Gender Difference of Academic Performance among Youths in Rural China: The Role of Gender Values

Yuying Tong, Jenny X. Li & Wenyang Su

The Chinese University of Hong Kong

Email: yytong@cuhk.edu.hk

Abstract

It is a global trend that girls are performing better than boys academically. However, little is known about the gender gap of academic performance in rural China where the patriarchal gender norm is still prevalent. In particular, how the gender values shift the male and female students' academic performance is largely under studied. Using a recent data set collected from two provinces in rural China, we found that overall female students are doing better than a male, which is similar to the findings to other settings, but they still perform worse in math test compared to their male counterparts. We found that egalitarian gender values benefit students' academic outcome, and such benefits are much larger for girls than for boys. Future policy should target more on improving children's gender equality awareness, despite that its beneficial outcome is much stronger for girls than boys.

Introduction

Despite the well documented fact that girls in general perform better than boys academically, gender differences in the math and science still widely exist. There is great international and geographic variation about gender differences. Studies on such gender difference have largely shifted from biological explanation to social and cultural explanations, such as the socialization process males and female students have experienced in their childhood.

As part of the socialization process and outcomes, the attitudes about gender norms held by children are argued to play an important role in their academic outcome (Salikutluk and Heyne 2017; Leaper et al. 2012). Widely accepted traditional gender norms and stereotypes could put girls in a disadvantaged situation so that they are less motivated and confident in math learning but encouraged in other more "feminine" subjects. Using the cross-national data from the Programme for International Student Achievement (PISA), Zhou et al. (2017) have shown a consistent male advantage among the top performers in mathematics. Moreover, they found

the gap was much higher in East Asian countries and in areas such as Hong Kong, Japan and South Korea than the Western countries, showing that the gendered cultural norm plays an important role in math achievement. Nevertheless, studies have also showed that the gender gap in STEM has decreased over time (Zhang and Tsang 2012).

Fewer studies have been conducted on the gender gap in the academic performance in China, especially in rural areas. Studies focusing on the gender values and how they affect children's academic performance are even rarer. There are two potential theoretical linkages between the gender values and the academic performance. Firstly, it is argued that the egalitarian gender values may benefit female students more than their male counterparts. The egalitarian gender values may encourage female students to overcome the existing social norms that largely shape their roles and expectations and promote self-actualization. In contrast, male students may benefit from a more traditional gender norm, as they would perceive the importance of role realization. Secondly, given the social norm, the effect of the gender values may vary across the subjects. Gender norm and values may be less important for the study of the subjects that do not exhibit much gender difference or those traditionally seen as feminine subjects.

In this study, using a data set collected from rural junior high schools in China, we first looked at whether there exists gender gap in academic performance for the major school subjects including Chinese, math and English. We then look at how the gender gap on academic performance may be moderated by egalitarian gender values.

Methods

Data: We use a data set from 18 rural middle schools in two provinces of China. Three counties were selected by their economic levels in each province. Within each county, three schools were further selected by the economic development levels of the towns in which they were located. Within each school, one class was randomly selected for Grade 7 to Grade 9. As a result, nine schools were selected for each province and 52 classes were selected in total. A structured class questionnaire survey was administrated in the classroom and 2-3 research assistants were assigned to facilitate the students to fill out the questionnaires in each class. Both provinces are ranked middle in the level of economic development in China and they are major migrant-sending areas. As a result, a high proportion of the students there are from the families whose parents have migrated to cities for work. A high proportion of the students are also boarding at school due to the distance between their homes and the schools. Thus, the context of schools may be largely different from previous studies about gender difference on academic performance in the Western setting as people in these rural areas often hold more traditional gender values. Thus, it serves as a lens to learn about the gender gap in terms of

both gender values and school performance among adolescents in the rural areas in China where girls are often more vulnerable due to the strong patriarchal social norm.

Variables: Our dependent variable is the students' test scores from their most recent mid-term exams. We examined their scores on Chinese, Math, and English as well as the total score from these three major subjects. Our key independent variables are students' gender and their gender values. We have 12 items to measure the gender attitudes, with each rated on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree". These items largely assess students' degree of agreement on the traditional gender stereotypes. For example, one stereotype is that men should be more superior to women in individual achievement; another is that women should invest more in family life. To assess students' egalitarian gender values, we then reversely coded the items before aggregation. The Cronbach alpha is 0.86, indicating the consistency of items in measuring the egalitarian gender ideology. As a result, we summed the items together. In addition, we also use the self-reported education aspiration as our additional dependent variable to investigate whether the education aspiration could explain the relationship between the gender values and one's academic performance. Since students are largely from rural areas and many of them are boarding at schools, we control for boarding status, age, local Hukou status, relative family SES, parental education, parental migration status, siblingship size as well as the co-residence with grandparents.

Analytical approach: Since the students were sampled by school, school-level fixed effect is used to control for school characteristics at the current point.

Preliminary Results

Table 1 presents the summary statistics for full sample as well as for male and female samples separately. It showed that female students are doing better on all main subjects except math. For math, there is no statistically difference across gender. Female students also have higher education aspiration than their male counterparts. The score on egalitarian gender role value shows an interesting pattern: female students show a much higher level of egalitarian gender role attitudes than male students, indicating that the gap in terms of gender equality is still large among the rural Chinese youths.

Table 2 presents school level-fixed effect model of Chinese score. Model 1 shows that being female on average is associated with nearly 7 points increment for students' Chinese score, and an increase of 1 in the egalitarian gender value is associated with a 0.347 increment for students' Chinese score. Model 2 shows that having a more egalitarian gender values matters much for female students than for male students. The separate models of female and male students in Model 3 and Model 4 indicate that the egalitarian gender value benefits female students nearly twice of male students.

Table 3 shows the regression results for math test score. Despite that the descriptive statistics did not show a gender difference in math test score, the school-level fixed effect models show that being female students reduces the math test score by 6.4 point, indicating that there is still a large gender gap between male and female students in the math test score with female students being disadvantaged. Model 2 shows the significant interaction effect between gender and the egalitarian gender values, showing that female students math score is much higher when they hold more egalitarian gender values. Model 3 and Model 4 show the results for female and male students separately. It indicates that one-point increment in the egalitarian gender value score is associated with an increase of 0.83 point in the math test score for the female students. However, it is not the case for the male students.

Table 4 shows the regression result for the English test score. Model 1 indicates that female students have a huge advantage on English learning comparing to male students in rural China. Model 2 to Model 4 show that male students' egalitarian gender value is not associated with the English test score. Instead, female students will enjoy a higher English test score when holding more egalitarian gender values.

Table 5 employed the total score of all the three major subjects as the dependent variable. It showed that overall female students are doing better academically and that having more egalitarian gender values is associated with a better academic outcome. The interaction results between the gender values and students' gender show that despite the universal benefits of the egalitarian gender values, its influence on the female students is much larger than that for the male students.

Table 6 is an attempt to deal with why female students are doing better than male students on their academic outcome. We examined whether egalitarian gender values are associated with a higher education aspiration. It showed that the egalitarian gender values are associated with higher education aspiration in general. Furthermore, the overall magnitude is much larger for female students than for male students.

To summarize, our results show that female students are doing better academically than male students in rural China, which made them on the track with other Western setting, despite the more vulnerable situation for female students in rural China. We found the egalitarian gender values benefit students' academic outcome. However, such benefits are much larger for the female students than for their male counterparts. The beneficial effect is also associated with the subjects we studied. For math, having a higher score on egalitarian gender values are particularly important for girls than for boys. Future policy should target more on improving children's gender equality awareness, as it not only benefits girls, but also boys, despite that its beneficial outcome is much stronger for girls than boys. In the next step, we plan to use the

structural equation modelling method to examine the pathway of how gender ideology is associated with youths' academic performance in rural China.

References:

Gong, X., Ding, Y. and Tsang, M.C., 2014. Gender differences of academic performance in compulsory education in rural Southwestern China. *International Journal of Educational Development*, 39, pp.193-204.

Leaper, C., Farkas, T. and Brown, C.S., 2012. Adolescent girls' experiences and gender-related beliefs in relation to their motivation in math/science and English. *Journal of youth and adolescence*, 41(3), pp.268-282.

Salikutluk, Z. and Heyne, S., 2017. Do Gender Roles and Norms Affect Performance in Maths? The Impact of Adolescents' and their Peers' Gender Conceptions on Maths Grades. *European Sociological Review*, 33(3), pp.368-381.

Zhang, Y. and Tsang, M., 2015. Gender gap in the National College Entrance Exam performance in China: a case study of a typical Chinese municipality. *Asia Pacific Education Review*, 16(1), pp.27-36.

Zhou, Y., Fan, X., Wei, X. and Tai, R.H., 2017. Gender Gap among High Achievers in Math and Implications for STEM Pipeline. *The Asia-Pacific Education Researcher*, 26(5), pp.259-269.

Table 1. Descriptive statistics of analytical variables (for full sample and by gender)

	Full sample (N=1,527)		Female (N=825)		Male (N=702)		T-test/Chi-square value
	Mean	S.E.	Mean	S.E.	Mean	S.E.	
Dependent variables							
Mid-term test score on Chinese	97.80	20.31	102.75	17.62	91.99	21.69	-10.69***
Mid-term test score on Math	75.33	33.14	75.03	32.09	75.69	34.35	0.39
Mid-term test score on English	79.71	29.31	85.88	26.83	72.46	30.43	-9.15***
Mid-term total test score on major subjects	252.84	70.52	263.65	64.43	240.14	75.15	-6.58***
Self-expected educational attainment (%)							57.29***
No expectation	0.06	-	0.03	-	0.09	-	
Junior high school	0.02	-	0.01	-	0.02	-	
Senior high school	0.09	-	0.06	-	0.12	-	
Diploma	0.09	-	0.09	-	0.09	-	
Bachelor's degree	0.36	-	0.38	-	0.32	-	
Postgraduate	0.39	-	0.43	-	0.34	-	
Independent variable							
Score on egalitarian gender role scale	43.77	10.00	47.63	8.39	39.23	9.82	-18.03***
Controls							
Currently boarding at school (%)	0.72	-	0.77	-	0.67	-	19.60***
Age	13.77	1.21	13.80	1.24	13.75	1.17	-0.83
Local *hukou* holder (%)	0.94	-	0.93	-	0.94	-	0.19
Relative family SES (%)							10.09**
Lower	0.23	-	0.24	-	0.21	-	
Similar	0.51	-	0.52	-	0.49	-	
Higher	0.27	-	0.23	-	0.30	-	
Parent's highest education (%)							12.31**
Primary or below	0.14	-	0.15	-	0.14	-	

Junior high school	0.62	-	0.65	-	0.59	-	
Senior high school	0.20	-	0.17	-	0.23	-	
College or above	0.04	-	0.03	-	0.05	-	
Parental migration status (%)							2.89
Both non-migrants	0.48	-	0.49	-	0.47	-	
Father migrates only	0.21	-	0.22	-	0.21	-	
Mother migrates only	0.05	-	0.05	-	0.06	-	
Both migrate	0.25	-	0.24	-	0.27	-	
Number of sibling(s) (%)							26.79***
Only child	0.14	-	0.10	-	0.18	-	
1 sibling	0.54	-	0.54	-	0.55	-	
2 siblings	0.20	-	0.24	-	0.16	-	
3 siblings or more	0.12	-	0.12	-	0.11	-	
Co-residing with grandparent(s) (%)	0.57	-	0.58	-	0.57	-	0.14

Note: *** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Table 2. School-level Fixed Effect Model of Chinese Scores

	Full Sample		Female	Male
VARIABLES	Model 1	Model 2	Model 3	Model 4
Independent Variables				
Egalitarian gender values	0.347***	0.264***	0.450***	0.236***
	(0.048)	(0.065)	(0.064)	(0.071)
Female	6.963***	-0.858		
	(0.964)	(4.264)		
Interaction Term				
Female*Egalitarian gender values		0.179+		
		(0.095)		
Controls				
Boarding at school (ref. not)	-0.513	-0.481	-2.429	2.043
	(1.511)	(1.510)	(1.968)	(2.292)
Age	-0.176	-0.164	0.113	-0.504
	(0.417)	(0.417)	(0.507)	(0.689)
Local hukou (ref. non-local hukou)	-1.706	-1.779	-4.704*	3.025
	(1.799)	(1.798)	(2.176)	(2.973)
Relative family SES (0=Lower)				
Similar	-2.667*	-2.715*	-1.555	-2.488
	(1.120)	(1.120)	(1.379)	(1.818)
Higher	-2.333+	-2.370+	-1.775	-1.601
	(1.270)	(1.269)	(1.612)	(2.001)
Parents' highest education (0=Primary or below)				
Junior high	2.393+	2.371+	1.399	3.638+
	(1.297)	(1.296)	(1.588)	(2.102)
Senior high	1.414	1.327	-1.325	4.219+
	(1.594)	(1.594)	(2.043)	(2.484)
College or above	4.067	3.970	2.917	6.180
	(2.497)	(2.495)	(3.303)	(3.798)
Parental migration status (0=both non-migrants)				
Father migrates	-0.023	-0.031	-2.660+	4.175*
	(1.157)	(1.156)	(1.407)	(1.901)
Mother migrates	1.782	1.886	0.683	2.644
	(1.999)	(1.998)	(2.584)	(3.062)
Both migrate	0.537	0.623	-0.188	1.718
	(1.202)	(1.201)	(1.501)	(1.936)
Number of siblings (0=Only child)				
1 sibling	3.020*	3.006*	-1.657	7.699***
	(1.324)	(1.323)	(1.815)	(1.966)
2 siblings	1.853	1.811	-0.673	4.135+
	(1.567)	(1.566)	(2.018)	(2.485)
3 siblings or more	0.878	0.886	-0.232	0.766
	(1.771)	(1.769)	(2.339)	(2.685)

Co-residing with grandparents (ref. not)	-0.941	-0.883	-1.929+	0.725
	(0.940)	(0.939)	(1.148)	(1.536)
Constant	81.495***	84.646***	89.221***	76.910***
	(6.529)	(6.735)	(8.143)	(10.617)
School-level fixed effect	Yes	Yes	Yes	Yes
Number of schools	18	18	18	18
R-squared	0.123	0.125	0.082	0.061
Observations	1,527	1,527	825	702

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Table 3. School-level Fixed Effect Model of Math Scores

	Full Sample		Female	Male
VARIABLES	Model 1	Model 2	Model 3	Model 4
Independent Variables				
Egalitarian gender values	0.504***	0.236*	0.830***	0.183
	(0.084)	(0.113)	(0.120)	(0.117)
Female	-6.417***	-31.790***		
	(1.690)	(7.452)		
Interaction Term				
Female*Egalitarian gender values		0.580***		
		(0.166)		
Controls				
Boarding at school (ref. not)	4.685+	4.787+	0.950	8.989*
	(2.649)	(2.639)	(3.697)	(3.777)
Age	0.611	0.650	1.252	-0.129
	(0.731)	(0.729)	(0.953)	(1.136)
Local hukou (ref. non-local hukou)	-5.389+	-5.626+	-11.981**	3.646
	(3.153)	(3.142)	(4.086)	(4.898)
Relative family SES (0=Lower)				
Similar	-0.976	-1.134	-0.570	-0.600
	(1.964)	(1.957)	(2.590)	(2.996)
Higher	-2.252	-2.373	-1.295	-2.716
	(2.226)	(2.218)	(3.028)	(3.297)
Parents' highest education (0=Primary or below)				
Junior high	6.974**	6.901**	4.351	9.131**
	(2.274)	(2.266)	(2.983)	(3.463)
Senior high	8.266**	7.982**	4.938	10.983**
	(2.795)	(2.786)	(3.838)	(4.093)
College or above	17.160***	16.846***	8.906	23.716***
	(4.376)	(4.361)	(6.204)	(6.258)
Parental migration status (0=both non-migrants)				
Father migrates	-4.489*	-4.515*	-6.571*	-0.398
	(2.028)	(2.021)	(2.642)	(3.132)
Mother migrates	3.742	4.079	2.694	5.620
	(3.505)	(3.493)	(4.855)	(5.045)
Both migrate	1.022	1.299	1.659	2.266
	(2.106)	(2.100)	(2.819)	(3.190)
Number of siblings (0=Only child)				
1 sibling	8.358***	8.312***	5.602	12.127***
	(2.321)	(2.312)	(3.409)	(3.239)
2 siblings	4.217	4.081	3.746	4.801
	(2.746)	(2.736)	(3.791)	(4.095)
3 siblings or more	3.662	3.690	1.025	5.391
	(3.104)	(3.092)	(4.393)	(4.424)

Co-residing with grandparents (ref. not)	-1.966	-1.776	-2.988	0.345
	(1.647)	(1.642)	(2.156)	(2.532)
Constant	40.253***	50.476***	23.905	43.920*
	(11.446)	(11.772)	(15.296)	(17.493)
School-level fixed effects	Yes	Yes	Yes	Yes
Number of schools	18	18	18	18
R-squared	0.061	0.068	0.091	0.063
Observations	1,527	1,527	825	702

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Table 4. School-level Fixed Effect Model of English Scores

	Full Sample		Female	Male
VARIABLES	Model 1	Model 2	Model 3	Model 4
Independent Variables				
Egalitarian gender values	0.304***	0.120	0.542***	0.079
	(0.071)	(0.096)	(0.099)	(0.102)
Female	10.362***	-7.090		
	(1.432)	(6.323)		
Interaction Term				
Female*Egalitarian gender values		0.399**		
		(0.141)		
Controls				
Boarding at school (ref. not)	2.110	2.180	0.789	4.476
	(2.245)	(2.239)	(3.056)	(3.290)
Age	-2.798***	-2.771***	-2.797***	-2.982**
	(0.620)	(0.618)	(0.788)	(0.989)
Local hukou (ref. non-local hukou)	-3.407	-3.570	-5.671+	0.768
	(2.672)	(2.666)	(3.378)	(4.266)
Relative family SES (0=Lower)				
Similar	-3.375*	-3.484*	-2.913	-2.452
	(1.664)	(1.661)	(2.141)	(2.610)
Higher	-3.057	-3.141+	-5.024*	-0.178
	(1.886)	(1.882)	(2.503)	(2.872)
Parents' highest education (0=Primary or below)				
Junior high	2.786	2.736	0.124	5.696+
	(1.927)	(1.922)	(2.466)	(3.016)
Senior high	2.821	2.626	-1.570	6.913+
	(2.368)	(2.363)	(3.172)	(3.565)
College or above	10.730**	10.514**	5.148	15.680**
	(3.708)	(3.700)	(5.128)	(5.451)
Parental migration status (0=both non-migrants)				
Father migrates	-2.834+	-2.852+	-6.000**	2.000
	(1.719)	(1.715)	(2.184)	(2.728)
Mother migrates	0.557	0.789	-0.355	2.060
	(2.969)	(2.963)	(4.013)	(4.394)
Both migrate	1.372	1.563	0.285	3.703
	(1.784)	(1.782)	(2.331)	(2.779)
Number of siblings (0=Only child)				
1 sibling	5.398**	5.366**	6.063*	6.559*
	(1.966)	(1.962)	(2.818)	(2.821)
2 siblings	2.897	2.803	4.346	2.284
	(2.327)	(2.322)	(3.134)	(3.567)
3 siblings or more	5.593*	5.612*	6.398+	3.468
	(2.630)	(2.624)	(3.632)	(3.854)

Co-residing with grandparents (ref. not)	-2.571+	-2.441+	-4.239*	-0.422
	(1.395)	(1.393)	(1.782)	(2.205)
Constant	98.353***	105.384***	104.690***	96.614***
	(9.698)	(9.988)	(12.645)	(15.237)
School-level fixed effect	Yes	Yes	Yes	Yes
Number of schools	18	18	18	18
R-squared	0.106	0.111	0.079	0.043
Observations	1,527	1,527	825	702

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Table 5. School-level Fixed Effect Model of Major Subjects Score

	Full Sample		Female	Male
VARIABLES	Model 1	Model 2	Model 3	Model 4
Independent Variables				
Egalitarian gender values	1.155***	0.619**	1.822***	0.498*
	(0.171)	(0.232)	(0.236)	(0.249)
Female	10.908**	-39.738**		
	(3.463)	(15.273)		
Interaction Term				
Female*Egalitarian gender values		1.158***		
		(0.340)		
Controls				
Boarding at school (ref. not)	6.282	6.485	-0.690	15.508+
	(5.428)	(5.409)	(7.245)	(8.018)
Age	-2.362	-2.284	-1.432	-3.615
	(1.499)	(1.493)	(1.867)	(2.411)
Local hukou (ref. non-local hukou)	-10.502	-10.976+	-22.355**	7.438
	(6.461)	(6.440)	(8.009)	(10.398)
Relative family SES (0=Lower)				
Similar	-7.017+	-7.333+	-5.038	-5.540
	(4.024)	(4.011)	(5.075)	(6.360)
Higher	-7.642+	-7.884+	-8.094	-4.495
	(4.560)	(4.545)	(5.934)	(7.000)
Parents' highest education (0=Primary or below)				
Junior high	12.154**	12.008**	5.874	18.465*
	(4.660)	(4.643)	(5.847)	(7.351)
Senior high	12.501*	11.934*	2.044	22.115*
	(5.727)	(5.709)	(7.522)	(8.688)
College or above	31.956***	31.331***	16.972	45.576***
	(8.967)	(8.937)	(12.158)	(13.285)
Parental migration status (0=both non-migrants)				
Father migrates	-7.347+	-7.399+	-15.232**	5.776
	(4.156)	(4.141)	(5.179)	(6.649)
Mother migrates	6.080	6.754	3.022	10.324
	(7.181)	(7.158)	(9.514)	(10.710)
Both migrate	2.931	3.485	1.756	7.688
	(4.315)	(4.303)	(5.526)	(6.773)
Number of siblings (0=Only child)				
1 sibling	16.776***	16.684***	10.008	26.386***
	(4.755)	(4.738)	(6.682)	(6.876)
2 siblings	8.966	8.696	7.420	11.219
	(5.627)	(5.608)	(7.431)	(8.693)
3 siblings or more	10.133	10.188	7.191	9.625
	(6.360)	(6.337)	(8.611)	(9.392)

Co-residing with grandparents (ref. not)	-5.478	-5.099	-9.157*	0.647
	(3.374)	(3.364)	(4.225)	(5.374)
Constant	220.102***	240.507***	217.816***	217.445***
	(23.452)	(24.125)	(29.979)	(37.135)
School-level fixed effect	Yes	Yes	Yes	Yes
Number of schools	18	18	18	18
R-squared	0.087	0.094	0.104	0.061
Observations	1,527	1,527	825	702

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Table 6. Ordered Logit Regression Model of Self-Expected Educational Attainment

	Full Sample		Female	Male
VARIABLES	Model 1	Model 2	Model 3	Model 4
Independent Variables				
Egalitarian gender values	0.032***	0.014+	0.059***	0.013+
	(0.005)	(0.007)	(0.008)	(0.007)
Female	0.255*	-1.413**		
	(0.109)	(0.481)		
Interaction Term				
Female*Egalitarian gender values		0.038***		
		(0.011)		
Controls				
Boarding at school (ref. not)	0.149	0.154	0.232	0.114
	(0.168)	(0.169)	(0.249)	(0.234)
Age	-0.145**	-0.140**	-0.208**	-0.068
	(0.048)	(0.048)	(0.067)	(0.072)
Local hukou (ref. non-local hukou)	-0.545*	-0.562**	-0.931**	-0.215
	(0.213)	(0.213)	(0.310)	(0.309)
Relative family SES (0=Lower)				
Similar	-0.183	-0.193	-0.212	-0.126
	(0.127)	(0.127)	(0.177)	(0.189)
Higher	-0.312*	-0.328*	-0.345+	-0.249
	(0.144)	(0.144)	(0.208)	(0.209)
Parents' highest education (0=Primary or below)				
Junior high	0.233	0.235	0.245	0.183
	(0.145)	(0.145)	(0.204)	(0.212)
Senior high	0.363*	0.348+	0.278	0.323
	(0.180)	(0.180)	(0.262)	(0.255)
College or above	1.294***	1.279***	0.686	1.603***
	(0.307)	(0.306)	(0.449)	(0.429)
Parental migration status (0=both non-migrants)				
Father migrates	-0.344**	-0.345**	-0.443*	-0.265
	(0.130)	(0.129)	(0.178)	(0.196)
Mother migrates	-0.036	-0.018	-0.098	0.024
	(0.224)	(0.225)	(0.341)	(0.309)
Both migrate	-0.038	-0.022	0.165	-0.195
	(0.135)	(0.136)	(0.192)	(0.200)
Number of siblings (0=Only child)				
1 sibling	0.433**	0.424**	0.160	0.672***
	(0.145)	(0.146)	(0.231)	(0.196)
2 siblings	0.454**	0.441*	0.054	0.925***
	(0.174)	(0.175)	(0.257)	(0.256)
3 siblings or more	0.174	0.159	-0.327	0.475+
	(0.196)	(0.196)	(0.299)	(0.269)

Co-residing with grandparents (ref. not)	-0.026	-0.011	-0.279+	0.264+
	(0.106)	(0.106)	(0.147)	(0.159)
Constant cut1	-3.669***	-4.329***	-4.692***	-2.667*
	(0.745)	(0.769)	(1.083)	(1.083)
Constant cut2	-3.415***	-4.075***	-4.428***	-2.405*
	(0.743)	(0.767)	(1.079)	(1.082)
Constant cut3	-2.460***	-3.119***	-3.358**	-1.433
	(0.740)	(0.764)	(1.069)	(1.080)
Constant cut4	-1.811*	-2.465**	-2.469*	-0.895
	(0.739)	(0.763)	(1.066)	(1.079)
Constant cut5	-0.089	-0.731	-0.473	0.677
	(0.737)	(0.759)	(1.062)	(1.077)
School-level dummies	Yes	Yes	Yes	Yes
Number of schools	18	18	18	18
Log-likelihood	-2016.2644	-2009.9539	-970.69837	-993.9026
Observations	1,527	1,527	825	702

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1