

Online Appendix

Table A1: The effect of preferential treatment of boys versus girls and gender-biased fertility strategies on education performance – both rounds, all observations

	Completed grades	Reading	Writing	Math
Female	0.014 (0.044)	-0.035 (0.038)	-0.030 (0.042)	-0.119*** (0.037)
Female*first-born girl family	-0.140** (0.060)	-0.131** (0.053)	-0.089 (0.057)	-0.087* (0.050)
<i>Adjusted coefficients^a</i>				
Female ^b	0.038 (0.052)	-0.012 (0.045)	-0.014 (0.050)	-0.104** (0.044)
Female*first-born girl family ^c	-0.164** (0.070)	-0.153** (0.063)	-0.104 (0.066)	-0.102* (0.059)
R^2	0.60	0.02	0.01	0.02
N	68,790	19,446	19,282	19,368
Mean outcome	4.603	0.016	0.017	0.014

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors, clustered at the sibship level, within parenthesis. The regressions also control for first born girl family, being first-born and a girl, being first-born and a boy, age dummies, a survey dummy and a constant.

^a) Since first-born boy families appear to use some gender-biased fertility strategies, the female coefficient will be an upward-biased estimate of preferential treatment of boys and the female*first-born girl family coefficient will be a downward biased estimate of the use of gender-biased fertility strategies. The bias-adjusted coefficient adjusts for the bias using information about the use of gender-biased fertility strategies in the two types of families and under the assumption of homogenous impacts of gender-biased fertility in the two types of families. The point estimates and standard errors are computed using the lincom post-estimation command in Stata.

^b) The adjusted female coefficient is $\beta_1 - 0.1740 * \beta_3$, where β_1 is the Female coefficient, β_3 is the Female*first-born girl family coefficient

^c) The adjusted Female*first-born girl family coefficient is $\beta_3 * 1.1740$.

Table A2: The effect of preferential treatment of boys versus girls and gender-biased fertility strategies on education inputs – both rounds, all observations

	Enrolled	School hours	Private	Expenses	HAZ
Female	-0.018** (0.007)	-0.929** (0.400)	-0.027*** (0.009)	-221.154*** (67.413)	-0.160*** (0.061)
Female*first-born girl family	-0.027*** (0.009)	-1.833*** (0.509)	-0.054*** (0.012)	-501.167*** (97.316)	-0.104 (0.081)
<i>Adjusted coefficients</i>					
Female ^b	-0.013 (0.009)	-0.610 (0.472)	-0.017* (0.010)	-133.951* (80.078)	-0.141* (0.072)
Female*first-born girl family ^c	-0.032*** (0.011)	-2.152*** (0.597)	-0.064*** (0.014)	-588.370*** (114.249)	-0.122 (0.095)
R^2	0.10	0.07	0.02	0.09	0.02
N	79,110	72,488	65,923	60,048	20,096
Mean outcome	0.861	36.300	0.305	3188.076	-1.807

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors, clustered at the sibship level, within parenthesis. The regressions also control for first born girl family, being first-born and a girl, being first-born and a boy, age dummies, a survey dummy and a constant.

^a) Since first-born boy families appear to use some gender-biased fertility strategies, the female coefficient will be an upward-biased estimate of preferential treatment of boys and the female*first-born girl family coefficient will be a downward biased estimate of the use of gender-biased fertility strategies. The bias-adjusted coefficient adjusts for the bias using information about the use of gender-biased fertility strategies in the two types of families and under the assumption of homogenous impacts of gender-biased fertility in the two types of families. The point estimates and standard errors are computed using the lincom post-estimation command in Stata.

^b) The adjusted female coefficient is $\beta_1 - 0.1740 * \beta_3$, where β_1 is the Female coefficient, β_3 is the Female*first-born girl family coefficient

^c) The adjusted Female*first-born girl family coefficient is $\beta_3 * 1.1740$.

Table A3: The effect of preferential treatment of boys versus girls and gender-biased fertility strategies on education performance – round 1

	Completed grades	Reading	Writing	Math
Female	-0.052 (0.062)	-0.000 (0.053)	-0.033 (0.058)	-0.093* (0.054)
Female*first-born girl family	-0.144* (0.082)	-0.203*** (0.071)	-0.104 (0.077)	-0.190*** (0.071)
<i>Adjusted coefficients^a</i>				
Female ^b	-0.027 (0.074)	0.035 (0.063)	-0.015 (0.068)	-0.060 (0.064)
Female*first-born girl family ^c	-0.169* (0.097)	-0.239*** (0.083)	-0.122 (0.091)	-0.223*** (0.084)
R^2	0.52	0.02	0.01	0.02
N	36,708	9,820	9,724	9,775
Mean outcome	4.636	0.054	-0.033	0.058

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors, clustered at the sibship level, within parenthesis. The regressions also control for first born girl family, being first-born and a girl, being first-born and a boy, age dummies, a survey dummy and a constant.

^a) Since first-born boy families appear to use some gender-biased fertility strategies, the female coefficient will be an upward-biased estimate of preferential treatment of boys and the female*first-born girl family coefficient will be a downward biased estimate of the use of gender-biased fertility strategies. The bias-adjusted coefficient adjusts for the bias using information about the use of gender-biased fertility strategies in the two types of families and under the assumption of homogenous impacts of gender-biased fertility in the two types of families. The point estimates and standard errors are computed using the lincom post-estimation command in Stata.

^b) The adjusted female coefficient is $\beta_1 - 0.1740 * \beta_3$, where β_1 is the Female coefficient, β_3 is the Female*first-born girl family coefficient

^c) The adjusted Female*first-born girl family coefficient is $\beta_3 * 1.1740$.

Table A4: The effect of preferential treatment of boys versus girls and gender-biased fertility strategies on pathways – round 1

	Enrolled	School hours	Private	Expenses	HAZ
Female	-0.033*** (0.011)	-1.135** (0.537)	-0.009 (0.010)	-31.216 (59.539)	-0.107 (0.085)
Female*first-born girl family	-0.015 (0.014)	-1.647** (0.693)	-0.050*** (0.015)	-220.032*** (84.114)	-0.086 (0.108)
<i>Adjusted coefficients</i>					
Female ^b	-0.030** (0.013)	-0.848 (0.635)	0.000 (0.012)	7.070 (70.659)	-0.093 (0.100)
Female*first-born girl family ^c	-0.018 (0.016)	-1.934** (0.814)	-0.059*** (0.018)	-258.318*** (98.750)	-0.101 (0.127)
R^2	0.10	0.06	0.01	0.07	0.01
N	42,015	39,102	33,018	28,195	10,347
Mean outcome	0.823	34.086	0.273	1998.421	-2.017

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors, clustered at the sibship level, within parenthesis. The regressions also control for first born girl family, being first-born and a girl, being first-born and a boy, age dummies, a survey dummy and a constant.

^a) Since first-born boy families appear to use some gender-biased fertility strategies, the female coefficient will be an upward-biased estimate of preferential treatment of boys and the female*first-born girl family coefficient will be a downward biased estimate of the use of gender-biased fertility strategies. The bias-adjusted coefficient adjusts for the bias using information about the use of gender-biased fertility strategies in the two types of families and under the assumption of homogenous impacts of gender-biased fertility in the two types of families. The point estimates and standard errors are computed using the lincom post-estimation command in Stata.

^b) The adjusted female coefficient is $\beta_1 - 0.1740 * \beta_3$, where β_1 is the Female coefficient, β_3 is the Female*first-born girl family coefficient

^c) The adjusted Female*first-born girl family coefficient is $\beta_3 * 1.1740$.

Table A5: The effect of preferential treatment of boys versus girls and gender-biased fertility strategies on education performance – round 2

	Completed grades	Reading	Writing	Math
Female	0.090 (0.057)	-0.072 (0.056)	-0.023 (0.061)	-0.147*** (0.050)
Female*first-born girl family	-0.146* (0.083)	-0.057 (0.078)	-0.078 (0.082)	0.017 (0.069)
<i>Adjusted coefficients^a</i>				
Female ^b	0.115* (0.067)	-0.062 (0.066)	-0.009 (0.073)	-0.150** (0.060)
Female*first-born girl family ^c	-0.172* (0.098)	-0.067 (0.091)	-0.091 (0.097)	0.020 (0.081)
R^2	0.70	0.02	0.02	0.02
N	32,082	9,626	9,558	9,593
Mean outcome	4.564	-0.023	0.068	-0.031

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors, clustered at the sibship level, within parenthesis. The regressions also control for first born girl family, being first-born and a girl, being first-born and a boy, age dummies, a survey dummy and a constant.

^a) Since first-born boy families appear to use some gender-biased fertility strategies, the female coefficient will be an upward-biased estimate of preferential treatment of boys and the female*first-born girl family coefficient will be a downward biased estimate of the use of gender-biased fertility strategies. The bias-adjusted coefficient adjusts for the bias using information about the use of gender-biased fertility strategies in the two types of families and under the assumption of homogenous impacts of gender-biased fertility in the two types of families. The point estimates and standard errors are computed using the lincom post-estimation command in Stata.

^b) The adjusted female coefficient is $\beta_1 - 0.1740 * \beta_3$, where β_1 is the Female coefficient, β_3 is the Female*first-born girl family coefficient

^c) The adjusted Female*first-born girl family coefficient is $\beta_3 * 1.1740$.

Table A6: The effect of preferential treatment of boys versus girls and gender-biased fertility strategies on pathways – round 2

	Enrolled	School hours	Private	Expenses	HAZ
Female	-0.001 (0.009)	-0.726 (0.529)	-0.044*** (0.014)	-379.790*** (110.365)	-0.217*** (0.078)
Female*first-born girl family	-0.040*** (0.011)	-2.004*** (0.687)	-0.058*** (0.018)	-702.394*** (153.126)	-0.116 (0.114)
<i>Adjusted coefficients</i>					
Female ^b	0.006 (0.010)	-0.377 (0.625)	-0.034** (0.016)	-257.573** (130.879)	-0.197** (0.093)
Female*first-born girl family ^c	-0.046*** (0.013)	-2.353*** (0.806)	-0.068*** (0.021)	-824.610*** (179.770)	-0.136 (0.134)
R^2	0.09	0.05	0.02	0.06	0.02
N	37,095	33,386	32,905	31,853	9,749
Mean outcome	0.903	38.893	0.338	4241.112	-1.583

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors, clustered at the sibship level, within parenthesis. The regressions also control for first born girl family, being first-born and a girl, being first-born and a boy, age dummies, a survey dummy and a constant.

^a) Since first-born boy families appear to use some gender-biased fertility strategies, the female coefficient will be an upward-biased estimate of preferential treatment of boys and the female*first-born girl family coefficient will be a downward biased estimate of the use of gender-biased fertility strategies. The bias-adjusted coefficient adjusts for the bias using information about the use of gender-biased fertility strategies in the two types of families and under the assumption of homogenous impacts of gender-biased fertility in the two types of families. The point estimates and standard errors are computed using the lincom post-estimation command in Stata.

^b) The adjusted female coefficient is $\beta_1 - 0.1740 * \beta_3$, where β_1 is the Female coefficient, β_3 is the Female*first-born girl family coefficient

^c) The adjusted Female*first-born girl family coefficient is $\beta_3 * 1.1740$.

Table A7: Variable definitions

Variable	Definition
Completed grades	Completed grades in years
Reading	Reading test score standardized by age
Writing	Writing test score standardized by age
Math	Math test score standardized by age
Enrolled	Binary indicator of current school enrollment
School hours	Total hours spent on school related activities, including hours in school, doing homework and private tuition
Private	Binary private school indicator
Expenses	Expenditure in 1,000 rupees on the child's education during the last 12 months
HAZ	Height for age Z score
Female	Binary indicator of child sex
First born girl family	Binary indicator equal to 1 if the first born child in family is a girl

Table A8: Descriptive statistics

Variable	N	Mean	Std dev	Min	Max
Dependent variables					
Enrollment	68,841	0.851	0.36	0	1
Total hours spent on school in a week	63,829	35.574	19.58	0	112
Private school	58,582	0.277	0.45	0	1
School expenses in rupees	54,027	2694.254	4831.01	0	70000
Height for age Z score	20,046	-1.850	1.55	-6.000	5.855
Completed grades	68,790	4.449	3.22	0	16
Reading test score	19,446	-0.070	1.01	-2.416	1.373
Writing test score	19,282	-0.042	1.02	-2.048	0.800
Math test score	19,368	-0.059	1	-1.846	1.947
Household variables (sub-section 4.3)					
Birth order 1	68,841	0.335	0.47	0	1
Birth order 2	68,841	0.308	0.46	0	1
Birth order 3	68,841	0.188	0.39	0	1
Birth order 4 or higher	68,841	0.169	0.37	0	1
Age 6	68,841	0.087	0.28	0	1
Age 7	68,841	0.093	0.29	0	1
Age 8	68,841	0.078	0.27	0	1
Age 9	68,841	0.067	0.25	0	1
Age 10	68,841	0.102	0.30	0	1
Age 11	68,841	0.071	0.26	0	1
Age 12	68,841	0.117	0.32	0	1
Age 13	68,841	0.087	0.28	0	1
Age 14	68,841	0.087	0.28	0	1
Age 15	68,841	0.080	0.27	0	1
Age 16	68,841	0.070	0.26	0	1
Age 17	68,841	0.061	0.24	0	1
Girl	68,841	0.480	0.50	0	1
In first-born girl family	68,841	0.512	0.50	0	1
Year 2011	68,841	0.478	0.50	0	1
Household variables (sub-section 4.3)					
Poor	29,541	0.244	0.430	0	1
Urban	29,542	0.286	0.452	0	1
Mother's ed	29,435	4.160	4.658	0	16
Father's ed	27,170	6.410	4.891	0	16
SC/ST	29,526	0.299	0.458	0	1
OBC	29,526	0.415	0.493	0	1
Brahmin	29,526	0.047	0.212	0	1
Muslim	29,542	0.128	0.334	0	1
Sibship size	29,542	2.958	1.338	1	13
Ideal no. kids	27,964	2.527	0.938	0	12

Table A9: The total gender inequalities in education - descriptive regressions

	Enrolled	Total hours	Private	Expenses	HAZ
Female	-0.032*** (0.004)	-1.815*** (0.212)	-0.045*** (0.005)	-415.489*** (45.823)	-0.219*** (0.031)
<i>N</i>	68,841	63,829	58,582	54,027	20,046
<i>Mean</i>	0.851	35.574	0.277	2694.254	-1.850
	Completed grades	Reading	Writing	Math	
Female	-0.051** (0.024)	-0.081*** (0.022)	-0.067*** (0.022)	-0.159*** (0.021)	
<i>N</i>	68,790	19,446	19,282	19,368	
<i>Mean</i>	4.449	-0.070	-0.042	-0.059	

Note: The estimations also include a constant, a full set of child age dummies, and a year dummy. Standard errors, clustered at the sibship level, within parenthesis.

Table A10: Differences in means – children up to age 17

	First-born girl family		First-born boy family		diff
	N	Mean	N	Mean	
Mother's age	19,609	31.80	20,625	31.87	-0.07
Father's age	17,779	36.63	18,710	36.64	-0.01
Mother's education	19,748	4.67	20,750	4.64	0.03
Father's education	17,899	6.78	18,795	6.78	0.002
Brahmin	19,638	0.0469	20,625	0.0470	-0.0001
Other Backward Class	19,638	0.419	20,625	0.424	-0.006
Scheduled Caste/Tribe	19,638	0.305	20,625	0.292	0.014*
Muslim	19,864	0.123	20,845	0.129	-0.006
Urban	19,646	0.279	20,643	0.284	-0.005

Table A11: The effect of preferential treatment of boys versus girls and gender-biased fertility strategies on education performance – control for absolute birth order

	Completed grades	Reading	Writing	Math
Female	0.012 (0.044)	-0.035 (0.037)	-0.030 (0.042)	-0.119*** (0.036)
Female*first-born girl family	-0.137** (0.059)	-0.124** (0.053)	-0.083 (0.056)	-0.080 (0.050)
First-born girl family	0.122 (0.190)	0.124** (0.056)	0.093 (0.067)	0.138** (0.059)
<i>Adjusted coefficients^a</i>				
Female ^b	0.035 (0.052)	-0.014 (0.044)	-0.015 (0.049)	-0.106** (0.043)
Female*first-born girl family ^c	-0.161** (0.070)	-0.146** (0.062)	-0.097* (0.066)	-0.094* (0.058)
R ²	0.60	0.03	0.02	0.03
N	68,790	19,446	19,282	19,368
Mean outcome	4.603	0.0158	0.017	0.014

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors, clustered at the sibship level, within parenthesis. The regressions also control for being first-born and a girl, being first-born and a boy, age dummies, a survey dummy and a constant.

^a) Since first-born boy families appear to use some gender-biased fertility strategies, the female coefficient will be an upward-biased estimate of preferential treatment of boys and the female*first-born girl family coefficient will be a downward biased estimate of the use of gender-biased fertility strategies. The bias-adjusted coefficient adjusts for the bias using information about the use of gender-biased fertility strategies in the two types of families and under the assumption of homogenous impacts of gender-biased fertility in the two types of families. The point estimates and standard errors are computed using the lincom post-estimation command in Stata.

^b) The adjusted female coefficient is $\beta_1 - 0.1740 * \beta_3$, where β_1 is the Female coefficient, β_3 is the Female*first-born girl family coefficient

^c) The adjusted Female*first-born girl family coefficient is $\beta_3 * 1.1740$.

Table A12: The effect of preferential treatment of boys versus girls and gender-biased fertility strategies on pathways – control for absolute birth order

	Enrolled	School hours	Private	Expenses	HAZ
Female	-0.021*** (0.008)	-0.915** (0.405)	-0.029*** (0.010)	-227.297*** (67.748)	-0.164*** (0.061)
Female*first-born girl family	-0.024** (0.010)	-1.954*** (0.521)	-0.055*** (0.013)	-440.720*** (98.782)	-0.104 (0.081)
First-born girl family	0.056** (0.027)	3.940** (1.674)	0.060 (0.039)	747.178 (462.720)	-0.052 (0.088)
<i>Adjusted coefficients^a</i>					
Female ^b	-0.017* (0.009)	-0.575 (0.478)	-0.019* (0.011)	-150.612* (80.519)	-0.146* (0.072)
Female*first-born girl family ^c	-0.028** (0.012)	-2.294*** (0.612)	-0.064*** (0.015)	-517.405*** (115.971)	-0.122 (0.095)
R ²	0.11	0.08	0.02	0.09	0.02
N	68,841	63,829	58,582	54,027	20,046
Mean outcome	0.861	36.357	0.305	3151.924	-1.807

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors, clustered at the sibship level, within parenthesis. The regressions also control for being first-born and a girl, being first-born and a boy, age dummies, a survey dummy and a constant.

^a) Since first-born boy families appear to use some gender-biased fertility strategies, the female coefficient will be an upward-biased estimate of preferential treatment of boys and the female*first-born girl family coefficient will be a downward biased estimate of the use of gender-biased fertility strategies. The bias-adjusted coefficient adjusts for the bias using information about the use of gender-biased fertility strategies in the two types of families and under the assumption of homogenous impacts of gender-biased fertility in the two types of families. The point estimates and standard errors are computed using the lincom post-estimation command in Stata.

^b) The adjusted female coefficient is $\beta_1 - 0.1740 * \beta_3$, where β_1 is the Female coefficient, β_3 is the Female*first-born girl family coefficient

^c) The adjusted Female*first-born girl family coefficient is $\beta_3 * 1.1740$.

Table A13: The effect of preferential treatment of boys versus girls and gender-biased fertility strategies on education performance – full results

	Completed grades	Reading	Writing	Math
Female	0.014 (0.044)	-0.035 (0.038)	-0.030 (0.042)	-0.119*** (0.037)
Female*first-born girl family	-0.140** (0.060)	-0.131** (0.053)	-0.089 (0.057)	-0.087* (0.050)
First-born girl family	0.116 (0.188)	0.116** (0.057)	0.085 (0.068)	0.131** (0.060)
First-born girl herself	0.212*** (0.038)	0.283*** (0.039)	0.235*** (0.039)	0.241*** (0.036)
First-born boy himself	0.273*** (0.035)	0.263*** (0.033)	0.240*** (0.037)	0.287*** (0.034)
Age 7	0.696*** (0.035)			
Age 8	1.414*** (0.040)			
Age 9	2.196*** (0.049)	0.051 (0.039)	0.063 (0.042)	0.056 (0.038)
Age 10	2.888*** (0.043)	0.014 (0.040)	0.042 (0.041)	0.002 (0.037)
Age 11	3.850*** (0.054)	0.023 (0.041)	0.032 (0.047)	-0.012 (0.041)
Age 12	4.491*** (0.050)			
Age 13	5.421*** (0.058)			
Age 14	6.307*** (0.062)			
Age 15	6.568*** (0.090)			
Age 16	7.377*** (0.086)			
Age 17	8.045*** (0.102)			
Late survey	0.459*** (0.037)	-0.114*** (0.030)	0.064** (0.033)	-0.128*** (0.030)
First-born girl family*Age 6	0.007 (0.176)			
First-born girl family*Age 7	0.001 (0.177)			
First-born girl family*Age 8	0.039 (0.182)	-0.012 (0.059)	-0.010 (0.064)	-0.055 (0.057)
First-born girl family*Age 9	0.028 (0.182)	-0.059 (0.057)	-0.024 (0.062)	-0.089 (0.057)
First-born girl family*Age 10	-0.036 (0.182)	-0.059 (0.057)	-0.092 (0.062)	-0.057 (0.057)

	(0.181)	(0.059)	(0.066)	(0.059)
First-born girl family*Age 11	0.028			
	(0.184)			
First-born girl family*Age 12	0.048			
	(0.186)			
First-born girl family*Age 13	0.070			
	(0.183)			
First-born girl family*Age 14	-0.021			
	(0.186)			
First-born girl family*Age 15	0.139			
	(0.179)			
First-born girl family*Age 16	-0.038			
	(0.208)			
First-born girl family*Late survey	0.020	0.042	0.026	0.027
	(0.054)	(0.045)	(0.048)	(0.043)
Constant	0.164***	-0.113***	-0.173***	-0.052
	(0.033)	(0.038)	(0.040)	(0.037)
R^2	0.60	0.02	0.01	0.02
N	68,790	19,446	19,282	19,368

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors, clustered at the sibship level, within parenthesis.

^{a)} Since first-born boy families appear to use some gender-biased fertility strategies, the female coefficient will be an upward-biased estimate of preferential treatment of boys and the female*first-born girl family coefficient will be a downward biased estimate of the use of gender-biased fertility strategies. The bias-adjusted coefficient adjusts for the bias using information about the use of gender-biased fertility strategies in the two types of families and under the assumption of homogenous impacts of gender-biased fertility in the two types of families. The point estimates and standard errors are computed using the `lincom` post-estimation command in Stata.

^{b)} The adjusted female coefficient is $\beta_1 - 0.1740 * \beta_3$, where β_1 is the Female coefficient, β_3 is the Female*first-born girl family coefficient

^{c)} The adjusted Female*first-born girl family coefficient is $\beta_3 * 1.1740$.

Table A14: The effect of preferential treatment of boys versus girls and gender-biased fertility strategies on pathways – full results

	Enrolled	School hours	Private	Expenses	HAZ
Female	-0.021*** (0.008)	-0.885** (0.409)	-0.028*** (0.009)	-224.171*** (68.719)	-0.164*** (0.061)
Female*first-born girl family	-0.024** (0.010)	-1.997*** (0.524)	-0.055*** (0.013)	-461.227*** (99.939)	-0.104 (0.081)
First-born girl family	0.056** (0.027)	3.881** (1.707)	0.059 (0.037)	741.646 (456.759)	-0.053 (0.088)
First-born girl herself	0.027*** (0.007)	2.150*** (0.383)	0.105*** (0.008)	1,278.331*** (72.580)	-0.010 (0.057)
First-born boy himself	0.045*** (0.006)	3.107*** (0.343)	0.075*** (0.008)	1,252.524*** (76.185)	0.007 (0.055)
Age 7	0.136*** (0.014)	6.369*** (0.693)	-0.060*** (0.017)	-118.686 (143.290)	
Age 8	0.159*** (0.016)	8.441*** (0.775)	-0.051*** (0.018)	160.368 (136.457)	
Age 9	0.170*** (0.013)	10.579*** (0.690)	-0.045** (0.018)	232.203 (145.504)	-0.094 (0.070)
Age 10	0.175*** (0.013)	9.924*** (0.660)	-0.072*** (0.016)	-45.928 (126.758)	-0.257*** (0.064)
Age 11	0.170*** (0.014)	11.685*** (0.699)	-0.083*** (0.018)	304.475** (152.425)	-0.179*** (0.068)
Age 12	0.130*** (0.014)	9.905*** (0.697)	-0.108*** (0.016)	173.338 (127.445)	
Age 13	0.112*** (0.015)	10.171*** (0.748)	-0.101*** (0.017)	451.704*** (146.240)	
Age 14	0.051*** (0.015)	7.820*** (0.759)	-0.099*** (0.017)	1,030.783*** (155.464)	
Age 15	-0.038** (0.018)	4.317*** (0.943)	-0.112*** (0.018)	1,453.072*** (162.369)	
Age 16	-0.093*** (0.018)	0.621 (0.904)	-0.079*** (0.022)	2,208.874*** (202.605)	
Age 17	-0.158*** (0.020)	-3.804*** (1.040)	-0.093*** (0.029)	3,384.755*** (328.349)	
Late survey	0.096*** (0.006)	5.909*** (0.371)	0.086*** (0.009)	1,845.742*** (73.686)	0.353*** (0.053)
First-born girl family*Age 6	-0.005 (0.029)	-0.786 (1.726)	-0.022 (0.040)	-503.717 (476.508)	
First-born girl family*Age 7	-0.024 (0.026)	-1.770 (1.651)	-0.007 (0.039)	-375.144 (472.830)	
First-born girl family*Age 8	-0.021 (0.028)	-0.911 (1.704)	-0.014 (0.041)	-683.104 (475.493)	0.101 (0.098)
First-born girl family*Age 9	-0.017 (0.026)	-2.072 (1.648)	-0.023 (0.039)	-523.313 (473.955)	0.135* (0.081)
First-born girl family*Age 10	-0.041 (0.026)	-2.141 (1.630)	-0.012 (0.038)	-439.749 (462.788)	0.168** (0.084)
First-born girl family*Age 11	-0.035 (0.026)	-2.145 (1.662)	-0.009 (0.039)	-448.543 (483.383)	
First-born girl family*Age 12	-0.011 (0.026)	-1.297 (1.626)	-0.010 (0.036)	-319.032 (457.466)	
First-born girl family*Age 13	-0.029 (0.027)	-2.043 (1.706)	-0.019 (0.038)	-496.879 (465.993)	
First-born girl	-0.027	-1.490	-0.027	-514.164	

family*Age 14	(0.027)	(1.706)	(0.038)	(470.196)	
First-born girl	-0.017	-0.891	0.009	-228.644	
family*Age 15	(0.027)	(1.497)	(0.037)	(470.991)	
First-born girl	-0.058*	-3.060*	-0.039	-238.690	
family*Age 16	(0.031)	(1.858)	(0.041)	(515.932)	
First-born girl	0.004	-0.141	-0.026**	-57.541	0.030
family*Late	(0.009)	(0.533)	(0.013)	(104.805)	(0.076)
survey					
Constant	0.717***	25.093***	0.293***	807.262***	-1.809***
	(0.013)	(0.637)	(0.015)	(108.124)	(0.083)
R^2	0.11	0.08	0.02	0.08	0.02
N	68,841	63,829	58,582	54,027	20,046

* $p<0.1$; ** $p<0.05$; *** $p<0.01$. Standard errors, clustered at the sibship level, within parenthesis.

a) Since first-born boy families appear to use some gender-biased fertility strategies, the female coefficient will be an upward-biased estimate of preferential treatment of boys and the female*first-born girl family coefficient will be a downward biased estimate of the use of gender-biased fertility strategies. The bias-adjusted coefficient adjusts for the bias using information about the use of gender-biased fertility strategies in the two types of families and under the assumption of homogenous impacts of gender-biased fertility in the two types of families. The point estimates and standard errors are computed using the lincom post-estimation command in Stata.

b) The adjusted female coefficient is $\beta_1 - 0.1740 * \beta_3$, where β_1 is the Female coefficient, β_3 is the Female*first-born girl family coefficient

c) The adjusted Female*first-born girl family coefficient is $\beta_3 * 1.1740$.

Table A15: The effect of preferential treatment of boys versus girls and gender-biased fertility strategies on education performance – mothers aged 40+

	Completed grades	Reading	Writing	Math
Female	-0.017 (0.092)	0.118 (0.083)	0.014 (0.095)	-0.018 (0.084)
Female*first-born girl family	-0.184 (0.116)	-0.276*** (0.106)	-0.247** (0.120)	-0.171 (0.105)
First-born girl family	0.349* (0.203)	0.418*** (0.120)	0.254 (0.173)	0.305** (0.126)
<i>Adjusted coefficients^a</i>				
Female ^b	0.015 (0.109)	0.166* (0.098)	0.057 (0.113)	0.012 (0.099)
Female*first-born girl family ^c	-0.216 (0.137)	-0.324*** (0.125)	-0.290** (0.141)	-0.201 (0.123)
R^2	0.46	0.03	0.02	0.03
N	18,227	3,254	3,225	3,239
Mean outcome	5.823	-0.182	-0.166	-0.152

* $p<0.1$; ** $p<0.05$; *** $p<0.01$. Standard errors, clustered at the sibship level, within parenthesis. The regressions also control for being first-born and a girl, being first-born and a boy, age dummies, a survey dummy and a constant.

a) Since first-born boy families appear to use some gender-biased fertility strategies, the female coefficient will be an upward-biased estimate of preferential treatment of boys and the female*first-born girl family coefficient will be a downward biased estimate of the use of gender-biased fertility strategies. The bias-adjusted coefficient adjusts for the bias using information about the use of gender-biased fertility strategies in the two types of families and under the assumption of homogenous impacts of gender-biased fertility in the two types of families. The point estimates and standard errors are computed using the lincom post-estimation command in Stata.

b) The adjusted female coefficient is $\beta_1 - 0.1740 * \beta_3$, where β_1 is the Female coefficient, β_3 is the Female*first-born girl family coefficient

c) The adjusted Female*first-born girl family coefficient is $\beta_3 * 1.1740$.

Table A16: The effect of preferential treatment of boys versus girls and gender-biased fertility strategies on pathways – mothers aged 40+

	Enrolled	School hours	Private	Expenses	HAZ
Female	-0.029* (0.015)	-1.601** (0.796)	-0.019 (0.019)	-296.718** (134.856)	-0.020 (0.139)
Female*first-born girl family	-0.036* (0.019)	-2.332** (0.998)	-0.057** (0.022)	-503.412*** (189.334)	-0.204 (0.169)
First-born girl family	0.034 (0.033)	1.759 (1.800)	0.025 (0.047)	1,220.017** (503.742)	0.242 (0.181)
<i>Adjusted coefficients^a</i>					
Female ^b	-0.023 (0.018)	-1.195 (0.940)	-0.009 (0.022)	-209.124 (160.002)	0.016 (0.164)
Female*first-born girl family ^c	-0.043* (0.023)	-2.738** (1.172)	-0.067** (0.026)	-591.006*** (222.278)	-0.239 (0.198)
R^2	0.10	0.07	0.02	0.10	0.03
N	18,292	16,782	13,957	13,137	3,390
Mean outcome	0.792	33.515	0.274	3612.447	-1.733

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors, clustered at the sibship level, within parenthesis. The regressions also control for being first-born and a girl, being first-born and a boy, age dummies, a survey dummy and a constant.

^a) Since first-born boy families appear to use some gender-biased fertility strategies, the female coefficient will be an upward-biased estimate of preferential treatment of boys and the female*first-born girl family coefficient a downward biased estimate of the use of gender-biased fertility strategies. The bias-adjusted coefficient adjusts for the bias using information about gender-biased fertility strategies in the two types of families and under the assumption of homogenous impacts of gender-biased fertility. The point estimates and standard errors are computed using the lincom post-estimation command in Stata.

^b) The adjusted female coefficient is $\beta_1 - 0.1740 * \beta_3$, where β_1 is the Female coefficient, β_3 is the Female*first-born girl family coefficient

^c) The adjusted Female*first-born girl family coefficient is $\beta_3 * 1.1740$.

Table A17: Correlations between family characteristics and indicators of education performance – coefficients from linear regression.

	Completed grades	Reading	Writing	Math
Poor	-0.163*** (0.035)	-0.181*** (0.028)	-0.160*** (0.032)	-0.160*** (0.032)
Urban	0.108*** (0.025)	0.114*** (0.021)	0.088*** (0.021)	0.088*** (0.021)
Mother's edu	0.045*** (0.004)	0.029*** (0.003)	0.033*** (0.004)	0.033*** (0.004)
Father's edu	0.058*** (0.004)	0.030*** (0.003)	0.016*** (0.003)	0.016*** (0.003)
SC/ST	-0.171*** (0.041)	-0.071** (0.031)	-0.100*** (0.032)	-0.100*** (0.032)
OBC	-0.064** (0.031)	0.018 (0.026)	-0.092*** (0.026)	-0.092*** (0.026)
Brahmin	-0.125*** (0.045)	0.110** (0.048)	-0.028 (0.047)	-0.028 (0.047)
Muslim	-0.366*** (0.041)	-0.047 (0.034)	-0.020 (0.036)	-0.020 (0.036)
Sibship size	-0.133*** (0.015)	-0.070*** (0.010)	-0.076*** (0.011)	-0.076*** (0.011)
Ideal no. kids	-0.122*** (0.022)	-0.070*** (0.013)	-0.021 (0.014)	-0.021 (0.014)
R^2	0.72	0.17	0.12	0.12
N	26,861	13,037	12,940	12,940

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors, clustered at the sibship level, within parenthesis.

Table A18: Correlations between family characteristics and measures of current education investment – coefficients from linear regression.

	Enrolled	Total hours	Private	Expenses	HAZ
Poor	-0.036*** (0.007)	-3.129*** (0.349)	-0.110*** (0.007)	-1,185.999*** (54.180)	-0.258*** (0.041)
Urban	0.009** (0.004)	1.454*** (0.279)	0.206*** (0.007)	1,831.650*** (82.384)	0.079** (0.034)
Mother's edu	0.004*** (0.001)	0.372*** (0.037)	0.008*** (0.001)	220.560*** (10.699)	0.024*** (0.004)
Father's edu	0.011*** (0.001)	0.561*** (0.036)	0.014*** (0.001)	112.128*** (9.362)	0.007 (0.004)
SC/ST	-0.014** (0.007)	-1.389*** (0.422)	-0.060*** (0.009)	-818.884*** (106.354)	-0.113** (0.050)
OBC	-0.002 (0.006)	0.310 (0.348)	0.024*** (0.008)	-581.375*** (102.344)	-0.062 (0.046)
Brahmin	0.009 (0.007)	-0.183 (0.590)	0.063*** (0.017)	207.533 (222.003)	-0.038 (0.072)
Muslim	-0.058*** (0.009)	-3.929*** (0.449)	-0.012 (0.010)	-364.539*** (112.647)	-0.000 (0.057)
Sibship size	-0.008*** (0.002)	-0.719*** (0.130)	0.003 (0.003)	-195.424*** (24.849)	-0.002 (0.013)
Ideal no. kids	-0.018*** (0.004)	-1.517*** (0.210)	0.003 (0.004)	-141.735*** (33.840)	-0.040** (0.019)
R ²	0.19	0.18	0.20	0.26	0.03
N	26,874	25,377	24,917	20,645	13,905

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors, clustered at the sibship level, within parenthesis.

Table A19: Sibship socio-economic characteristics in the full estimation sample versus the restricted within-family estimation sample – enrollment sample.

	Full sample		Restricted sample*	
	Mean	St. error	Mean	St. error
Poor	0.211	0.408	0.288	0.453
Urban	0.351	0.477	0.285	0.452
Sibship size	2.956	1.379	4.221	1.369
First born girl	0.490	0.500	0.551	0.497
SC/ST	0.284	0.451	0.326	0.469
OBC	0.404	0.491	0.417	0.493
Brahmin	0.054	0.226	0.044	0.204
Muslim	0.129	0.336	0.181	0.385
Sibships in sample	31,780		8,107	
Children in sample	68,841		27,754	

*The restricted sample refers to the sample of families where there are at least two children in the sample who are of opposite gender and birth order greater than one.