Social Background and Aspirations at School: Evidence from French Teenagers

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Motivation

Schooling decisions should be driven by individual talent

- Efficiency
  - Aspirations determine investment in human capital
  - In a classic economic model, students choose effort at school to balance its discounted return with its opportunity cost
  - It is optimal that individuals with more skills invest more in education
- Fairness
  - Individuals with equal skills should have equal opportunities (Roemer)

Motivation

But schooling decisions are not only driven by academic performances, social background plays a role:

- The Wisconsin Model (1960s): Students whose father and mother are less educated are less likely to declare that they want to attend college - at equal cognitive ability and grades
- Duru-Bellat (1988): Children of blue collar workers are less likely to continue after grade 7 in junior high school than children of senior executives - at equal age and equal scores in grade 7
- Avery and Hoxby (2012): Very high-achieving students who are low-income do not apply to any selective college despite the fact that selective institutions would often cost them less

Differences in aspirations at equal cognitive skills

Guyon and Huillery (2014): Compare aspirations of students in/out Priority Education and whose parents are low/high educated - at equal academic ability

	Among her preferred options for high school, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	Non-Vocational	High School without precision	Vocational	Dual	No education	No response	Number of options
Priority Education (EP)	-0.08	-0.04**	0.02	0.00	0.00	0.08*	-0.13*
	(0.055)	(0.017)	(0.033)	(0.022)	(0.014)	(0.048)	(0.069)
Both parents low educated	-0.08**	-0.01	0.02	0.02	-0.01	0.06*	-0.13**
	(0.041)	(0.012)	(0.025)	(0.017)	(0.010)	(0.036)	(0.052)
EP * Both parents low educated	0.01	0.02	-0.02	0.00	0.00	-0.03	0.04
	(0.057)	(0.017)	(0.035)	(0.023)	(0.014)	(0.050)	(0.071)
Constant	1.03***	0.05	0.09	-0.01	-0.00	-0.13	1.39***
	(0.127)	(0.038)	(0.077)	(0.052)	(0.032)	(0.111)	(0.159)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
EP*Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.648	0.0194	0.0891	0.0372	0.0138	0.209	0.907
Number of observations	1235	1235	1235	1235	1235	1235	1235
Adjusted R2	0.0906	-0.00126	0.0411	0.0193	0.0124	0.0324	0.0311

Contribution of the Paper

Why explains the social inequality in aspirations?

- We propose a simple theory of schooling decision
- We perform some tests based on lab-in-the-field experiments

Literature

- Relationship between social background and schooling decisions
  - Theory of choice: Kranton and Akerloff (2000) and (2002), Benabou and Tirole (2011), Boudon (1973)
  - Qualitative evidence from sociology: Bourdieu et Passeron (1970), Prost (1987), Herpin (2006), Millet and Thin (2005) and (2007), Périer (2004), Masson (1997), Van Zanten (2009), Chauvel (2011) , Poullaouec (2010), Broccolichi, Ben Ayed and Trancart (2010)

Presentation Outline

1. Simple theoretical framework
2. Empirical Strategy
3. Data
4. Results
   - 4.1 Limited possible selves/Information
   - 4.2 Taste for conformity to peers
   - 4.3 Feer of pear sanctions
   - 4.4 Stereotype threat on self-esteem

Theory of Schooling Decisions (1)

1. Students are partly self-interested

   1.1 They maximise monetary outcomes

   - Poor students cannot afford higher education (Palheta 2011)
   - Poor students anticipate lower returns to education due to discrimination (Aeberhardt et al. 2011, Adida et al. 2010) or less complementarity between social capital and education (Gobillon et al. 2011)

   1.1 Their utility include social preferences (economics of Identity: Kranton and Akerlof 2000, 2002; Benabou and Tirole 2011)

   - Students fear peer sanction and ostracism (Herpin 1996, Austen-Smith and Fryer 2005)
   - Students like to conform to their social category (Millet et Thin 2005, 2007; Périer 2004)

Theory of Schooling Decisions (2)

2. Individual behavior incorporates some form of "emotions" (unconscious factors)

- Students start with different sets of options in mind
  - Limited possible-self (Oyserman et al. 2006)
  - Lack of information about the set of options (Masson 1997, Van Zanten 2009)
- Poor students lack self-esteem due to stereotype threats: Steele and Aronson (1995) and (1999), Croizet and al. (2001) and (2004), Hoff and Pandey (2004)

Empirical Strategy

We do *not* investigate the economic factors:

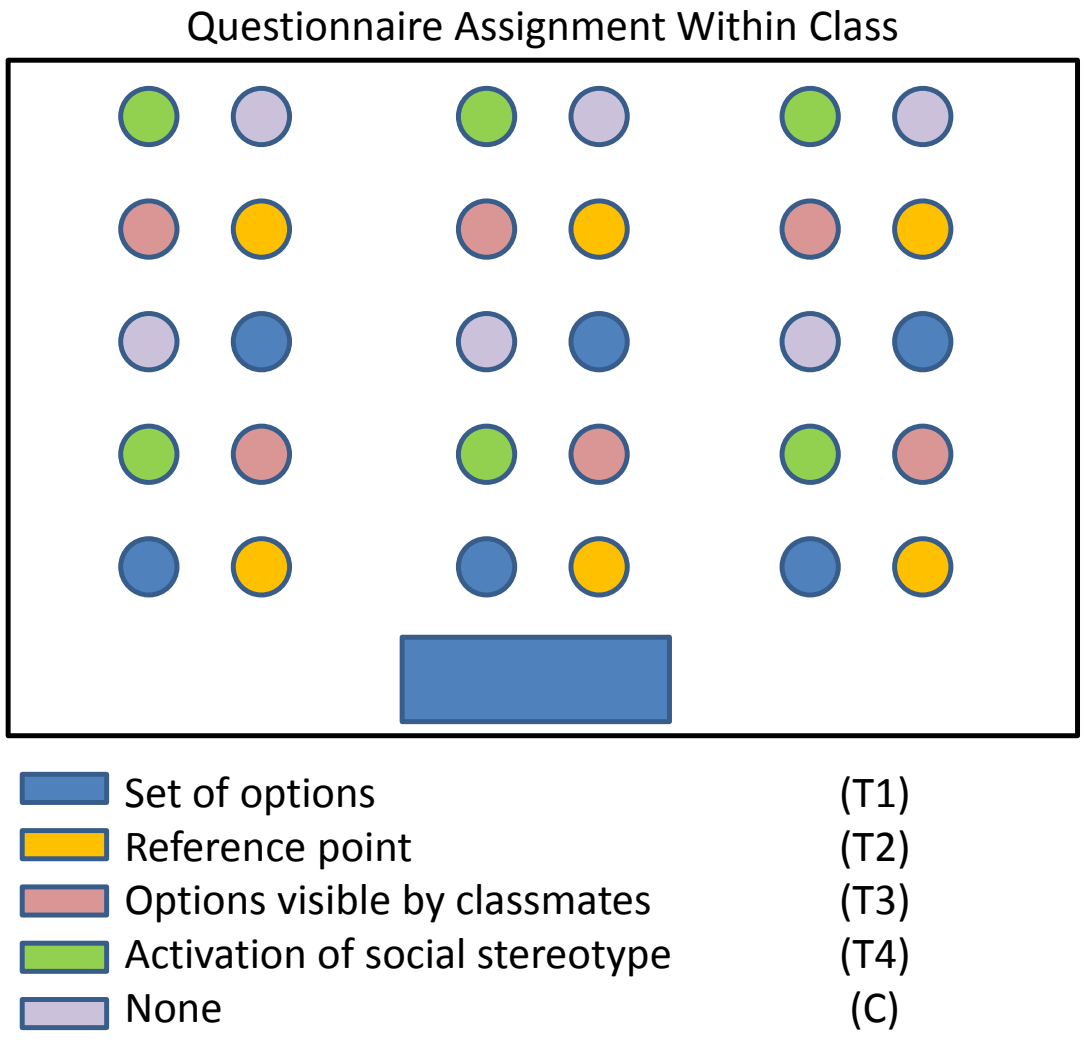
- Difference in cost of education
  - High school is free, higher education is not
  - Geographical distance to education option is equal in our sample
- Difference in returns to education

Empirical Strategy

We test the social and "emotional" factors:

Tested Factor	**Corresponding Questionnaire (Treatment)**	**Group size**
Limited possible self / lack of information	The set of options is given (not asked about what they know)	1,208
Taste for conformity to peers	A reference point is given (adjusted to school type: A, B and C)	1,205
Fear of peer sanction	Answers disclosed to classmates	1,206
Social stereotype reduces self-esteem	Social background is asked before self-esteem and aspirations	1,194
Control group		1,235

Empirical Strategy



Data

- We administered a questionnaire to French grade 9 students:

Académie	Number of pupils in	
	Priority Education	Non Priority Education
Versailles	1,942	1,881
Paris	225	325
Créteil	798	877
Total	**2,965**	**3,083**

- Priority Education schools were selected among socially disadvantaged
- Other schools were selected among socially advantaged
- All schools were selected in the same location so that geographical access to high school and universities is equal

Data

2-steps questionnaire:

- Maths test one week ahead
- Questionnaire:
  - Self-Esteem (Harter)
  - Aspirations (high school, higher education and occupation)
    - What they know
    - What they think is possible for them
    - What they prefer
  - Social background: parent degree, parent country of birth, parent occupation

Data

1. Outcomes: Levels of education among preferred options
   - No education required (footballer, singer, actress, model, etc.)
   - Dual education w/o high school diploma (CAP, BEP, CFA)
   - Vocational education w/ high school diploma (Bac/Lycée pro)
   - High school without precision (Bac/Lycée)
   - Non-vocational education (Bac/Lycée Général et Technologique)
   - No option is mentionned
2. Independent Variables
   - Priority Education (50% of the sample)
   - Both parents are low educated (at most one vocational diploma) (64% in EP, 33% out of EP)
3. Math Test Score

Results: Is there a gap in knowledge of the options?

	Among her options known for high school, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	Non-Vocational	High School without precision	Vocational	Dual	No education	No response	Number of options
Priority Education (EP)	-0.08*	-0.08*	-0.01	0.08	-0.06**	0.09***	-0.51*
	(0.040)	(0.042)	(0.054)	(0.059)	(0.028)	(0.033)	(0.279)
Both parents low educated	-0.05*	-0.04	-0.00	0.04	-0.04*	0.03	-0.61***
	(0.030)	(0.031)	(0.041)	(0.044)	(0.021)	(0.025)	(0.210)
EP * Both parents low educated	0.02	0.06	-0.01	-0.00	0.07**	-0.03	0.61**
	(0.042)	(0.043)	(0.056)	(0.061)	(0.029)	(0.035)	(0.290)
Constant	1.36***	0.25***	1.02***	0.76***	0.03	-0.29***	6.84***
	(0.093)	(0.096)	(0.125)	(0.136)	(0.065)	(0.077)	(0.648)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
EP*Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.860	0.138	0.717	0.412	0.0591	0.0899	3.852
Number of observations	1235	1235	1235	1235	1235	1235	1235
Adjusted R2	0.0691	-0.00511	-0.00153	0.00640	0.00223	0.0571	0.0455

How does this gap contribute to the inequality in aspirations?

	Among her preferred options for high school, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	Non-Vocational	High School without precision	Vocational	Dual	No education	No response	Number of options
Priority Education (EP)	-0.04	-0.03**	0.02	-0.00	0.01	0.02	-0.08
	(0.050)	(0.016)	(0.033)	(0.022)	(0.013)	(0.043)	(0.064)
Both parents low educated	-0.06	-0.00	0.02	0.02	-0.00	0.04	-0.08
	(0.038)	(0.012)	(0.025)	(0.017)	(0.010)	(0.032)	(0.048)
EP * Both parents low educated	0.01	0.01	-0.02	0.00	-0.01	-0.01	-0.01
	(0.052)	(0.017)	(0.034)	(0.023)	(0.014)	(0.044)	(0.066)
The option is among options known	0.52***	0.09***	0.13***	0.07***	0.15***	0.66***	0.09***
	(0.036)	(0.011)	(0.017)	(0.011)	(0.013)	(0.037)	(0.007)
Constant	0.31**	0.02	-0.04	-0.06	-0.01	0.06	0.77***
	(0.127)	(0.038)	(0.078)	(0.052)	(0.031)	(0.099)	(0.155)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
EP*Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.648	0.0194	0.0891	0.0372	0.0138	0.209	0.907
Number of observations	1235	1235	1235	1235	1235	1235	1235
Adjusted R2	0.225	0.0439	0.0854	0.0545	0.0996	0.235	0.162

Does providing the list of options help?

	Among her preferred options for high school, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	Non-Vocational	High School without precision	Vocational	Dual	No education	No response	Number of options
T1	0.02	-0.04***	-0.00	0.01	0.00	-0.00	-0.02
	(0.037)	(0.008)	(0.023)	(0.019)	(0.010)	(0.032)	(0.049)
T1*Priority Education	0.04	0.04**	0.04	0.02	-0.00	-0.10	0.17
	(0.077)	(0.017)	(0.048)	(0.039)	(0.021)	(0.067)	(0.101)
T1*Both parents low educated	-0.02	0.01	0.02	0.04	0.02	-0.02	0.18**
	(0.056)	(0.013)	(0.035)	(0.029)	(0.016)	(0.049)	(0.074)
T1*EP*Both parents low educated	0.02	-0.02	-0.02	-0.03	-0.02	0.06	-0.14
	(0.079)	(0.018)	(0.049)	(0.040)	(0.022)	(0.069)	(0.104)
Priority Education (EP)	-0.07	-0.04***	0.02	0.00	0.00	0.08*	-0.13*
	(0.053)	(0.012)	(0.033)	(0.027)	(0.015)	(0.046)	(0.070)
Both parents low educated	-0.08**	-0.01	0.02	0.02	-0.01	0.06*	-0.14***
	(0.040)	(0.009)	(0.025)	(0.021)	(0.011)	(0.035)	(0.053)
EP*Both parents low educated	0.01	0.02	-0.02	0.00	0.00	-0.03	0.05
	(0.055)	(0.012)	(0.035)	(0.028)	(0.015)	(0.048)	(0.073)
Constant	0.59***	0.03***	0.13***	0.02	0.02	0.22***	0.91***
	(0.047)	(0.011)	(0.029)	(0.024)	(0.013)	(0.041)	(0.062)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
EP*Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
T1*EP*Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.648	0.0194	0.0891	0.0372	0.0138	0.209	0.907
Number of observations	2443	2443	2443	2443	2443	2443	2443
Adjusted R2	0.109	0.00758	0.0395	0.0285	0.00733	0.0351	0.0253

Results: Taste for Conformity (T2) - Reference B

GROUP B	Among her preferred options for high school, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	Non-Vocational	High School without precision	Vocational	Dual	No education	No response	Number of options
T2	-0.08	0.01	0.04	0.03	0.02	-0.01	0.03
	(0.076)	(0.014)	(0.054)	(0.033)	(0.023)	(0.068)	(0.092)
T2*Both parents low educated	0.05	-0.02**	0.06	-0.02	-0.02	-0.03	0.03
	(0.065)	(0.012)	(0.046)	(0.028)	(0.020)	(0.058)	(0.079)
Both parents low educated	-0.09**	0.01	-0.02	0.03	0.01	0.06	-0.11*
	(0.046)	(0.008)	(0.033)	(0.020)	(0.014)	(0.041)	(0.056)
Constant	0.90***	0.01	0.13	0.02	-0.02	-0.05	1.11***
	(0.138)	(0.025)	(0.098)	(0.060)	(0.041)	(0.124)	(0.167)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
T2*Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.577	0.00634	0.127	0.0402	0.0211	0.243	0.869
Number of observations	933	933	933	933	933	933	933
Adjusted R2	0.105	-0.00516	0.0211	0.00420	0.00715	0.0332	0.0302

Results: Taste for Conformity (T2) - Reference B

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	-0.08**	-0.05	0.10*	-0.17**	0.05	-0.26**
	(0.023)	(0.033)	(0.057)	(0.051)	(0.075)	(0.080)	(0.113)
T2*Both parents low educated	-0.01	0.05*	-0.05	0.04	0.19***	-0.11	0.25***
	(0.020)	(0.029)	(0.049)	(0.044)	(0.065)	(0.068)	(0.097)
Both parents low educated	-0.01	-0.03	-0.03	-0.06*	-0.10**	0.14***	-0.29***
	(0.014)	(0.020)	(0.034)	(0.031)	(0.046)	(0.048)	(0.069)
Constant	-0.02	0.16***	0.22**	0.06	0.29**	0.42***	0.87***
	(0.042)	(0.061)	(0.103)	(0.093)	(0.137)	(0.145)	(0.205)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
T2*Other parents characteristics	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	0.00909	0.0214	0.0164	-0.000473	0.0310	0.00276	0.00942

Results: Fear of Peer Sanctions (T3)

	Among her preferred options for high school, the student mentions...						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	Non-Vocational	High School without precision	Vocational	Dual	No education	No response	Number of options
T3	-0.14***	-0.02	0.06**	-0.01	-0.00	0.11***	-0.15***
	(0.039)	(0.011)	(0.024)	(0.014)	(0.009)	(0.036)	(0.051)
T3*Priority Education (EP)	0.00	0.06**	0.01	-0.01	0.02	-0.04	0.07
	(0.079)	(0.022)	(0.048)	(0.029)	(0.019)	(0.073)	(0.102)
T3*Both parents low educated	-0.05	-0.00	-0.01	-0.02	0.01	0.08	-0.06
	(0.058)	(0.016)	(0.035)	(0.021)	(0.014)	(0.054)	(0.076)
T3*EP*Both parents low educated	0.01	-0.02	0.07	0.02	-0.01	-0.06	0.10
	(0.082)	(0.023)	(0.049)	(0.030)	(0.020)	(0.076)	(0.106)
Priority Education (EP)	-0.07	-0.04***	0.02	0.01	0.00	0.07	-0.11
	(0.055)	(0.015)	(0.033)	(0.020)	(0.013)	(0.051)	(0.072)
Both parents low educated	-0.09**	-0.01	0.02	0.03*	-0.01	0.06	-0.13**
	(0.042)	(0.011)	(0.025)	(0.015)	(0.010)	(0.039)	(0.054)
EP*Both parents low educated	0.02	0.02	-0.02	-0.00	0.00	-0.03	0.04
	(0.058)	(0.016)	(0.035)	(0.021)	(0.014)	(0.054)	(0.075)
Constant	0.59***	0.03*	0.17***	0.06***	0.00	0.20***	0.94***
	(0.051)	(0.014)	(0.031)	(0.019)	(0.012)	(0.047)	(0.066)
Math Test Score	yes	yes	yes	yes	yes	yes	yes
Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
EP*Other parents characteristics	yes	yes	yes	yes	yes	yes	yes
Mean of dep. Variable	0.648	0.0194	0.0891	0.0372	0.0138	0.209	0.907
Number of observations	2441	2441	2441	2441	2441	2441	2441
Adjusted R2	0.101	0.00271	0.0383	0.0133	0.00674	0.0604	0.0496

Conclusion

What explains social inequality in aspirations ?

- Large differences in knowledge/salience of the different options
  - Making options salient helps to reduce the gap in Priority Education
  - Suggests a difference of salience more than a difference in knowledge
  - This does not reduce the gap due to low educated parents
- Moderate taste for conformity to peers
- Very large fear of peer sanction for all students