The Aspiration-Poverty Trap: Why do Students from Low Social Background Limit their Ambition? Evidence from France *

Nina Guyon[†]and Elise Huillery[‡]

February 18, 2014

Abstract

The paper studies the reasons why students who have the same academic abilities have different educational aspirations depending on whether their parents are low educated and whether they live in a disadvantaged neighbourhood. We propose a model of how educational aspirations develop in order to clarify how social background influences aspirations. We then provide an empirical test for the social and psychological factors exposed in the model. We find three reasons for the social gap in aspirations: low background students have limited option set in mind, they fear peer sanction, and they underestimate their academic proficiency. We do not find evidence that students like to conform to their peers.

JEL Codes: I24, D81

1 Introduction

Despite equal test scores at school, students from low social background exhibit lower aspirations than students from high social background. The inequality in schooling aspirations has been first quantified by sociologists in what is known as the "Wisconsin Model" using US data: at similar score of academic aptitude and grades in 11th grade, students whose father has a high education level, occupation level and income are more likely to declare that they want to attend a four-year college than those whose father's education, occupation level and income is low (Jenck, Crouse and Mueser, 1983). The effect of father's education and occupation is not driven by differences in

education affordability since it holds at similar level of father's income. Using data on French 7th graders in the early 1980s, Duru-Bellat (1988) showed that children of senior executives were more likely to continue junior high school after grade 7 than children of blue collar workers despite similar grades[1]. More recently, Hoxby and Avery (2012) show that the vast majority of very high-achieving students who are low-income do not apply to any selective college or university despite the fact that selective institutions would often cost them less. Using original data on French nineth graders, we also find that French students' family background influences their aspirations after controlling for their academic aptitude: students whose parents are low educated are 11 percentage points less likely to declare that they want to attend academic high schools[2], and 16 percentage points less likely to declare that they want to attend at least 3-year college, than students of the same academic aptitude (measured by an independent acamedic test[3]) whose parents are educated[4] at least one parent has a high school degree (Appendix Tables 1 and 2. For more details see Guyon and Huillery, 2014). In this companion paper, we also find that students in Priority Education zones (French Zones d'Education Prioritaire) are less likely to have a preference for academic high schools and 3 or more-year higher education, irrespectively of their parents' education. Despite similar academic ability, both parents' education and social environnement thus influence student aspirations.

The economic issue with the inequality in aspirations is that aspirations determine where students apply to, and therefore their actual human capital accumulation. Hoxby and Avery (2012) provides direct evidence that students from low social background do not apply to selective college. Jenck et al. (1983) also show that education plans in eleventh grade are a strong predictor of the number of years of education completed at the adult age, after controlling for academic aptitudes and grades as well as parents' characteristics[5]. Aspirations are therefore important since they influence future real schooling choices. Moreover, aspirations and academic performances might be endogeneously co-determined: low aspirations are likely to result in lower effort at school,

---

[1] An important critic that was made to this result is that grades are contaminated by school-to-school differences in grading standards. High grades in low-performing schools do not reflect the same academic ability than the same grades in a high-performing school. The difference in grading standard is taken into account by teachers and educational professionals when assessing the academic level of students (Broccolichi, 2014).

[2] Lycée Général et Technologique. It is the top level high school in France, among other options including vocational high school and apprenticeship (also vocational but without high school diploma).

[3] In order to measure academic aptitute without any contamination by differences in grading standards, we administered the same math test to all students in our sample and graded it ourselves.

[4] Hereafter, "low educated parents" means that both parents have no high school degree, or one parent does not have any high school degree and the other has a vocational high school degree. "educated parents" refers to all other cases, meaning that both parents have a vocational high school degree, or at least one parent has at least an academic high school degree.

[5] Parent characteristics include income, education of the father and the mother, father's occupation and parents' preference for college education.

translating into lower academic performances. In turn, low academic performances translate into low aspirations since students are aware that selection into higher education is based on academic performances. In fact, Jenck et al (1983) provides evidence that grades and academic ability are both strong predictors of educational aspirations. Given the (potential) influence of aspirations on academic performances (empirical evidence is still needed here), and the influence of academic performances on aspirations, aspirations are able to generate a poverty trap. In this perspective, the fact that social background undermines aspirations creates an important reinforcer of inequalities at school: in the hypothetical situation where disadvantaged students would start with similar academic aptitudes as advantaged students, they would still end up at different human capital accumulation levels because of lower aspirations.

This paper contributes to the literature by exploring the reasons for the social gap in aspirations. Building on the economic and sociological literatures, it first provides a theoretical framework that formalizes how schooling aspirations develop in order to clarify what factors play a role in students' ambition level. We consider three categories of factors: economic factors, social factors, and psychological factors, and in each category we hypothesize a causal effect of each factor on aspirations. Second, we use a lab-in-the-field experiment to provide empirical evidence on the role of the social and psychological factors: taste for conformity to peers, fear for peer sanction, limited set of education options in mind, and lack of self-esteem as a consequence of social stereotypes. Despite qualitative evidence provided in the sociological literature, this paper is the first attempt to provide a comprehensive theory of how aspirations develop and to assess whether the social and psychological factors are indeed at work for a large proportion of individuals and are sufficiently important to contribute to the social gap in aspiration.

In October-November 2012, we conducted a survey on 6,000 nineth graders in three French academic divisions (Versailles, Paris and Créteil). In France, grade 9 is the last grade in junior high school so at the end of the year students have to decide whether to apply to high school or not, and, if so, to which type of high school. Half of the sampled schools are labelled "Priority Education" (French Zones d'Education Prioritaire, a program that channels additional resources to schools in disadvantaged areas), while the other half schools are classic schools enrolling students from more advantaged social background. The survey was conducted in two steps. First, the students took a 30-minute math test in order to assess their academic ability. One week after, the students took a questionnaire which asked about which education options they know, which they judge accessible,

and finally which they prefer. We can thus distinguish the set of options that students have in mind (which options they *know*) from aspirations (which options they *prefer*). The three questions were asked first for high school education, then for higher education. The questionnaire also entailed questions to measure student self-esteem and parental characteristics, in particular father's and mother's education. Importantly, we introduced variations in the questionnaire in order to test the role of social factors -fear of peer sanction and taste for conformity to peers- as well as psychological factors -limited set of options in mind and stereotype threat to self-esteem. Students of the same class were randomly assigned to the different versions of the questionnaire.

We find evidence that both social and psychological factors influence student aspirations. First, students in Priority Education and students whose parents are low educated have a more limited set of options in mind than the others. For students in Priority Education with educated parents, providing the set of existing options is enough to close the gap and make aspirations similar to those of students out of Priority Education. However, students with low-educated parents still exhibit lower aspirations than their educated-parent counterparts even when the existing set of options is available, revealing a more profound effect of parents' education on children's aspirations.

Second, students exhibit a strong fear of peer sanction. Actually, making their aspirations visible by classmates changes substantially students' apirations. It reduces dramatically the proportion of students who prefer academic high school, as well as the proportion of students who prefer 5 or more-year higher education. Instead of revealing these ambitious preferences to classmates, students abstain or exhibit less ambitious preferences. This finding gives clear evidence that peer pressure is an important factor when students form their aspirations.

Third, our results provide some support for the idea that students like to conform to their peers, although our test could reveal only a moderate taste for conformity. Students who are given a school-specific reference point are more likely to declare the reference point as their preferred option than students who do not have this information. Conformity to the reference point remains small and statistically insignificant for high school options, whereas it proved larger and significant for higher education. This finding suggests that conformity to peers might play a role when students are more uncertain about their preferences, although it does not seem to be extremely present for less uncertain choice. Finally, we do not find support for the idea that social stereotypes have an depressing effect on self-esteem and aspirations.

There are three key policy implications of our findings. First, while the cost of education and

the lower returns to education might also play a role in the social gap in aspirations, social and psychological factors should receive attention and be taken into account in the design of possible interventions addressing this issue. Second, making the set of existing options salient (as it is the case when nineth graders have to fill out an administrative wish-list form later in the year) closes the gap when parents are educated, but not when parents are low-educated. Third, one promising avenue for public policies is to decrease peer pressure and make students more confortable with individual preferences that might differ from peers' preferences, especially when it comes with ambitious preferences.

The remainder of the paper is organized as follows. Section 2 presents a simple theory of the way aspirations develop. Section 3 presents the context in which the experiment was set up, the research questions it seeks to address, and the experimental design. Section 4 presents the data. Section 5 presents the results, and Section 6 concludes.

2   The Theoretical Framework

To the best of our knowledge, Sewell, Haller and Portes (1969) provides the first theoretical framework of how educational aspirations develop. It assumes that educational aspirations are determined by significant others' influence (friends). They also assume that significant others are determined by academic performances and socioeconomic status, while academic performances are determined by mental ability and socioeconomic status. So academic performances, mental ability and socioeconomic status play an indirect role on educational aspirations through friends' characteristics and influence. Sewell, Haller and Olhendorf (1970) then enriched the model by allowing academic performances for having a direct influence on educational aspirations, in addition to its indirect influence through friends' characteristics.

This approach needs to be revisited since it does not take into account the direct effect of the cost of education and perceived returns to education on aspirations. Moreover, friends' influence is taken into account but the mechanisms behind their influence are not clear. In this paper, we thus propose a more comprehensive view of how aspirations develop starting from a standard utility maximizing approach. We then enrich the framework by considering non-standard factors that could also play a role in the formation of aspirations.

5

Standard Utility Maximizing Approach

We consider a self-interested student. She faces a set of education options S and chooses the option $s*$ which maximizes her utility. We posit that options are more or less academically ambitious and can be ranked on a scale of ambition. If option s is less ambitious than option s', we will write for simplicity $s < s'$. Here, ambition is used in the narrow sense of academic ambition, and by no way refers to the more general motivation that students put in succeeding in their life. Student's utility associated to each option $s \in S$ is the difference between the benefit she would extract from option s and the cost of option s. Cost and benefit include first an economic component. The economic benefit of option s is given by the return to education r_s of option s, conditional on the fact that she succeeds in this option which happens with the probability θ_s. The economic cost of option s is the aggregated cost c_s of tuition fees, transportation costs and any other costs that would occur if option s is chosen, like rent (if the student has to move away from home) or credit repayment (if the student has to borrow).

Cost and benefit of option s also include a social component. The social benefit of s depends on the distance between option s and the options chosen by friends. As modelized by Akerlof and Kranton (2000) and (2002), and discussed by Perier (2004) and Millet and Thin (2005) and (2007), students like to conform to their friends (or their social category) because it gives them the opportunity to enjoy being in the same school as their friends and avoid the effort required to make new friends. We thus assume that they have a direct utility of choosing the same option as their peers. Let us denote $\bar{s}$ the most popular option among friends and ν the utility gain that the student gets from having the same aspirations as her friends (the intensity of her taste for conformity to peers). The social benefit of s is ν if $s = \bar{s}$ and 0 if $s \neq \bar{s}$. In addition to the social benefit of choosing the same option as friends, we allow the student for supporting a social cost for being ambitious due to potential peer sanction (mocking, booing or bullying) (Herpin, 1996; Austen-Smith and Fryer 2005). This effect would take the form of an additional cost π that would be incurred only for ambitious options , let say s such that $s > \underline{s}$.

For any $s \neq \bar{s}$, the utility associated to option s is:

$\theta_s r_s - c_s - \pi$ if $s > \underline{s}$

$\theta_s r_s - c_s$ if $s \leq \underline{s}$

For $s = \bar{s}$, the utility associated to option s is:

$\theta_s r_s + \nu - c_s - \pi$ if $\bar{s} > \underline{s}$

$\theta_s r_s + \nu - c_s$ if $\bar{s} \leq \underline{s}$

We consider that students are heterogenous in their academic performances a. Academic performances influence the probability that the student succeeds in option s, higher performances resulting in a higher θ_s (so $\theta_s = \theta_s(a)$ with $\theta'_s(a) > 0$). Since more ambitious options yield higher returns to education ($s < s' \Rightarrow r_s < r_{s'}$), high-performing students should be more likely to prefer ambitious options than low-performing students holding all other factors constant.

Broadening the Pscyhological Base of Aspirations

In this framework, we allow students for being simultaneously self-interested and influenced by psychological factors. First, we assume that students have different set of options in mind depending on the information they received from teachers, friends and relatives (Oyserman et al. 2006, Masson 1997, Van Zanten 2009). More precisely, we hypothetize that the set of options in their mind is loosely influenced by official information provided by school staff on existing options, and strongly influenced by more tangible information provided by friends and relatives (or more generally role models). Role models transform abstract information into salient and tangible one. As a consequence, students might not think of option s if nobody among their friends and relatives personifies this option and is able to share experience about it. We assume that abstract knowledge about an option is not sufficient to make this option present in student's mind.

Second, we hypothetize that aspirations depends on the level of self-esteem and that self-esteem is not only determined by objective performances (grades), but also by social stereotypes. Many lab or lab-in-the-field experiments show that activating social stereotypes associated with gender or ethnic group has a depressing effect on immediate individual performances (Steele and Aronson 1995, 1999, Croizet and al. 2001, 2004, Hoff and Pandey 2004, Dee, 2009). The reason for this effect is the fact that stereotypes make students less confident in their ability to perform than equally performing students who are not subject to negative stereotype. In our model, we thus incorporate the idea that students from low social background may be less confident in their ability to perform at school than their socially advantaged counterparts, even at similar performances. This can be reflected in the probability to succeed $\theta_s = \theta_s(\delta a)$ with $\delta \in [0,1]$ representing the academic stereotype associated with student's social category.

Explaining the Social Aspiration Gap

In this framework, we can understand why students with low social background (low-educated parents or disadvantaged social environnment as reflected by the fact that they attend a school in Priority Education) have lower aspirations than students with educated parents and students out of Priority Education.

First, low social background students might anticipate lower returns to education r_s of ambitious options s due to discrimination by employers (Aeberhardt et al. 2011, Adida et al. 2010), or less complementarity between their social capital and jobs that demand skills of option s (Gobillon et al. 2011): their social network offers less connections to workers in the sectors that demand skills of option s so it is more difficult for them to take advantage of these skills. Moreover, low social background is likely to decrease θ_s of ambitious options s because the probability to succeed also depends on potential discrimination by teachers, as well as complementarity between social capital and option s's curriculum: relatives are less able to help students in their homework if they do not have the skills to help and cannot afford extra-class courses. Broccolichi (2014) looks at students with similar test scores in grade 6 and shows that those whose parents are blue collar workers have a lower probability to pass High School final exam (*Baccalauréat*) than students whose parents are senior executives, suggesting a smaller θ_s even at the same initial level of academic performances a.

Second, low social background students might face higher c_s for ambitious options if those options are located far from home (concentration of academic high-schools and universities in advantaged neighborhoods), and if parents cannot afford the cost of option s (the student has to borrow and support additional financial costs) (see Palheta 2011).

Third, high-performing students who have low-performing peers face a lower reference point $\bar{s}$ so they have a lower utility to prefer ambitious options than high-performing students who have high-performing peers because they would more often deviate from $\bar{s}$ and loose ν.

Fourth, peers might sanction ambitious students more heavily if peers have low performances and low ambitions. In this case, the cost π that would be incurred for ambitious options would be larger in Priority Education compared to advantaged neighbourhoods. Moreover, peer sanction π would be attenuated if teachers and parents encourage and support the student in ambitious aspirations. The importance of peer sanction would thus be larger when students benefit less from parents' and teachers' support.

Fifth, all options might not be in the mind of all students because students consider different

subsets of educational options $\tilde{S} \subset S$ depending on the specific role models available in their social network. Low social background students would tend to consider less ambitious subsets of options than advantaged students.

Finally, the stereotype associated with low social categories is that students are academically less efficient so they would internalize a low δ, whereas high social categories are stereotyped academically efficient and internalize a high δ. It means that despite similar academic performances, students in low social categories anticipate a lower θ_s than students in high social categories.

3 The Experiment

Research Questions

As proposed in our model, we think of aspirations as the result of economic, social and psychological factors. This paper proposes a lab-in-the-field experiment to test the role of the social and psychological factors. We do not investigate the role of economic factors for two reasons : first, our sample size was limited by budget constraints so we chose to test a few factors in order to keep enough statistical power for each factor. Second, it seemed more difficult to reveal the role of economic costs and benefits of education through a lab-in-the-field experiment because introducing variations in perceived financial cost and benefit of education in the lab environnment seems too unrealistic.

However, we find suggestive evidence that the cost of education is not the main driver of the social gap in aspiration. First, it is worthy to note that our sampling strategy was designed to make geographical distance to any education options equal from schools in and out of Priority Education so that geographical access to educational plans does not differ across high and low social backgrounds. In our sample, 11% of students think that they should move out of their parenst's home to pursue some of the options they know at the High School level (29% at the higher education level) and these proportions are similar for students in and out of Priority Education, as well as for students with low-educated and educated parents. Access being similar for all students, we then investigated students' perception of the cost of the options they know (including tuition fees, transportation cost, relocation cost). In France the vast majority of high schools and universities are public and free[6]. In our sample, students in Priority Education and students with low-educated

---

[6]Universities charge very small tuition fees -about 200 euros per year. Only selective colleges, the "Grandes Ecoles", charge substantial tuition fees (from 2,000 for ingeneer schools to 12,000 euros for business schools).

parents estimate a rather lower cost of education for the options they know than the others: 33% estimate that the options they know would cost more than 1,000 euros per year, while 40% among students out of Priority Education and among students whose parents are educated. Importantly, a lower proportion of students in Priority Education than out of Priority Education anticipate that some options they know would require to borrow money (22% versus 25%, p-value<0.01), and this is exactly the same for students whose parents are low-educated compared to students whose parents are educated (22% versus 25%, p-value<0.01).

As for returns to education, we asked students to estimate the probability to succeed in one's educational plans for a high-achieving student under two conditions: the students lives in an advantaged neighbourhood, and the student lives in a disadvantaged neighbourhood. In our sample, the probability to succeed was estimated 85% for the student living in the advantaged neighborhood, whereas 52% for the equally performing student living in the disadvantaged neighborhood. This result reveals that students attribute a very important role of social background on θ_s. One reason for the social gap in aspirations is thus likely to be that students from disadvantaged neighbourhood or from low-educated families are discouraged because they internalize a huge difference in the probability to succeed. However, this result is based on self-reported information. Since we are not confident that students are fully aware of the factors that drive their aspirations, we take this evidence as only suggestive and do not draw any conclusion on the role of economic factors in determining educational aspirations. In contrast, we propose some tests providing evidence on the role of the social and psychological factors.

Treatment arms

Control group   In the control group, students took a 50-minute individual questionnaire in class, in the presence of a enumerator and, except in few cases, a teacher. The questionnaire consists in three main sections took in the following order:

- The Harter Self-Perception Profile for Adolescents scale, which provides a measure for four dimensions of self-esteem (school proficiency, social acceptance, behavior and overall value).

- A set of questions on educational aspirations: the options they know at the High School level, the options they think possible, and the options they prefer. Then the same questions were asked at the higher education level. Finally, they were asked abouy elements that influenced their educational aspirations: sources of information, distance, cost, role models, familial

10

network, peer desirability and peer sanctions.

- A set of questions on their social background: father and mother's citizenship, education and job, and whether their middle school is in Priority Education or not.

In this version of the questionnaire, no information was provided about existing options and the questions on the options they know/they think possible/they prefer were left open so as to not induce any particular response.

Limited Set of Options in Mind (T1) Students in this treatment arm had the same questionnaire as the control group except that they were given a list of all existing options at the high school level and at the higher education level instead of asking them which options they know. At the beginning of the section on aspirations, they had the list of options and could confirm they read the list of options (91% confirmed). Then they were asked which options they think are possible, and which options they prefer. Compared to the control group, these students are reminded about the different options right before taking questions on orientation. If the reason why low social background students have lower aspirations is that they do not think about the complete set of options and have less ambitious options in mind, then we expect that this treatment would enlarge the set of options they have in mind and reduce the social gap in aspirations as measured in the immediately subsequent questions.

Taste for Conformity to Peers (T2) In this treatment arm, students took the same questionnaire as in the control group except that they were informed about the most frequent option chosen by students who attend their middle school (based on school level information from the headmaster). Three categories of middle schools were made based on the most frequent option: "academic high school" (group A), "vocational high school" (group B), and "dual education[7]" (group C). This reference point was mentioned at the beginning of the section on educational aspirations in order to make it salient before students were asked about the options they know, they think possible, and they prefer. However, mentionning an option in the questionnaire is likely to result in a higher proportion of students choosing this option not because they like to conform to peers, but because the option is more salient. In order to differentiate these two effects, the questionaire not only mentionned the school-specific reference point, but also another option, referred to as the "example"

---

[7]"Centre de Formation par l'Apprentissage", or apprenticeship

option, that was not labelled as particularly popular in their middle school[8]. This way, the salience effect should work for both mentionned options, whereas taste for conformity to peers would work only for the reference point option. 93% of students confirmed that they read the paragraph providing information on the reference point and "example" options. If students like to conform to their peers, we expect that this treatment would increase the proportion of students who prefer the reference point option.

Fear of Peer Sanctions (T3)   In this treatment arm, students took the same questionnaire as the control group except that they were informed that a discussion of aspirations will be held in the class at the end of the survey and that all educational aspirations will be shared with classmates in order to evaluate educational aspirations in the class. The difference with the control group is thus that students anticipate that peers will be informed about their aspirations. 92% of students confirmed that they were aware of the collective discussion. If students take care about peers' opinion and fear about peer sanction, we expect that this treatment will decrease the proportion of students who prefer ambitious options.

Stereotype Threat (T4)   Students in this treatment took the question set on social background first, then the Harter scale, and finally the section on educational aspirations. This group thus differs from the control group in that the social stereotype is activated before students take the Harter scale and questions on aspirations. If stereotypes associated with low social categories make students feel that they are academically less efficient, we expect that they would exhibit lower self-esteem levels and lower aspirations when the stereotype is activated.

4   Data

Sampling Strategy

We sampled 59 middle schools to take part of the study. The sampling strategy was done along four criteria. First, the headmaster of the middle school had to accept to participate in the study, which means that the middle schools in our sample are headed by persons who are more concerned by the topic of the study, and more open to accept the constraints imposed by the study, than the average middle schools. Second, the middle schools should be clearly advantaged or clearly

---

[8]For instance in type A schools, the questionnaire said: "One option is vocational high school. In your middle school, students typically enroll in academic high schools."

disadvantaged based on parents' socio-economic background data provided by the education district (*Académies*): we excluded middle schools whose population was intermediate in terms of social characteristics (neither advantaged nor disadvantaged) because the evaluation of the importance of peers' influence requires some heterogeneity in average students' social charateristics. Third, we wanted an equal number of students from advantaged and disadvantaged schools in order to have the largest statistical power in our subgroup analysis. Finally, to enter the sample, a disadvantaged middle school should be close to an advantaged middle school (and vice-versa) so that students from both advantaged and disadvantaged social backgrounds have a similar geographical access to any education options at the High School and at the higher education levels.

As a result, the sample entails 6 middle schools from Paris (3 in Priority Education and 3 out of Priority Education), 15 from Créteil (8 in Priority Education and 7 out of Priority Education) and 38 from Versailles (23 in Priority Education and 15 out of Priority Education[9]).

Data Collection

The survey was taken in two parts. First, students took a 30-minute math test to approximate their academic achievement. Grades are contaminated by school-to-school differences in grading standards so we created a test to measure academic performances independently from teacher grading differences. The math test consisted in 7 different exercises covering grade 8's math curriculum. This test was administered in class by a math teacher. However, students and teachers were informed that the math test would be graded by independent researchers and not by the teacher. They were also informed that the purpose of the study was not to evaluate their personal performance and that their score won't be transmitted to anybody (parents, teachers, school staff).

Second, the week after, students took the 50-minute questionnaire described in the previous section. The survey took place from mid-October to early December 2012. An important constraint was to administer the questionnaire to students early in grade 9 because from January on, students receive information and advices about educational options at the High School level from specialized school staff and teachers. Since we were interested in students' aspirations itself, we wanted to survey students before this information was provided in order to avoid contamination by teachers' opinion.

From the 6,903 students registered in the 270 classes of our sample, 6,382 students took at least

---

[9]In this académie, the number of classes and class size are larger in non-Priority Education schools so a fewer number of middle schools out of Priority Education could provide the same number of pupils.

one part of our questionnaire (3,181 in Priority Education and 3,201 out of Priority Education). Among these students, 6,005 took the math test, 6,049 took the questionnaire, and 5,672 took both. The vast majority of the students who did not took one part of the survey were not present the day when that part was administered (only a few students refused to answer the survey). Attendance rate was found 87% in the first visit and 88% in the second visit.

Variables of interest

Our main outcome of interest is the level of education reflected in students' preferred option. At the High School level, we distinguish 5 groups of preferred options:

- No preferred option is mentionned: this category groups the students who responded that they did not know which option they preferred ("none", "I don"t know"), or did not write any answer to this question.

- No education: this category entails students whose preferred options do not require any education: "footballer", "singer", "actress", "model", among others.

- Dual education: this category corresponds to the students whose preferred option is technical education without no high school diploma: apprenticeship and aptitude certificate for worker/employee positions (French CAP and BEP).

- Vocational High School: this category corresponds to the students whose preferred option is vocational Hish School (French lycée professionnel). In vocational High School, students typically prepare technical high school diploma ("bac professionnel") and those who pass it can either work or access to some higher education options.

- Academic High School: this category corresponds to the students whose preferred option is academic Hish School ("lycée général et technologique"). Students prepare academic high school diploma ("bac général et technologique") with the aim to achieve some higher education.

For each of these levels of education, we present an indicator of whether student's preferred options include responses in that category. Students were asked about one preferred options, but some of them gave several preferred options in which case they are counted in all the corresponding categories[10]. Since the number of responses per student is important to interpret the variations in

---

[10]Students responded from 0 to 3 preferred options. 22% gave no preferred option, 67% exactly one, 10% two, and 1% three.

the proportion of students in each level category, we also present the number of preferred options as an outcome.

At the higher education level, we present the following level categories: no preferred option, no higher education[11], one and two-year college education (French IUT, BTS, bac+1 and bac+2 diploma), three and four-year college education (Licence, bac+3 and bac+4 diploma), master degree, and more than 5 years (graduate studies or jobs like "doctor", "architect", "researcher", etc).

Our independent variables of interest are the treatment group, and the treatment group interacted with the Priority Education dummy, a dummy "low-educated parents" indicating that both parents are low-educated (at most one vocational high school diploma), as well as the interaction between those two variables. Actually, we allow for heterogenous effect of the treatments for students in and out of Priority Education, for students whose parents are low-educated, as well as for students who have low-educated parents in Priority Education and students with low-educated parents out of Priority Education. Finally, we include indicators of math test score quantiles (students are classified in 20 groups according to their score at the math test) in order to capture heterogeneity in educational aspirations and improve the precision of the estimates.

Finally, we use a measure of self-esteem both as a dependent and as an independent variable in some specifications. The Harter scale consists in a serie of 20 questions divided in 4 categories: 5 questions on school proficiency, 5 on social acceptance, 5 on behavior, and 5 on one's overall value. Questions in each category are used to construct a category-specific score, and the 20 questions altogether are used to construct a global score of self-esteem. Each score ranges between 1 and 4, 4 being the highest level of self-esteem.

5   Results

Do Low Social Background Students Have Limited Option Sets in Mind?

Table 1 presents the options students know at the High School level, while Table 2 presents the options they know at the higher education level. In these tables, we consider only students in the control group in order to evaluate the option sets students have in mind in absence of any manipulation. Both tables show that students in Priority Education are less likely to mention the

---

[11]corresponding to students whose preferred option is a job that does not require higher education, like again "athlet", "singer", "musician", "writer", "photograph", etc. If the student responded a job that requires higher education, like "doctor" or architect", she was put in the corresponding level category. For education levels associated to any job, we used the website of ONISEP, a French institute specialized in student information and orientation.

most ambitious options among the options they know: while 88% of students mention academic high school and 21% mention master degree out of Priority Education, 83% and 13% mention these options in Priority Education (the differences are statistically significant at respectively the 10 and 5 percent levels). In addition to this effect of being in Priority Education, fewer students whose parents are low educated mention these options. A student in Priority Education whose parents are low educated is 10 percentage points less likely to mention academic high school and 17 percentage points less likely to mention master degree than a student out of Priority Education whose parents are educated. Note that the option set that disadvantaged students have in mind does not only entail less often ambitious options, it also entails less often options that do not require any education (Table 1-column 4 and Table 2-column 5). So disadvantaged students are more likely to not mention any option known (Table 1-column 5 and Table 2-column 6), and mention a smaller number of options (Table 1-column 6 and Table 2-column 7).

How much does the difference in option sets contribute to the difference in aspirations? Comparing students from different social background with similar option sets in mind provides an answer. For each level of education, Tables 3 and 4 present the proportion of students who prefer this level of education at similar math test score and similar presence of this level of education in mind (we control by quantile of math test score and by an indicator of whether this level of education is in the option set). At both the High School and higher education levels, we find that, despite similar option sets in mind and similar academic performances, students in Priority Education and students whose parents are low educated are less likely to prefer ambitious options and more likely to prefer less ambitious options (vocational High School and options that do not require any education at the High School level, and options that do not require any higher education at the higher education level). Comparing the social gap in aspirations with (Tables 3 and 4) and without (Appendix tables 1 and 2) taking into account the difference in option set in mind, we can conclude that differences in option set in mind do explain part of the social gap in aspirations, but not all of it.

The question now is whether T1 is able to enlarge the set of options they have in mind in a way that reduces the social gap in aspirations as measured in the immediately subsequent questions. As for aspirations at the High School level, providing the list of existing options does not change anything for students whose parents are educated (neither in nor out of Priority Education). For students whose parents are low-educated, providing the list of existing options closes the gap in the number of preferred options, but in favor of less ambitious options (no education and dual

education), not in favor of ambitious ones (the gap in the proportion of students who prefer academic high school remains the same).

As for aspirations at the higher education level, the general effect of T1 is a decrease in the proportion of students who do not mention any preferred option (and consequently the average number of preferred options) and an increase in the proportion of students who prefer the master degree level. This effect reflects a general enlargement of students' option sets (probably related to the fact that students know less about higher education than about High School education) whatever students' social background. We also find that T1 closes some social gaps in aspirations: students whose parents are educated are no longer more likely to prefer options that do not require higher education in Priority Education compared to their counterparts out of Priority Education. Moreover, students out of Priority Education are no longer less likely to prefer 3-4 years of college when their parents are low educated compared to those whose parents are educated.

To conclude, low social background students have more limited option sets in mind, which explains some but not all of the social gap in aspirations. Providing the list of options just before they are asked about the options they prefer reduces the gap in aspirations along some dimensions at the higher education level but does not close it, especially at the High School level (when the initial level of information among all students is better). This result suggests that students need more than just abstract information in order to enlarge their option set.

Do Students like to Conform to Their Peers?

If students like to conform to their peers, we expect that students in T2 respond more often that they prefer the reference point option than the other options (after substracting the salience effect reflected in the preference for the "example" option). Tables 7 and 8 present the effect of T2 on students' preferences respectively at the High School and at the higher education levels in B-type schools (Appendix tables 3-6 present the effect in type-A and type-C schools, which is qualitatively similar). In this type of schools, the reference point option is "vocational High School" while the example option is "academic High School". All type-B schools are in Priority Education so we look at the heterogenous effect of the treatment by parent education level only. We do not observe any change in students' preferences in response to the reference point at the High School level (Table 7). At the higher education level, we observe that students whose parents are educated are less likely to prefer master degrees and options that do not require any higher education in T2 (Table 8).

However, it seems that they do not prefer the reference point option more often but rather reduced the number of options they prefer. So the effect of T2 is limited to those students with educated parents who tend to give more than one preferred option and limit their preferences to the reference point and the example options due to the treatment. Since this effect cannot be distinguished from a pure salience effect, we conclude that T2 did not give evidence of any taste for conformity to peers neither for students whose parents are low-educated, nor for students whose parents are educated. This absence of effect of T2 on preferences is not due to the fact that the treatment was not effective since 93% of the students confirmed that they have read the information about the reference point and the example options.

Do Students Fear Peers' Sanction?

In T3, students anticipate that their peers will observe their educational aspirations. Table 9 presents the effect of this treatment on aspirations at the High School level. Advantaged students (out of Priority Education and whose parents are educated) proved 11 percentage points less likely to declare that they prefer academic High School. Instead, they were 3 percentage points more likely to declare that they prefer vocational High School and 9 percentage points more likely to not declare any preferred option. So advantaged students clearly tend to hide ambitious aspirations to their peers. Students in Priority Education whose parents are educated had the same response to T3, except that they were less likely to express a preference not only for academic High School but also for vocational High School. This tendency to hide educational aspirations to peers was even a little bit more pronounced among students whose parents are low-educated, as reflected in the 9 percentage point increase in the proportion of students who do not declare any preferred option.

The picture is very similar at the higher education level (Table 10). In T3, students proved less likely to declare ambitious aspirations (master degrees and more than 5-year education). The proportion of students who do not give any preferred option does not increase, while the number of options decreased by 28% (from 0.82 down to 0.59), suggesting that the effect comes from those students who would have given several preferred options in the absence of the treatment. It is striking that students hide ambitious aspirations much more than the less ambitious ones. This effect is similar on all students, except on those in Priority Education whose parents are low-educated: those students are not only less likely to declare ambitious aspirations, but they are also 17 percentage points more likely to declare that they prefer options that do not require any higher

education[12].

Overall, these findings suggest that students care a lot about peers' opinion and fear about peer sanction. Fear for peer sanction decreases the proportion of students who prefer ambitious options and increases, for the most disadvantaged students, the proportion of them who prefer the least ambitious options.

Do Low Social Background Students lack Self-Esteem?

To explore whether stereotypes associated with low social categories make students feel less confident at school, Table 11 presents the correlation between students' level of self-esteem and their social background, controlling for their academic performances. Students whose parents are educated have similar levels of self-esteem (along all dimensions) in and out of Priority Education. However, we find that students whose parents are low-educated have a lower esteem of their school proficiency, despite similar academic abilities. The lack of self-esteem in school proficiency is less pronounced in Priority Education than out of Priority Education, which suggests that the lack of self-esteem in school proficiency due to one's parent education depends on peers' parent education (although the difference is not statistically significant)[13]. Since self-esteem along the school proficiency dimension captures how students *perceive* their academic performances, it seems plausible that the lower self-esteem in that dimension among students whose parents are low-educated contributes to their lower aspirations.

In order to evaluate how much the social gap in students' perception of their school proficiency contribute to the social gap in aspirations, we compare aspirations of students from different social background with similar levels of school proficiency perception and similar academic performances (Tables 12 and 13). Self-esteem in school proficiency is a good predictor of students' aspirations at both the High School and higher education levels, and taking it into account reduces a little bit the social gap in aspirations, although most of the gap remains (we observe only small changes in the coefficients on the low educated parent indicator).

In order to provide evidence on the role of the social stereotype on aspirations, the stereotype is activated in T4. Table 14 presents the effect of activating the social stereotype on the levels of

---

[12]On average those students declare the same number of preferred options as in the control group. Since the treatment induced a 20 percentage point increase in the proportion of students who declared at least one preferred option, it means that it also induced a smaller number of responses from those students who would have provided several preferred options.

[13]Note that the global score of self-esteem for students whose parents are low educated in Priority Education is larger than for the other students, which is due to higher esteem along the social acceptance dimension. This suggests that social background does not decrease self-esteem in general.

self-esteem. We do not see any significant impact of stereotype activation on self-esteem in school proficiency (the effect is negative for students whose parents are low-educated but it is very small and not significant).

6 Conclusion

This paper explores the reasons why students who have the same academic abilities have different educational aspirations depending on whether their parents are low educated and whether they attend a school in Priority Education. We propose a model of how educational aspirations develop in order to clarify how social background (both family and friends) can influence aspirations. We then provide an empirical test for the social and psychological factors exposed in the model.

We find evidence of three reasons for the social gap in aspirations. First, students whose parents are low educated and those who attend a school in Priority Education have different set of options in mind. Providing abstract information about the full set of options does not reduce the gap, which suggests that students need concrete exposure to the different options in order to enlarge their option set. Second, we find that students care a lot about peers' opinion and that peer pressure makes them less ambitious. In contexts where parents and teachers have a weak preference for ambitious options, peer pressure might lower actual aspirations. Third, we find that students whose parents are low educated have a lower self-esteem in their school proficiency, although the difference is small and accounts for only a small part of the social gap in aspirations. Equally important, we do not find evidence that students like to conform to peers in the absence of peer sanction.

In terms of policy implications, this paper provides support to three types of interventions to reduce the social gap in aspirations. A first type of interventions would be to expose students who have low social background to a variety of experiences and life stories to serve as role models and enlarge their option set. A second type of interventions would consist in improving students' ability to cope with peer sanction and be comfortable with ambition. A third type of interventions could focus on self-esteem so that students from low social background do not underestimate their school proficiency and objectivize their actual academic potential.

References

[1] Akerlof and Kranton. 2000. "Economics and Identity", the Quarterly Journal of Economics, 65(3): 715-753.

[2] Akerlof, George and Rachel Kranton. 2002. "Identity and Schooling: Some Lessons for the Economics of Education", Journal of Economic Literature, 40(4): 1167-1201.

[3] Austen-Smith and Fryer. 2005. "An Economic Analysis of "Acting White"", the Quarterly Journal of Economics, 120(2): 551-583.

[4] Bénabou, Roland and Jean Tirole. 2011. "Identity, Morals and Taboos: Beliefs as Assets", The Quarterly Journal of Economics, 126 (2): 805-855.

[5] Broccolichi Sylvain and Rémi Sinthon. 2011. "Comment s'articulent les inégalités d'acquisition scolaire et d'orientation ? Relations ignorées et rectifications tardives", Revue française de pédagogie, 175: 15-38.

[6] Croizet, Jean-Claude, Michel Désert, Marion Dutrévis and Jacques-Philippe Leyens. 2001. "Stereotype threat, social class, gender, and academic under-achievement: when our reputation catches up to us and takes over", Social Psychology of Education, 4, 295-310

[7] Croizet, Jean-Claude, Gérard Després, Marie-Eve Gauzins, Pascal Huguet, Jacques-Philippe Leyens, Alain Méot. 2004. "Stereotype Threat Undermines Intellectual Performance by Triggering a Disruptive Mental Load", Personality and Social Psychology Bulletin, 30, 721-732.

[8] Dee, Thomas S. 2009. "Stereotype threat and the student-athlete", NBER Working Papers 14705, National Bureau of Economic Research.

[9] Duru-Bellat. 1988. Le fonctionnement de l'orientation. Genèse des inégalités sociales à l'école. Lausanne, Editions Delachaux et Niestlé.

[10] Jenck, Crouse and Mueser. 1983. "The Wisconsin Model of Status Attainment: A National Replication with Improved Measures of Ability and Aspirations," Sociology of Education (January 1983): pp. 3-19.

[11] Guyon and Huillery. 2014.

[12] Herpin Nicolas. 1996. "Les amis de classe : du collège au lycée". Economie et statistiques, 293: 125-136.

[13] Hoff, Karla & Pandey, Priyanka, 2004. "Belief systems and durable inequalities: an experimental investigation of Indian caste", Policy Research Working Paper Series 3351, The World Bank.

[14] Hoxby and Avery. 2012.

[15] Masson, Philippe. 1997. "Elèves, parents d'élèves et agents scolaires dans le processus d'orientation", Revue française de sociologie, 38(1): 119-142.

[16] Millet Mathias and Daniel Thin. 2005. Ruptures scolaires : l'école à l'épreuve de la question sociale. Collection Le lien social, PUF, Paris.

[17] Millet Mathias and Daniel Thin. 2007. "Ecole, jeunes de milieux populaires et groupes de pairs", In : Marwan Mohammed et Laurent Mucchielli, Les bandes de jeunes. Des « blousons noirs » à nos jours, La découverte, Paris.

[18] Oyserman, Bybee, Terry. 2006. "Possible Selves and Academic Outcomes: How and When Possible Selves Impel Action", Journal of Personality and Social Psychology, 91(1): 188-204

[19] Périer Pierre. 2004. "Adolescences populaires et socialisation scolaire. Les épreuves relationnelles et identitaires du rapport pédagogique et identitaires du rapport pédagogique". L'orientation scolaire et professionnelle, 33(2): 227-248.

[20] Sewell, Haller and Olhendorf. 1970.

[21] Steele, Claude and Joshua Aronson. 1995. "Stereotype Threat and the Intellectual Test Performance of African Americans", Journal of Personality and Social Psychology, 69(5): 797-811.

[22] Spencer Steven, Claude Steele and Diane Quinn. 1999. "Stereotype threat and women's math performance", Journal of Experimental Social Psychology, 35: 4-28.

[23] Van Zanten, Agnès. 2009. Choisir son école : stratégies familiales et médiations locales. Collection « Le lien social », PUF, Paris.

Table 1:

VARIABLES	Among her options **known** for **high school,** the student mentions...					
	(1)	(2)	(3)	(4)	(5)	(6)
	Academic	Vocational	Dual	No education	No response	Number of options
Priority Education (PE)	-0.05*	-0.00	0.02	-0.04**	0.06**	-0.29
	(0.027)	(0.039)	(0.042)	(0.020)	(0.024)	(0.201)
Both parents low educated	-0.05*	-0.01	0.06	-0.04*	0.04*	-0.59***
	(0.027)	(0.039)	(0.043)	(0.020)	(0.024)	(0.202)
PE * Parents low educated	0.02	-0.01	-0.02	0.08***	-0.04	0.58**
	(0.037)	(0.054)	(0.059)	(0.028)	(0.034)	(0.281)
Constant	0.86***	0.66***	0.37***	0.06*	0.14***	3.74***
	(0.041)	(0.060)	(0.065)	(0.031)	(0.037)	(0.309)
Math Test Score	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.885	0.717	0.412	0.0591	0.0899	3.852
Number of observations	1235	1235	1235	1235	1235	1235
Adjusted R2	0.0734	0.00315	0.00471	0.00196	0.0513	0.0480

Table 2:

VARIABLES	Among her options **known** for **higher education**, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	More than 5 years	5 years	3 or 4 years	1 or 2 years	No higher education	No response	Number of options
Priority Education (PE)	-0.00	-0.08**	-0.03	-0.04	0.02	0.08**	-0.25
	(0.023)	(0.034)	(0.041)	(0.037)	(0.038)	(0.041)	(0.175)
Both parents low educated	-0.05**	-0.09***	-0.07	-0.04	-0.09**	0.13***	-0.71***
	(0.023)	(0.034)	(0.041)	(0.038)	(0.038)	(0.041)	(0.176)
PE * Parents low educated	0.03	0.04	-0.05	-0.00	-0.01	0.02	0.09
	(0.032)	(0.047)	(0.057)	(0.052)	(0.053)	(0.057)	(0.244)
Constant	0.07**	0.19***	0.33***	0.19***	0.28***	0.42***	1.97***
	(0.035)	(0.052)	(0.063)	(0.057)	(0.058)	(0.062)	(0.269)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.0753	0.206	0.377	0.256	0.264	0.387	1.847
Number of observations	1235	1235	1235	1235	1235	1235	1235
Adjusted R2	0.0133	0.0769	0.0505	0.0171	0.00620	0.0731	0.0777

Table 3:

VARIABLES	Among her **preferred** options for **high school,** the student mentions...					
	(1)	(2)	(3)	(4)	(5)	(6)
	Academic	Vocational	Dual	No education	No response	Number of options
Priority Education (PE)	-0.05	0.04*	-0.02	0.02*	0.01	-0.02
	(0.036)	(0.024)	(0.016)	(0.010)	(0.031)	(0.046)
Both parents low educated	-0.08**	0.02	0.02	-0.01	0.03	-0.09**
	(0.037)	(0.024)	(0.016)	(0.010)	(0.031)	(0.046)
PE * Parents low educated	0.02	-0.01	0.00	0.00	-0.00	0.01
	(0.051)	(0.033)	(0.022)	(0.013)	(0.043)	(0.064)
The option is among options known	0.10	-0.07	0.05	0.00	-0.03	-0.03
	(0.108)	(0.070)	(0.047)	(0.028)	(0.091)	(0.137)
Constant	0.13*	0.08**	-0.00	-0.02	0.15***	0.55***
	(0.065)	(0.038)	(0.025)	(0.015)	(0.047)	(0.075)
Math Test Score	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.662	0.0891	0.0372	0.0138	0.209	0.907
Number of observations	1235	1235	1235	1235	1235	1235
Adjusted R2	0.214	0.0828	0.0525	0.0865	0.236	0.163

Table 4:

VARIABLES	Among her **preferred** options for **higher education**, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	More than 5 years	5 years	3 or 4 years	1 or 2 years	No higher education	No response	Number of options
Priority Education (PE)	-0.02	-0.01	-0.02	0.00	0.08**	-0.05	0.02
	(0.015)	(0.022)	(0.029)	(0.025)	(0.038)	(0.038)	(0.062)
Both parents low educated	-0.02	-0.02	-0.06**	0.01	0.08**	0.02	-0.07
	(0.016)	(0.023)	(0.030)	(0.025)	(0.038)	(0.039)	(0.062)
PE * Parents low educated	0.02	0.01	0.03	-0.03	-0.11**	0.03	-0.08
	(0.021)	(0.031)	(0.041)	(0.035)	(0.053)	(0.053)	(0.086)
The option is among options known	0.05	0.11*	-0.10	-0.02	0.01	0.06	0.07
	(0.045)	(0.066)	(0.087)	(0.075)	(0.112)	(0.113)	(0.182)
Constant	0.05**	0.01	0.06	0.02	0.28***	0.18***	0.58***
	(0.024)	(0.034)	(0.046)	(0.039)	(0.059)	(0.060)	(0.097)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.0340	0.0874	0.189	0.121	0.321	0.410	0.815
Number of observations	1235	1235	1235	1235	1235	1235	1235
Adjusted R2	0.0357	0.165	0.244	0.198	0.118	0.190	0.190

Table 5:

	Among her preferred options for **high school**, the student mentions...					
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Academic	Vocational	Dual	No education	No response	Number of options
T1	0.01	-0.01	0.02	0.01	-0.02	0.01
	(0.031)	(0.019)	(0.016)	(0.009)	(0.027)	(0.041)
T1*PE	-0.01	0.02	0.03	-0.01	-0.03	0.04
	(0.053)	(0.034)	(0.028)	(0.015)	(0.047)	(0.071)
T1*Parents low educated	-0.00	0.01	0.04	0.02	-0.01	0.18**
	(0.054)	(0.034)	(0.028)	(0.015)	(0.047)	(0.072)
T1*PE*Parents low educated	-0.01	-0.02	-0.02	-0.02	0.05	-0.14
	(0.077)	(0.048)	(0.039)	(0.022)	(0.067)	(0.102)
Priority Education (PE)	-0.07*	0.04	-0.02	0.01	0.04	-0.05
	(0.038)	(0.024)	(0.019)	(0.011)	(0.033)	(0.050)
Parents low educated	-0.11***	0.02	0.02	-0.01	0.06*	-0.15***
	(0.038)	(0.024)	(0.020)	(0.011)	(0.033)	(0.051)
PE * Parents low educated	0.03	-0.01	0.00	0.01	-0.03	0.06
	(0.053)	(0.034)	(0.028)	(0.015)	(0.047)	(0.071)
Constant	0.59***	0.14***	0.02	0.02	0.24***	0.88***
	(0.044)	(0.028)	(0.023)	(0.012)	(0.039)	(0.059)
Math Test Score	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.662	0.0891	0.0372	0.0138	0.209	0.907
Number of observations	2443	2443	2443	2443	2443	2443
Adjusted R2	0.109	0.0396	0.0274	0.00171	0.0360	0.0270

Table 6:

	Among her preferred options for **higher education**, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	More than 5 years	5 years	3 or 4 years	1 or 2 years	No higher education	No response	Number of options
T1	-0.04***	0.14***	-0.04	0.03	-0.04	-0.14***	0.18***
	(0.011)	(0.024)	(0.027)	(0.025)	(0.031)	(0.032)	(0.056)
T1*PE	0.03	-0.03	0.02	0.04	-0.10*	0.05	-0.12
	(0.019)	(0.041)	(0.047)	(0.043)	(0.054)	(0.056)	(0.097)
T1*Both parents low educated	0.03	-0.05	0.09*	-0.01	-0.02	0.01	0.02
	(0.019)	(0.042)	(0.048)	(0.044)	(0.054)	(0.057)	(0.098)
T1*EP*Both parents low educated	-0.02	0.04	-0.02	0.04	0.15**	-0.12	0.27*
	(0.027)	(0.059)	(0.067)	(0.062)	(0.077)	(0.080)	(0.139)
Priority Education (PE)	-0.02*	-0.03	-0.02	-0.01	0.09**	-0.01	-0.02
	(0.013)	(0.029)	(0.033)	(0.030)	(0.038)	(0.039)	(0.068)
Parents low educated	-0.03**	-0.04	-0.08**	-0.01	0.05	0.07*	-0.19***
	(0.013)	(0.029)	(0.034)	(0.031)	(0.038)	(0.040)	(0.069)
PE * Parents low educated	0.03	0.02	0.02	-0.03	-0.12**	0.04	-0.05
	(0.019)	(0.041)	(0.047)	(0.043)	(0.054)	(0.056)	(0.097)
Constant	0.06***	0.08**	0.13***	0.12***	0.40***	0.38***	0.92***
	(0.015)	(0.034)	(0.039)	(0.036)	(0.044)	(0.046)	(0.080)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.0340	0.0874	0.189	0.121	0.321	0.410	0.815
Number of observations	2443	2443	2443	2443	2443	2443	2443
Adjusted R2	0.00649	0.0717	0.0176	0.00894	0.0347	0.0305	0.0344

Table 7:

GROUP B	Among her preferred options for **high school**, the student mentions...					
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Academic	**Vocational**	Dual	No education	No response	Number of options
T2	-0.04	-0.02	0.02	0.01	0.00	-0.03
	(0.050)	(0.035)	(0.022)	(0.015)	(0.044)	(0.060)
T2*Parents low educated	0.06	0.04	-0.02	-0.02	-0.03	0.02
	(0.064)	(0.045)	(0.028)	(0.019)	(0.057)	(0.077)
Parents low educated	-0.10**	-0.01	0.03	0.02	0.06	-0.11**
	(0.045)	(0.032)	(0.019)	(0.013)	(0.040)	(0.054)
Constant	1.00***	0.13	0.01	-0.01	-0.14	1.28***
	(0.151)	(0.107)	(0.065)	(0.045)	(0.135)	(0.182)
Math Test Score	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.584	0.127	0.0402	0.0211	0.243	0.869
Number of observations	933	933	933	933	933	933
Adjusted R2	0.0928	0.0212	0.00674	0.000152	0.0289	0.0251

Table 8:

GROUP B	Among her preferred options for **higher education**, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	More than 5 years	5 years	3 or 4 years	**1 or 2 years**	No higher education	No response	Number of options
T2	0.00	-0.04*	0.01	0.02	-0.18***	0.05	-0.21***
	(0.015)	(0.022)	(0.037)	(0.033)	(0.049)	(0.052)	(0.073)
T2*Parents low educated	-0.01	0.05*	-0.03	0.02	0.18***	-0.11*	0.25***
	(0.020)	(0.028)	(0.048)	(0.043)	(0.063)	(0.067)	(0.094)
Parents low educated	-0.01	-0.03	-0.05	-0.05*	-0.10**	0.14***	-0.28***
	(0.014)	(0.020)	(0.033)	(0.030)	(0.044)	(0.047)	(0.066)
Constant	0.10**	0.13*	0.33***	0.12	0.22	0.30*	0.99***
	(0.046)	(0.066)	(0.113)	(0.102)	(0.149)	(0.158)	(0.223)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.0233	0.0507	0.152	0.0951	0.366	0.429	0.740
Number of observations	933	933	933	933	933	933	933
Adjusted R2	0.00879	0.0223	0.0139	-0.00487	0.0367	0.00776	0.0118

Table 9:

	Among her preferred options for **high school**, the student mentions...					
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Academic	Vocational	Dual	No education	No response	Number of options
T3	-0.11***	0.03*	-0.00	-0.00	0.09***	-0.10**
	(0.032)	(0.019)	(0.012)	(0.008)	(0.030)	(0.042)
T3*PE	0.02	-0.07**	-0.01	-0.00	0.05	-0.09
	(0.054)	(0.033)	(0.020)	(0.013)	(0.051)	(0.071)
T3*Parents low educated	-0.04	-0.03	-0.02	0.01	0.09*	-0.05
	(0.056)	(0.034)	(0.021)	(0.014)	(0.053)	(0.074)
T3*PE*Parents low educated	0.02	0.06	0.01	-0.01	-0.08	0.09
	(0.079)	(0.048)	(0.029)	(0.019)	(0.074)	(0.104)
Priority Education (PE)	-0.07*	0.04	-0.01	0.01	0.04	-0.04
	(0.039)	(0.024)	(0.014)	(0.009)	(0.036)	(0.051)
Parents low educated	-0.11***	0.02	0.03*	-0.01	0.06	-0.15***
	(0.040)	(0.024)	(0.015)	(0.010)	(0.037)	(0.052)
PE * Parents low educated	0.03	-0.02	-0.01	0.01	-0.02	0.05
	(0.056)	(0.034)	(0.020)	(0.013)	(0.052)	(0.073)
Constant	0.71***	0.22***	0.08**	0.03	0.00	1.17***
	(0.094)	(0.057)	(0.034)	(0.023)	(0.088)	(0.123)
Math Test Score	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.662	0.0891	0.0372	0.0138	0.209	0.907
Number of observations	2441	2441	2441	2441	2441	2441
Adjusted R2	0.103	0.0312	0.0130	0.000995	0.0580	0.0486

Table 10:

	Among her preferred options for **higher education**, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	More than 5 years	5 years	3 or 4 years	1 or 2 years	No higher education	No response	Number of options
T3	-0.03***	-0.05***	-0.03	-0.02	-0.04	0.02	-0.23***
	(0.011)	(0.018)	(0.026)	(0.022)	(0.031)	(0.034)	(0.050)
T3*PE	0.03	0.03	-0.03	0.00	-0.08	0.07	-0.04
	(0.019)	(0.030)	(0.044)	(0.038)	(0.053)	(0.058)	(0.085)
T3*Parents low educated	0.03	0.02	-0.03	-0.02	-0.04	0.08	0.01
	(0.020)	(0.031)	(0.046)	(0.039)	(0.055)	(0.060)	(0.088)
T3*PE*Parents low educated	-0.05	-0.00	0.10	0.04	0.17**	-0.20**	0.25**
	(0.028)	(0.044)	(0.065)	(0.055)	(0.077)	(0.084)	(0.124)
Priority Education (PE)	-0.02	-0.04*	-0.03	-0.02	0.08**	-0.00	-0.04
	(0.014)	(0.022)	(0.032)	(0.027)	(0.038)	(0.042)	(0.061)
Parents low educated	-0.03**	-0.05**	-0.09***	-0.01	0.05	0.08*	-0.19***
	(0.014)	(0.022)	(0.032)	(0.027)	(0.039)	(0.042)	(0.062)
PE * Parents low educated	0.03	0.02	0.01	-0.03	-0.12**	0.04	-0.05
	(0.019)	(0.031)	(0.045)	(0.038)	(0.054)	(0.059)	(0.087)
Constant	0.00	-0.01	0.26***	0.19***	0.30***	0.38***	0.82***
	(0.033)	(0.052)	(0.076)	(0.065)	(0.091)	(0.100)	(0.146)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.0340	0.0874	0.189	0.121	0.321	0.410	0.815
Number of observations	2441	2441	2441	2441	2441	2441	2441
Adjusted R2	0.0130	0.0525	0.0220	0.00197	0.0358	0.00870	0.0310

Table 11:

VARIABLES	Score in Self-Esteem				
	(1) School Proficiency	(2) Social Acceptance	(3) Behavior	(4) Overall Value	(5) Total
Priority Education (PE)	0.06	-0.06	0.02	0.03	0.01
	(0.053)	(0.052)	(0.049)	(0.058)	(0.035)
Parents low educated	-0.12**	-0.03	-0.00	-0.01	-0.04
	(0.053)	(0.052)	(0.049)	(0.058)	(0.035)
PE * Parents low educated	0.07	0.14**	0.02	0.09	0.08*
	(0.074)	(0.072)	(0.068)	(0.081)	(0.048)
Constant	2.62***	3.53***	2.65***	2.90***	2.84***
	(0.080)	(0.169)	(0.074)	(0.089)	(0.053)
Math Test Score	yes	yes	yes	yes	yes
Mean of dep. Variable	2.704	3.174	2.882	2.968	2.933
Number of observations	1201	1202	1201	1199	1206
Adjusted R2	0.188	0.00276	0.0345	0.00549	0.0705

Table 12:

VARIABLES	Among her **preferred** options for **high school,** the student mentions...					
	(1) Academic	(2) Vocational	(3) Dual	(4) No education	(5) No response	(6) Number of options
Priority Education (PE)	-0.09**	0.04*	-0.01	0.01	0.05	-0.05
	(0.038)	(0.024)	(0.016)	(0.010)	(0.034)	(0.049)
Both parents low educated	-0.09**	0.02	0.02	-0.01	0.05	-0.13***
	(0.038)	(0.024)	(0.016)	(0.010)	(0.034)	(0.049)
PE * Parents low educated	0.02	-0.01	0.01	0.01	-0.02	0.05
	(0.053)	(0.034)	(0.023)	(0.014)	(0.048)	(0.069)
Self-Esteem - School Proficiency	0.19***	-0.04***	-0.04***	-0.01	-0.11***	0.15***
	(0.021)	(0.013)	(0.009)	(0.006)	(0.019)	(0.027)
Constant	0.08	0.28***	0.12***	0.02	0.54***	0.48***
	(0.080)	(0.051)	(0.034)	(0.022)	(0.072)	(0.103)
Math Test Score	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.662	0.0891	0.0372	0.0138	0.209	0.907
Number of observations	1235	1235	1235	1235	1235	1235
Adjusted R2	0.152	0.0446	0.0342	0.00262	0.0544	0.0548

Table 13:

| VARIABLES | Among her **preferred** options for **higher education**, the student mentions... | | | | | | |
	(1) More than 5 years	(2) 5 years	(3) 3 or 4 years	(4) 1 or 2 years	(5) No higher education	(6) No response	(7) Number of options
Priority Education (PE)	-0.02	-0.03	-0.03	-0.01	0.10**	-0.02	-0.01
	(0.016)	(0.024)	(0.034)	(0.029)	(0.040)	(0.043)	(0.069)
Both parents low educated	-0.03*	-0.03	-0.07**	-0.00	0.03	0.08*	-0.17**
	(0.016)	(0.024)	(0.034)	(0.029)	(0.040)	(0.043)	(0.068)
PE * Parents low educated	0.02	0.01	0.01	-0.04	-0.10*	0.04	-0.08
	(0.022)	(0.033)	(0.047)	(0.040)	(0.056)	(0.060)	(0.095)
Self-Esteem - School Proficiency	0.02**	0.05***	0.08***	0.03*	-0.12***	0.01	0.06*
	(0.009)	(0.013)	(0.019)	(0.016)	(0.022)	(0.024)	(0.038)
Constant	0.01	-0.08	-0.03	0.02	0.67***	0.35***	0.72***
	(0.033)	(0.050)	(0.071)	(0.060)	(0.084)	(0.090)	(0.143)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.0340	0.0874	0.189	0.121	0.321	0.410	0.815
Number of observations	1235	1235	1235	1235	1235	1235	1235
Adjusted R2	0.0162	0.0730	0.0361	0.00472	0.0490	0.00714	0.0290

Table 14:

| VARIABLES | Score in Self-Esteem | | | | |
	(1) School Proficiency	(2) Social Acceptance	(3) Behavior	(4) Overall Value	(5) Total
T4	0.01	0.02	-0.01	-0.02	0.00
	(0.043)	(0.042)	(0.039)	(0.047)	(0.029)
T4*PE	0.08	0.10	0.07	0.11	0.09*
	(0.073)	(0.071)	(0.067)	(0.081)	(0.049)
T4*Parents low educated	-0.05	0.04	0.05	-0.06	0.00
	(0.074)	(0.072)	(0.067)	(0.082)	(0.049)
T4*PE*Parents low educated	-0.05	-0.17*	-0.09	-0.08	-0.11
	(0.105)	(0.102)	(0.096)	(0.116)	(0.070)
Priority Education (PE)	0.06	-0.09*	0.03	0.03	0.01
	(0.052)	(0.051)	(0.048)	(0.058)	(0.035)
Parents low educated	-0.13**	-0.05	0.00	-0.01	-0.05
	(0.052)	(0.051)	(0.048)	(0.058)	(0.035)
PE * Parents low educated	0.09	0.15**	0.01	0.10	0.09*
	(0.074)	(0.072)	(0.067)	(0.082)	(0.049)
Constant	2.40***	3.40***	2.70***	2.84***	2.87***
	(0.129)	(0.126)	(0.056)	(0.068)	(0.086)
Math Test Score	yes	yes	yes	yes	yes
Mean of dep. Variable	2.704	3.174	2.882	2.968	2.933
Number of observations	2363	2365	2362	2361	2373
Adjusted R2	0.182	0.00395	0.0361	0.00755	0.0575

Table 15:

VARIABLES	Among her preferred options for **high school**, the student mentions...					
	(1)	(2)	(3)	(4)	(5)	(6)
	Academic	Vocational	Dual	No education	No response	Number of options
T4	0.03	0.02	-0.01	-0.01	-0.03	-0.01
	(0.031)	(0.020)	(0.014)	(0.007)	(0.028)	(0.040)
T4*PE	-0.00	-0.06*	0.02	0.01	0.03	-0.03
	(0.053)	(0.034)	(0.024)	(0.012)	(0.047)	(0.067)
T4*Parents low educated	-0.06	0.02	0.03	0.01	0.01	0.08
	(0.054)	(0.035)	(0.024)	(0.012)	(0.048)	(0.068)
T4*PE*Parents low educated	0.00	0.04	-0.03	-0.03	0.00	-0.07
	(0.076)	(0.049)	(0.034)	(0.017)	(0.068)	(0.096)
Priority Education (PE)	-0.07*	0.04	-0.01	0.01	0.04	-0.05
	(0.038)	(0.024)	(0.017)	(0.009)	(0.033)	(0.047)
Parents low educated	-0.11***	0.02	0.03	-0.01	0.06*	-0.15***
	(0.039)	(0.025)	(0.017)	(0.009)	(0.034)	(0.048)
PE * Parents low educated	0.03	-0.01	-0.00	0.01	-0.02	0.06
	(0.054)	(0.035)	(0.024)	(0.012)	(0.048)	(0.068)
Constant	0.64***	0.12***	0.04**	-0.00	0.21***	0.90***
	(0.045)	(0.029)	(0.020)	(0.010)	(0.040)	(0.057)
Math Test Score	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.662	0.0891	0.0372	0.0138	0.209	0.907
Number of observations	2429	2429	2429	2429	2429	2429
Adjusted R2	0.110	0.0344	0.0199	0.00404	0.0410	0.0336

Table 16:

VARIABLES	Among her preferred options for **higher education**, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	More than 5 years	5 years	3 or 4 years	1 or 2 years	No higher education	No response	Number of options
T4	-0.02	-0.02	-0.02	-0.05**	-0.03	-0.02	-0.20***
	(0.011)	(0.019)	(0.027)	(0.022)	(0.032)	(0.034)	(0.051)
T4*PE	0.01	0.03	-0.01	0.02	-0.13**	0.12**	-0.05
	(0.019)	(0.032)	(0.046)	(0.037)	(0.054)	(0.059)	(0.086)
T4*Parents low educated	0.01	0.00	-0.02	0.01	0.02	0.01	0.10
	(0.020)	(0.032)	(0.046)	(0.037)	(0.054)	(0.059)	(0.087)
T4*PE*Parents low educated	-0.02	-0.02	0.06	0.02	0.11	-0.11	0.11
	(0.028)	(0.045)	(0.065)	(0.053)	(0.077)	(0.084)	(0.123)
Priority Education (PE)	-0.02	-0.04*	-0.02	-0.01	0.08**	-0.01	-0.03
	(0.014)	(0.022)	(0.032)	(0.026)	(0.038)	(0.041)	(0.061)
Parents low educated	-0.03**	-0.05**	-0.08**	-0.01	0.05	0.07*	-0.19***
	(0.014)	(0.023)	(0.033)	(0.027)	(0.039)	(0.042)	(0.062)
PE * Parents low educated	0.03	0.02	0.01	-0.03	-0.12**	0.04	-0.05
	(0.020)	(0.032)	(0.046)	(0.037)	(0.054)	(0.059)	(0.087)
Constant	0.05***	0.07***	0.19***	0.12***	0.35***	0.40***	0.88***
	(0.016)	(0.027)	(0.038)	(0.031)	(0.045)	(0.049)	(0.073)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.0340	0.0874	0.189	0.121	0.321	0.410	0.815
Number of observations	2429	2429	2429	2429	2429	2429	2429
Adjusted R2	0.00969	0.0568	0.0257	0.00338	0.0335	0.0124	0.0302

Appendix Table 1: Aspirations at the High School Level

	Among her preferred options for **high school**, the student mentions...					
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Academic*	Vocational	Dual	No education	No response	Number of options
Priority Education (PE)	-0.08**	0.04*	-0.01	0.01	0.05	-0.05
	(0.039)	(0.024)	(0.016)	(0.010)	(0.035)	(0.049)
Parents low educated	-0.11***	0.02	0.02	-0.01	0.06*	-0.15***
	(0.039)	(0.024)	(0.016)	(0.010)	(0.035)	(0.050)
PE * Parents low educated	0.03	-0.02	-0.00	0.01	-0.03	0.06
	(0.054)	(0.034)	(0.023)	(0.014)	(0.048)	(0.069)
Constant	0.58***	0.17***	0.02	-0.01	0.25***	0.89***
	(0.060)	(0.037)	(0.025)	(0.015)	(0.053)	(0.076)
Math Test Score	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.662	0.0891	0.0372	0.0138	0.209	0.907
Number of observations	1235	1235	1235	1235	1235	1235
Adjusted R2	0.0934	0.0392	0.0178	0.00114	0.0333	0.0331

Source: Guyon and Huillery (2014)

*This category entails 2 percentage points of students whose preferred option is "High School" or "High School Diploma" without precision

about the type of high school and high school diploma.

Appendix Table 2: Aspirations at Higher Education Level

	Among her preferred options for **higher education**, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	More than 5 years	5 years	3 or 4 years	1 or 2 years	No higher education	No response	Number of options
Priority Education (PE)	-0.02	-0.03	-0.03	-0.01	0.09**	-0.01	-0.02
	(0.016)	(0.024)	(0.033)	(0.028)	(0.040)	(0.042)	(0.068)
Parents low educated	-0.03*	-0.04*	-0.09**	-0.01	0.05	0.07*	-0.18***
	(0.016)	(0.024)	(0.034)	(0.028)	(0.040)	(0.043)	(0.068)
PE * Parents low educated	0.02	0.02	0.01	-0.03	-0.12**	0.04	-0.06
	(0.022)	(0.033)	(0.047)	(0.039)	(0.056)	(0.059)	(0.094)
Constant	0.06**	0.05	0.18***	0.09**	0.37***	0.36***	0.89***
	(0.024)	(0.036)	(0.051)	(0.043)	(0.061)	(0.065)	(0.104)
Math Test Score	yes	yes	yes	yes	yes	yes	
Mean of dep. Variable	0.0340	0.0874	0.189	0.121	0.321	0.410	0.815
Number of observations	1235	1235	1235	1235	1235	1235	1235
Adjusted R2	0.0144	0.0651	0.0245	5.88e-05	0.0249	0.00795	0.0267

Source: Guyon and Huillery (2014)

Appendix Table 3:

GROUP A	Among her preferred options for **high school**, the student mentions...					
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	**Academic**	Vocational	Dual	No education	No response	Number of options
T2	0.02	0.02	0.00	-0.00	-0.04	0.02
	(0.029)	(0.018)	(0.012)	(0.006)	(0.025)	(0.037)
T2*Parents low educated	-0.02	0.04	-0.01	0.02*	-0.02	0.03
	(0.050)	(0.030)	(0.020)	(0.010)	(0.042)	(0.063)
Parents low educated	-0.12***	0.01	0.02	-0.01	0.08**	-0.17***
	(0.036)	(0.022)	(0.015)	(0.007)	(0.030)	(0.045)
Constant	0.74***	0.15*	0.06	-0.05**	0.05	1.03***
	(0.140)	(0.085)	(0.057)	(0.027)	(0.117)	(0.175)
Math Test Score	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.747	0.0560	0.0320	0.00480	0.166	0.958
Number of observations	1243	1243	1243	1243	1243	1243
Adjusted R2	0.0567	0.0520	0.0197	0.00428	0.0126	0.0277

Appendix Table 4:

GROUP C	Among her preferred options for **high school**, the student mentions...					
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Academic	Vocational	**Dual**	No education	No response	Number of options
T2	0.06	0.03	0.02	-0.02	-0.09	0.01
	(0.103)	(0.072)	(0.055)	(0.040)	(0.092)	(0.123)
T2*Parents low educated	-0.08	0.03	0.01	0.05	0.03	0.07
	(0.125)	(0.088)	(0.067)	(0.049)	(0.112)	(0.149)
Parents low educated	0.07	0.03	-0.01	-0.07*	-0.08	-0.04
	(0.088)	(0.062)	(0.047)	(0.034)	(0.079)	(0.105)
Constant	1.02***	0.14	0.03	0.06	-0.13	1.50***
	(0.267)	(0.187)	(0.142)	(0.104)	(0.238)	(0.317)
Math Test Score	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.533	0.0219	0.547	0.109	0.0511	0.0292
Number of observations	264	264	264	264	264	264
Adjusted R2	0.113	0.00477	0.109	0.0220	-0.0271	-0.00160

Appendix Table 5:

GROUP B	Among her preferred options for **higher education**, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	More than 5 years	5 years	3 or 4 years	1 or 2 years	No higher education	No response	Number of options
T2	0.00	-0.04*	0.01	0.02	-0.18***	0.05	-0.21***
	(0.015)	(0.022)	(0.037)	(0.033)	(0.049)	(0.052)	(0.073)
T2*Parents low educated	-0.01	0.05*	-0.03	0.02	0.18***	-0.11*	0.25***
	(0.020)	(0.028)	(0.048)	(0.043)	(0.063)	(0.067)	(0.094)
Parents low educated	-0.01	-0.03	-0.05	-0.05*	-0.10**	0.14***	-0.28***
	(0.014)	(0.020)	(0.033)	(0.030)	(0.044)	(0.047)	(0.066)
Constant	0.10**	0.13*	0.33***	0.12	0.22	0.30*	0.99***
	(0.046)	(0.066)	(0.113)	(0.102)	(0.149)	(0.158)	(0.223)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.0233	0.0507	0.152	0.0951	0.366	0.429	0.740
Number of observations	933	933	933	933	933	933	933
Adjusted R2	0.00879	0.0223	0.0139	-0.00487	0.0367	0.00776	0.0118

Appendix Table 6:

GROUP C	Among her preferred options for **higher education**, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	More than 5 years	5 years	3 or 4 years	1 or 2 years	**No higher education**	No response	Number of options
T2	-0.01	-0.00	-0.13*	0.08	-0.01	-0.05	-0.12
	(0.027)	(0.045)	(0.078)	(0.071)	(0.105)	(0.111)	(0.154)
T2*Parents low educated	0.01	0.01	0.15	-0.12	0.00	0.07	0.05
	(0.033)	(0.054)	(0.094)	(0.086)	(0.127)	(0.134)	(0.187)
Parents low educated	0.01	-0.05	-0.15**	0.03	-0.01	0.07	-0.16
	(0.023)	(0.038)	(0.066)	(0.061)	(0.089)	(0.095)	(0.132)
Constant	0.00	0.13	0.43**	-0.15	0.53*	0.21	0.92**
	(0.070)	(0.115)	(0.200)	(0.183)	(0.270)	(0.286)	(0.398)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.0219	0.0365	0.161	0.124	0.343	0.438	0.737
Number of observations	264	264	264	264	264	264	264
Adjusted R2	-0.0108	-0.0229	0.0202	0.00792	-0.00354	-0.0266	-0.0196