I have analysed the evolution of expectations over time, I confirm the modest impact that academic attainment has on the future educational plans reported by South Asian and Black African minorities. Pakistani, Bangladeshi and Black African students, who obtain on average, modest or low scores in GCSE exams, do not adapt their initial expectations to their actual attainment. In this respect, this

finding challenges rational action assumptions about the evolution of expectations across time and supports socio-psychological explanations, which consider parents' expectations as the main factor shaping the formation and evolution of students' academic ambitions. In contrast, the plans for the future of White British students are much more related to the grades they obtain. That is, the correlation between attainment and expectations is significantly higher.

7.4. Educational choices after compulsory education

Even though the maintenance of high educational expectations during secondary education by Pakistanis, Bangladeshis and Black Africans could be regarded as unrealistic, they are key in explaining their educational trajectories after compulsory education. Against all the odds, these three minorities choose more academic-orientated educational trajectories than White British students with similar grades, and they also access university in a higher proportion. The Indian minority, with a significantly higher attainment at age 16 than White British students, also continue on to higher education significantly more than the latter, controlling for prior attainment and background characteristics.

In addition, it seems that ethnic minority students do not have their parents' socio-economic position or level of education as the point of reference on which they base their actual educational decisions, as the relative risk aversion theory suggests (Breen & Goldthorpe, 1997). The fact that ethnic minorities are not representative samples of the population of their countries of origin is likely to limit the application of rationality assumptions to explain the behaviour of ethnic minority students. That is, minority students tend to adopt and internalize the high aspirations that their families have for them and make their choices accordingly, regardless of their actual grades.

Surprisingly, the discrimination that ethnic minority students expect to find in the labour market has no impact on the academic choices of

South Asians, and has only a marginal impact for Black students. For the two Black minorities, which are precisely those that perceive a higher ethnic penalty in the labour market, discrimination acts as an incentive to continue in vocational education instead of dropping out of school after the age of 16.

7.5. Limitations of my research

The main limitation of this dissertation has been the impossibility of testing the association between the selectivity of the migration flows that have shaped English ethnic minorities and the academic progress, the expectations and the choices of ethnic minority students. Unfortunately, the LSYPE has not included any question about the year and country of birth of students' parents and/or grandparents, making it impossible to know their exact generation and to build indicators of selectivity for the ethnic group. Nevertheless, it is important to bear in mind that some of the factors that shape the process of (self) selection of migrants are unobserved, such as the ambition or the drive for success. That is, scholars have not included these factors in the indexes of selectivity of migration flows.

Another limitation has been the impossibility of developing a more refined test of some of the rational action assumptions that could have helped to understand better the educational expectations and choices of ethnic minority students relative to the White British. A detailed analysis of the perceived costs and benefits that students attribute to going to university has not been possible, given that only those that have already decided to go to higher education are asked about them.

Finally, the LSYPE has not allowed me to follow this cohort of students until they finish university and make the transition to the labour market. With regard to the former, it would have been interesting to analyse the ethnic differentials in graduation rates, which might be different to those in university admission rates.

References

Administrative Data Liaison Service. (2013). National Pupil Database (NPD). Retrieved from http://www.adls.ac.uk/department-for-education/dcsf-npd/?detail

Alexander, K., Bozick, R., & Entwisle, D. (2008). Warming Up, Cooling Out, or Holding Steady? Persistence and Change in Educational Expectations After High School. *Sociology of Education*, *81*(4), 371–396. doi:10.1177/003804070808100403

Alexander, K. L., Entwisle, D. R., & Bedinger, S. D. (1994). When Expectations Work: Race and Socioeconomic Differences in School Performance. *Social Psychology Quarterly*, *57*, 283–299.

Andrew, M., & Hauser, R. M. (2011). Adoption? Adaptation? Evaluating the Formation of Educational Expectations. *Social Forces*, *90*(2), 497–520. doi:10.1093/sf/sor005

Archer, L., & Francis, B. (2007). *Understanding minority ethnic achievement: race, gender, class and "success."* London: Routledge.

Banaji, M. R., & Heiphetz, L. (2010). Attitudes. In D. T. Gilbert & S. T. Fiske (Eds.), *Handbook of Social Psychology* (pp. 353–393). Hoboken, NJ: John Wiley & Sons.

Bankston, C., & Caldas, S. J. (1996). Majority black schools and the perpetuation of social injustice: the influence of de facto segregation on academic achievement. *Social Forces*, *75*(2), 535–555.

Beattie, I. R. (2002). Are All "Adolescent Econometricians" Created Equal? Racial, Class, and Gender Differences in College Enrollment. *Sociology of Education*, *75*(1), 19–43.

Blanchflower, D. G., Saleheen, J., & Shadforth, C. (2007). *The impact of the recent migration from Eastern Europe on the UK economy*. London.

Blau, P. M., & Duncan, O. D. (1967). The process of stratification. In D. B. Grusky (Ed.), *Social stratification in sociological perspective* (Vols. 1-Book, 1-Section, Vol. 2nd, pp. 390–402). Boulder (CO): Westview.

Böhlmark, A. (2008). Age at immigration and school performance: A siblings analysis using swedish register data. *Labour Economics*, *15*(6), 1366–1387.

Boudon, R. (1974). *Education, Opportunity, and Social Inequality*. New York: Wiley.

Breckler, S. J., & Wiggins, E. C. (1989). Affect versus evaluation in the structure of attitudes. *Journal of Experimental Social Psychology*, *25*(3), 253–271. doi:10.1016/0022-1031(89)90022-X

Breen, R., & Goldthorpe, J. H. (1997). Explaining Educational Differentials: Towards a Formal Rational Action Theory. *Rationality and Society*, *9*(3), 275–305.

Breen, R., Karlson, K. B., & Holm, A. (2011). Total, direct, and indirect effects in logit models. *Social Science Research Network*. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstractid=1730065

Breen, R., & Yaish, M. (2006). Testing the Breen-Goldthorpe Model of Educational Decision Making. In S. L. Morgan, D. B. Grusky, & G. S. Fields (Eds.), *Mobility and Inequality: Frontiers of Sociology and Economics* (Vols. 1-Book, 1-Section). Stanford (CA): Stanford University Press.

Brinbaum, Y., & Cebolla Boado, H. (2007). The school careers of ethnic minority youth in France: Success or disillusion? *Ethnicities*, *7*(3), 445–474.

Buchmann, C., & Dalton, B. (2002). Interpersonal influences and educational aspirations in 12 countries: The importance of institutional context. *Sociology of Education*, *75*, 99–123.

Buis, M. L. (2010). Direct and indirect effects in a logit model. *The Stata Journal*, *10*(1), 11–29.

Burgess, S., Wilson, D., Briggs, A., & Piebalga, A. (2008). Segregation and the attainment of minority ethnic pupils in England. *CMPO Working Paper Series*, *No. 08/204*.

Castles, S., & Miller, M. J. (1993). Migration to highly developed countries since 1945. In *The age of migration. International population movements in the modern world* (2nd ed.). London (UK): MacMillan Press.

Cebolla Boado, H. (2008). Del prescolar a las puertas de la universidad. Un análisis de las trayectorias escolares de los estudiantes inmigrantes en Francia. *Revista Internacional de Sociología*, *LXVI*(51), 79–103.

Cebolla Boado, H., & Garrido Medina, L. (2011). The impact of immigrant concentration in Spanish schools: school, class, and composition effects. *European Sociological Review*, *27*(5), 606–623.

Chahal, K. (1999). *"We can't all be white!" Racist victimisation in the UK*. York: Joseph Rowntree Foundation.

Cheng, S., & Starks, B. (2002). Racial Differences in the Effects of Significant Others on Students' Educational Expectations. *Sociology of Education*, *75*(306), 327.

Chiswick, B. R. (2000). Are immigrants favourable self-selected? An economic analysis. In C. D. Brettell & J. F. Hollifield (Eds.), *Migration Theory: Talking Across the Disciplines* (Vols. 1-Book, 1-Section). New York: Routledge.

Clark, R. L., Glick, J. E., & Bures, R. M. (2009). Immigrant families over the life course. Research directions and needs. *Journal of Family Issues*, *30*(6), 852–872.

Coleman, J. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, *94*, 95–120.

Coleman, J. S. (1966). *Equality of Educational Opportunity*. Washington, DC: U.S. Department of Health, Education and Welfare.

Coleman, J. S., Hoffer, T., & Kilgore, S. (1982). Achievement and Segregation in Secondary Schools: A Further Look at Public and Private School Differences. *Sociology of Education*, *55*, 162–182.

Crozier, G., & Davies, J. (2006). Family matters: a discussion of the Bangladeshi and Pakistani extended family and community in supporting the children's education. *The Sociological Review*, *54*(4), 678–695.

Crul, M., & Vermeulen, H. (2003). The Second Generation in Europe. *International Migration Review*, *37*(4), 765–986.

Davies R., Heinese, E., & Holm, A. (2002). The relative risk aversion hypothesis of educational choice. *Journal of Population Economics*, *15*, 683–713.

De Valk, H. A. G., & Billari, F. C. (2007). Living arrangements of migrant and Dutch young adults: the family influence disentangled. *Population Studies*, *61*(2), 201–217.

Demack, S., Drew, D., & Grimsley, M. (2000). Minding the gap: ethnic, gender and social class differences in attainment at 16, 1988-95. *Race, ethnicity and education*, *3*(2), 117–143.

Department for Education. (2011a). *LSYPE User guide to the datasets: wave 1 to wave 7* (No. UK Data Archive Study Number 5545).

Department for Education, Q. and C. D. A. (2011b). National Curriculum website.

Domina, T., Conley, A. M., & Farkas, G. (2011). The Link between Educational Expectations and Effort in the College-for-all Era. *Sociology of Education*, *84*(2), 93–112.

Dustmann, C., Frattini, T., & Theodoropoulos, N. (2011). Ethnicity and second generation immigrants. In *The Labour Market in Winter: the state of working Britain 2010*. Oxford: Oxford University Press.

Dustmann, C., Machin, S., & Schonberg, U. (2008). Educational Achievement and ethnicity in compulsory schooling. *CReAM Discussion Paper. Centre for Research and Analysis of Migration, Department of Economics, University of London*, *No 12/08*.

Eagly, A., & Chaiken, S. (1998). Attitude structure and function. In D. T. Gilbert & S. T. Fiske (Eds.), *The Handbook of Social Psychology* (4th ed., Vol. 1, pp. 269–322). New York: MacGraw-Hill.

Erikson, R. (2007). Social selection in Stockholm schools: primary and secondary effects on the transition to upper secondary education. In S. Scherer, R. Pollak, G. Otte, & M. Gangl (Eds.), *From origin to destination. Trends and mechanisms in social stratification research* (Vols. 1-Book, 1-Section, pp. 58–77). Chicago: The University of Chicago Press.

Erikson, R., & Goldthorpe, J. H. (1992). *The constant flux: A study of class mobility in industrial societies*. Oxford: Oxford University Press.

Erikson, R., Goldthorpe, J., Jackson, M., Yaish, M., & Cox, D. R. (2005). On class differentials in educational attainment. *Proceedings of the National Academy of Science*, *102*, 9730–9733.

Erikson, R., & Jonsson, J. O. (1996). *Can Education be Equalised? The Swedish Case in Comparative Perspective*. Boulder: Westview Press.

Erikson, R., & Rudolphi, F. (2010). Change in social selection to upper secondary school— Primary and secondary effects in Sweden. *European Sociological Review*, *26*(3), 291–305.

Feliciano, C. (2005). *Unequal origins. Immigrant selection and the education of the second generation*. El Paso: LFB Scholarly Publishing.

Feliciano, C. (2006). Beyond the family: the infuence of premigration group status on the educational expectations of immigrants' children. *Sociology of Education*, *79*, 281–303.

Foster, P., & Hammersley, M. (2000). Case studies as spurious evaluations: The example of research on educational inequalities. *British Journal of Educational Studies*, *48*(3), 215–230.

Fuligni, A. J. (1997). The academic achievement of adolescents from immigrant families: the roles of family background, attitudes, and behaviour. *Child Development*, *68*(2), 351–363.

Georgas, J., Berry, J. W., van de Vijver, F. J. R., Kagitçibasi, C., Poortinga, Y. H., & Poortinga, Y. H. (2006). *Families Across Cultures: A 30-Nation Psychological Study*. Cambridge: Cambridge University Press.

Gillborn, D. (1998). Race and Ethnicity in Compulsory Schooling. In T. Modood & T. Acland (Eds.), *Race and Higher Education* (Vols. 1-Book, 1-Section, pp. 11–23). London: Policy Studies Institute.

Gillborn, D., & Mirza, H. S. (2000a). Educational inequality. Mapping race, class, and gender. A synthesis of research evidence.

Gillborn, D., & Mirza, H. S. (2000b). *Educational inequality. Mapping race, class, and gender. A synthesis of research evidence*. London (UK): Office for Standards in Education.

Gillborn, David. (1997). Ethnicity and Educational Performance in the United Kingdom: Racism, Ethnicity, and Variability in Achievement. *Anthropology & Education Quarterly*, *28*(3), 375–393. doi:10.1525/aeq.1997.28.3.375

Giordano, P. C. (2003). Relationships in Adolescence. *Annual Review of Sociology*, *29*, 257–281. doi:10.2307/30036968

Gish, O. (1971). Doctor migration and world health: the impact of the international demand for doctors on health services in developing countries. Occasional papers on social administration.

Glick, J. E., & White, M. J. (2004). Post-secondary school participation of immigrant and native youth: the role of familial resources and educational expectations. *Social Science Research*, *33*, 272–299.

Goldenberg, C., Gallimore, R., Reese, L., & Garnier, H. (2001). Cause or Effect? A Longitudinal Study of Immigrant Latino Parents' Aspirations and Expectations, and Their Children's School Performance. *American Educational Research Journal*, *38*(547), 582.

Goyette, K., & Xie, Y. (1999). Educational expectations of Asian American youths: determinants and ethnic differences. *Sociology of Education*, *72*(January), 22–36.

Haller, A. O. (1982). Reflections on the social psychology of status attainment.

Haller, A. O., & Portes, A. (1973). Status attainment processes. *Sociology of Education*, *46*, 51–91.

Hansen, K. T., Heckman, J. J., & Mullen, K. J. (2004). The effect of schooling and ability on achievement scores. *Journal of Econometrics*, *121*, 39–98.

Hansen, K. T., Joshi, H., & Dex, S. (2010). *Children of the 21st century: the first five years* (Vol. 2). Bristol: Policy Press.

Hanson, S. L. (1994). Lost talent: Unrealized educational aspirations and expectations among US youths. *Sociology of Education*, *67*, 159–183.

Hanushek, E. A., & Rivkin, S. G. (2009). Harming the best: How schools affect the black-white achievement gap. *Journal of Policy Analysis and Management*, *28*(3), 366–393.

Hao, L., & Bonstead-Bruns, M. (1998). Parent-child differences in educational expectations and the academic achievement of immigrant and native students. *Sociology of Education*, *71*, 175–198.

Haque, Z., & Bell, J. F. (2001). Evaluating the performances of minority ethnic pupils in secondary schools. *Oxford Review of Education*, *27*(3), 357–368.

Harker Tillman, K., Guang, G., & Mullan Harris, K. (2006). Grade retention among immigrant children. *Social Science Research*, *35*(1), 129–156.

Hatton, T. J. (2005). Explaining trends in UK migration. *Journal of Population Economics*, (18), 719–740.

Hatton, T. J., & Wheatley Price, S. (2005). Migration, migrants, and policy in the United Kingdom. In K. F. Zimmermann (Ed.), *European migration. What do we know?* (pp. 113–172). Oxford: Oxford University Press.

Heath, A. F., Rothon, C., & Kilpi-Jakonen, E. (2008). The Second Generation in Western Europe: Education, Unemployment, and Occupational Attainment. *Annual Review of Sociology*, *34*, 8/4/2008.

Heath, A., & Kilpi-Jakonen, E. (2012). Immigrant children's age at arrival and assessment results. *OECD Education Working Paper*, *75*, 1–30.

Heath, A., van der Werfhorst, H., & van Elsas, E. (2012). Explaining cross-national variations in ethnic educational inequalities (Vol. Northumbria University, Newcastle-upon-Tyne). Presented at the Ethnicity and Education: Old Issues, New Insights.

Heath, Anthony, & Brinbaum, Y. (2007). Guest editorial: Explaining ethnic inequalities in educational attainment. *Ethnicities*, *7*(3), 291–304. doi:10.1177/1468796807080230

Hill, N. E., & Torres, K. (2010). Negotiating the American dream: the paradox of aspirations and achievement among Latino students

and engagement between their families and schools. *Journal of Social Issues*, *66*(1), 95–112.

Hodgson, A., & Spours, K. (2008). *Education and training 14-19: curriculum, qualifications and organisation*. London: Sage.

Hodgson, A., Spours, K., & Waring, M. (2005). Higher education, Curriculum 2000 and the future reform of 14-19 qualifications in England. *Oxford Review of Education*, *31*(4), 479–495.

Jackson, M. (2012). Bold choices. How ethnic inequalities in educational attainment are suppressed. *Oxford Review of Education*, *38*(2), 189–208.

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*(2), 158–178.

Jæger, M. M., & Holm, A. (2012). Conformists or Rebels?: Relative Risk Aversion, Educational Decisions, and Social Class Reproduction. *Rationality and Society*, *24*(2), 221–253.

Jeynes, W. (2007). The relationship between parental involvement and urban secondary school student scademic schievement: a meta-analysis. *Urban Education*, *42*(1), 82–110.

Kahl, J. (1953). Educational and occupational aspirations of common man boys. *Harvard Educational Review*, *23*, 186–201.

Kao, G., & Thompson, J. S. (2003). Racial and ethnic stratification in educational achievement and attainment. *Annual Review of Sociology*, *29*, 417–442.

Kao, G., & Tienda, M. (1995). Optimism and Achievement:The Educational Performance of Immigrant Youth. *Social Science Quarterly*, *76*(1), 1–19.

Kao, G., & Tienda, M. (1998). Educational aspirations of minority youth. *American Journal of Education*, *106*(3), 349–384.

Karlsen, S., & Nazroo, J. Y. (2002). Relation Between Racial Discrimination, Social Class, and Health Among Ethnic Minority Groups. *American Journal of Public Health*, *92*(4), 624–631.

Karlson, K. B., & Holm, A. (2011). Decomposing primary and secondary effects: A new decomposition method. *Research in Stratification and Social Mobility*, *29*, 221–237.

Keller, S., & Zavalloni, M. (1964). Ambition and social class: a respecification. *Social Forces*, *43*(1), 58–70.

Kilpi-Jakonen, E. (2011). Continuation to upper secondary education in Finland: children of immigrants and the majority compared. *Acta Sociologica*, *54*(1), 77–106.

Kohler, U., Karlson, K., & Holm, A. (2011). Comparing coefficients of nested nonlinear probability models. *The Stata Journal*, *11*(3), 420–438.

Kristen, C., Reimer, D., & Kogan, I. (2008). Higher education entry of Turkish immigrant youth in Germany. *International Journal of Comparative Sociology*, *49*(2/3), 127–151.

Lee, V. E. (2000). School size and the organization of secondary schools. In M. T. Hallinan (Ed.), *Handbook of the Sociology of Education* (Vols. 1-Book, 1-Section, pp. 327–344). New York: Springer.

Leslie, D., & Drinkwatr, S. (1999). Staying on in Full-Time Education: Reasons for Higher Participation Rates Among Ethnic Minority Males and Females. *Economica*, *66*(261), 63–77. doi:10.1111/1468-0335.00156

Louie, V. (2001). Parents' aspirations and investment: the role of social class in the educational experiences of 1.5- and second-generation Chinese Americans. *Harvard Educational Review*, *71*(3).

Manski, C. (1990). The use of intentions data to predict behavior: A best case analysis. *Journal of the American Statistical Association*, (85), 934–940.

Manski, C. (1995). *Identification Problems in the Social Sciences*. Cambridge: Harvard University Press.

Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Edward, J. (1993). Theories of International Migration: A Review and Appraisal. *Population and Development Review*, *19*(3), 431–466.

Messersmith, E. E., & Schulenberg, J. E. (2008). When Can We Expect the Unexpected? Predicting Educational Attainment When it Differs from Previous Expectations. *Journal of Social Issues*, *64*(1), 195–211.

Mickelson, R. A. (1990). The attitude-achievement paradox among black adolescents. *Sociology of Education*, *63*, 44–61.

Minello, A., & Barban, N. (2012). The educational expectations of children of immigrants in Italy. *The ANNALS of the American Academy of Political and Social Science*, *643*, 78–103.

Modood, T. (1994). Political Blackness and British Asians. *Sociology*, *28*(4), 859–876.

Modood, T. (2005). The educational attainments of ethnic minorities in Britain. In G. C. Loury, T. Modood, & S. M. Teles (Eds.), *Ethnicity, social mobility, and public policy. Comparing the US and UK* (Vols. 1-Book, 1-Section, pp. 288–308). Cambridge (UK): Cambridge University Press.

Modood, T., & Berthoud, R. (1997). *Ethnic minorities in Britain. Diversity and Disadvantage*. London: Policy Studies Institute.

Moore, R. (2004). *Education and society. Issues and explanations in the Sociology of Education*. Cambridge: Polity Press.

Morgan, S. L. (2004). Methodologist as arbitrator. Five models for Black-White differences in the causal effect of expectations on attainment. *Sociological Methods & Research*, *33*, 3–53.

Morgan, S. L. (2005). *On the edge of commitment. Educational attainment and race in the United States*. Stanford: Stanford University Press.

Morgan, S. L. (2006). Expectations and aspirations. In G. Ritzer (Ed.), *The Blackwell Encyclopedia of Sociology*. Blackwell.

Nash, R. (2003). Inequality/difference in education: is a real explanation of primary and secondary effects possible? *British Journal of Sociology*, *54*, 433–451.

OECD. (2012). Indicator D2 What is the student-teacher ratio and how big are classes? In *Education at a Glance 2012: OECD Indicators* (OECD Publishing.).

Ogbu, J. U. (1991). Minority coping responses and school experience. *The Journal of Psychohistory*, *18*, 433–456.

Ogbu, J. U. (2008). *Minority status, oppositional culture, & schooling*. New York: Routledge.

Owen, D. (2008). *African migration to the UK*. University of Warwick.

Payne, J. (2003). Choice at the end of compulsory schooling: A research review. *Department for Education and Skills. Research Report*, *414*.

Peach, C. (1998). South Asian and Caribbean ethnic minority housing choice in Britain. *Urban Studies*, *35*(10), 1657–1680.

Penn, R., & Scattergood, H. (1992). Ethnicity and career aspirations in contemporary Britain. *Journal of Ethnic and Migration Studies*, *19*(1).

Piore, M. J. (1979). *Birds of passage: migrant labor and industrial societies*. New York: Cambridge University Press.

Platt, L. (2011). *Understanding inequalities. Stratification & difference*. London: Polity Press.

Plewis, I. (2009). Ethnic differences in Educational attainments and progress revisited. *CCSR Working Paper, Cathie Marsh Centre for Census and Survey Research, University of Manchester*, *01*.

Portes, A. (1998). Social Capital: Its Origins and Applications in Modern Sociology. *Annual Review of Sociology*, *24*, 1–24.

Portes, A., & MacLeod, D. (1996). Educational progress of children of immigrants: the roles of class, ethnicity, and school context. *Sociology of Education*, *69*, 255–275.

Portes, A., & Rumbaut, R. (2001). *Legacies. The story of the immigrant second generation*. Berkeley & New York: University of California Press & Russel Sage Foundation.

Portes, A., & Rumbaut, R. G. (1996). *Immigrant America. A Portrait* (Vol. Second Edition). Berkeley (California): University of California Press.

Raleigh, E., & Kao, G. (2010). Do immigrant minority parents have more consistent college aspirations for their children? *Social Science Quarterly*, *91*(4), 1102–1083.

Robinson, V., & Carey, M. (2000). Peopling Skilled International Migration: Indian Doctors in the UK. *International Migration*, *38*(1), 89–108. doi:10.1111/1468-2435.00100

Roscigno, V. J. (1998). Race and the reproduction of educational disadvantage. *Social Forces*, *76*, 1033–1061.

Rothon, C. (2005). An assessment of the "oppositional culture" explanation for ethnic differences in educational attainment in

Britain. *Sociology Working Paper Paper, University of Oxford*, *2*, 1–39.

Rothon, C. (2007). Can achievement differentials be explained by social class alone? An examination of minority ethnic educational performance in England and Wales at the end of compulsory schooling. *Ethnicities*, *7*(3), 306–322.

Rotter, J. B. (1966). Generalized expectancies of internal versus external control of reinforcements. *Psychological Monographs*, *80*(1).

Rumberger, R. W., & Palardy, G. J. (2004). Multilevel models for school effectiveness research. In D. Kaplan (Ed.), *Handbook on quantitative methodology for the social sciences* (Vols. 1-Book, 1-Section, pp. 235–258). Thousand Oaks, CA: Sage.

Sanders, M. G. (1997). Overcoming Obstacles: Academic Achievement as a Response to Racism and Discrimination. *The Journal of Negro Education*, *66*(1), 83–93.

Schain, M. A. (2008). *The politics of immigration in France, Britain and the United States. A comparative study*. New York: Palgrave Macmillan.

Sewell, W. H., Haller, A. O., & Portes, A. (1969a). The educational and early occupational attainment process. *American Sociological Review*, *34*, 82–92.

Sewell, W. H., Haller, A. O., & Portes, A. (1969b). The educational and early occupational attainment process. *American Sociological Review*, *34*, 82–92.

Sewell, W. H., Haller, A. O., & Portes, A. (1969c). The educational and early occupational attainment process. *American Sociological Review*, *34*(1), 82–92.

Sewell, W. H., & Hauser, R. M. (1993). A Review of the Wisconsin Longitudinal Study of Social and Psychological Factors in Aspirations and Achievements 1963-1992. *Center for Demography and Ecology Working Paper*, *92-01*, 1–99.

Shavit, Y., & Mueller, W. (2000). Vocational secondary education, tracking and occupational attainment in a comparative perspective. In M. T. Hallinan (Ed.), *Handbook of the Sociology of Education* (Vols. 1-Book, 1-Section, pp. 437–452). New York: Plenum Publishing.

Simpson, L., & Akinwale, B. (2006). Quantifying stability and change in ethnic group. *CCSR Working Paper, Cathie Marsh Centre for Census and Survey Research, University of Manchester*, (5), 53.

Smith, P. (1997). Appendix: survey methods. In R. Berthoud & T. Modood (Eds.), *Ethnic minorities in Britain. Diversity and disadvantage*. London (UK): Policy Studies Institute.

Sorensen, A. B., & Morgan, S. L. (2000). School effects: theoretical and methodological issues. In M. T. Hallinan (Ed.), *Handbook of the Sociology of Education* (Vols. 1-Book, 1-Section, pp. 137–160). New York: Kluwer/Plenum.

Stark, O., & Bloom, D. E. (1985). The new economics of labor migration. *American Economic Review*, *75*, 173–178.

Steele, C. M., & Aronson, J. (1995). Stereotype Threat and the intellectual test-performance of African-Americans. *Journal of personality and Social Psychology*, *69*(5), 797–811.

Stevens, P. A. J. (2007). Researching race/ethnicity and educational inequality in English secondary schools: a critical review of the research literature between 1980 and 2005. *Review of Educational Research*, *77*(2), 147–185.

Stocké, V. (2007a). Explaining educational decision and effects of familes' social class position: an empirical test of the Breen-Goldthorpe model of educational attainment. *European Sociological Review*, *23*(4), 505–519.

Stocké, V. (2007b). Explaining Educational Decision and Effects of Families' Social Class Position: An Empirical Test of the Breen–Goldthorpe Model of Educational Attainment. *European Sociological Review*, *23*(4), 505–519.

Strand, S. (2012). The White-British / Black Caribbean achievement gap: tests, tiers and teachers expectations. *British Educational Research Journal*, *38*(1), 75–101.

Strand, S., & Demie, F. (2007). Pupil mobility, attainment and progress in secondary school. *Educational Studies*, *33*(3), 313–331.

Strand, S., & Winston, J. (2008). Educational aspirations in inner city schools. *Educational Studies*, *34*(4), 249–267.

Swann Report. (1985). *The Swann Report "Education for All."* Retrieved from http://www.educationengland.org.uk/documents/swann/swann18.html

Szulkin, R., & Jonsson, J. O. (2007). Ethnic segregation and educational outcomes in Swedish comprehensive schools. *Working Paper Stockholm University Linnaeus, Centre for Integration Studies*, *2*.

Teney, C., Devleeshouwer, P., & Hanquinet, L. (2013). Educational aspirations among ethnic minority youth in Brussels: Does the perception of ethnic discrimination in the labour market matter? A mixed-method approach. *Ethnicities*. doi:10.1177/1468796812472009

Van de Werfhorst, H., & Hofstede, S. (2007). Cultural capital or relative risk aversion? Two mechanisms for educational inequality compared. *The British Journal of Sociology*, *58*(3), 391–415.

Van Ours, J. C., & Veenman, J. (2003). The educational attainment of second-generation immigrants in The Netherlands. *Journal of Population Economics*, *16*, 739–753.

Vermeulen, H. (2000). The role of culture in explanations of social mobility. In H. Vermeulen & J. Perlmann (Eds.), *Immigrants, schooling and social mobility. Does culture make a difference?* (Vols. 1-Book, 1-Section). New York: Palgrave Macmillan.

Ward, K., & D'Souza, J. (2008). *LSYPE User guide to the datasets: wave one to wave three*. Department for children schools and families.

Wilson, D., Burgess, S., & Briggs, A. (2005a). The dynamics of school attainment of England's ethnic minorities. *CMPO Working Paper Series*, *05/130*.

Wilson, D., Burgess, S., & Briggs, A. (2005b). The dynamics of school attainment of England's ethnic minorities. *CMPO Working Paper Series*, *No 05/130*.

Wilson, K., Wolfe, B., & Haveman, R. (2005). The role of expectations in adolescent schooling choices: do youths respond to economic incentives? *Economic Inquiry*, *43*(3), 467–492.

Wong, C. A., Eccles, J. S., & Sameroff, A. (2003). The influence of ithnic discrimination and ethnic identification on African American adolescents' school and socioemotional adjustment. *Journal of Personality*, *71*(1197), 1232.