

Online Appendix for

**THE FAMILY ORIGIN OF THE MATH GENDER GAP IS A WHITE
AFFLUENT PHENOMENON**

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Table A1 – Sample Statistics, Florida Department of Education

| | All | | | White | | | Black | | |
|--|-------------|--------------------|----------|-------------|--------------------|----------|-------------|--------------------|----------|
| | (1) Mean | (2) St. Dev. | (3) N | (4) Mean | (5) St. Dev. | (6) N | (7) Mean | (8) St. Dev. | (9) N |
| Math score | 0.161 | 0.929 | 703,654 | 0.340 | 0.863 | 489,903 | -0.406 | 0.923 | 154,253 |
| Female | 0.504 | 0.500 | 703,654 | 0.497 | 0.500 | 489,903 | 0.524 | 0.499 | 154,253 |
| White | 0.696 | 0.460 | 703,654 | 1.000 | 0.000 | 489,903 | 0.000 | 0.000 | 154,253 |
| Black | 0.219 | 0.414 | 703,654 | 0.000 | 0.000 | 489,903 | 1.000 | 0.000 | 154,253 |
| Hispanic | 0.043 | 0.203 | 703,654 | 0.000 | 0.000 | 489,903 | 0.000 | 0.000 | 154,253 |
| Asian | 0.002 | 0.048 | 703,654 | 0.000 | 0.000 | 489,903 | 0.000 | 0.000 | 154,253 |
| Other race | 0.038 | 0.192 | 703,654 | 0.000 | 0.000 | 489,903 | 0.000 | 0.000 | 154,253 |
| Median income zipcode of birth*100,000 (USD) | 0.458 | 0.134 | 703,654 | 0.484 | 0.132 | 489,903 | 0.375 | 0.105 | 154,253 |
| Free Lunch | 0.429 | 0.495 | 703,654 | 0.308 | 0.462 | 489,903 | 0.782 | 0.413 | 154,253 |
| Special Education | 0.107 | 0.309 | 703,654 | 0.100 | 0.300 | 489,903 | 0.130 | 0.337 | 154,253 |
| Age (in months) | 153.119 | 14.616 | 703,654 | 152.928 | 14.624 | 489,903 | 154.176 | 14.691 | 154,253 |
| Mother married at birth | 0.596 | 0.491 | 703,654 | 0.738 | 0.440 | 489,903 | 0.185 | 0.388 | 154,253 |
| Mother age at birth of 1st child | 24.891 | 6.007 | 703,654 | 26.190 | 5.845 | 489,903 | 21.329 | 5.065 | 154,253 |
| Mother high school dropout | 0.190 | 0.393 | 703,654 | 0.139 | 0.346 | 489,903 | 0.337 | 0.473 | 154,253 |
| Mother graduated high school | 0.356 | 0.479 | 703,654 | 0.346 | 0.476 | 489,903 | 0.387 | 0.487 | 154,253 |
| Mother attended some college | 0.250 | 0.433 | 703,654 | 0.266 | 0.442 | 489,903 | 0.195 | 0.396 | 154,253 |
| Mother graduated from college | 0.204 | 0.403 | 703,654 | 0.249 | 0.432 | 489,903 | 0.081 | 0.273 | 154,253 |

Notes. The table reports descriptive statistics for the Florida sample used in Table 1 of the main text. The unit of observation is a student-year. The sample includes all students born in Florida between 1994 and 2002, attending a Florida public school grade 6 to 10 in years 2002 to 2011, and for whom we have a score in mathematics. Columns (1) to (3) report mean, st. deviation and sample size for the full sample of students. Columns (4) to (6), and Columns (7) to (9) report the same statistics respectively for the subsample of White students, and for the one of Black students. "Math score" measures students' Florida Comprehensive Assessment Test math score in a given grade (standardized with mean 0 and standard deviation 1 over the population for a given grade and year). The race dummies are taken from the FLODE school records. "Median income in zipcode of birth (USD)" is taken from the 1999 US Census, and it refers to the time of birth of the child. "Free Lunch" is a dummy equal to 1 if the student is enrolled in the Free lunch program in the given academic year. "Special Education" is a dummy equal to 1 if the student is enrolled in the special education program in the given academic year. "Age in months" is the student's age at the beginning of the academic year. "Mother married at birth" is a dummy variable equal to 1 if the mother was married when the child was born. "Mother age at birth of 1st child" is the age (in years) of the mother when she gave birth to her first child. "Mother graduated high school", "Mother attended some college", "Mother graduated from college" are dummy variables with excluded category "Mother is a high school dropout".

Table A2- Sample Statistics, Florida Department of Education

| | White | | | Black | | |
|--|-------------|-----------------|----------|-------------|-----------------|----------|
| | (1) Mean | (2) St. Dev. | (3) N | (4) Mean | (5) St. Dev. | (6) N |
| Panel A. Sample: Firstborn females | | | | | | |
| Math score | 0.482 | 0.799 | 50,402 | -0.154 | 0.836 | 5,455 |
| Boy bias | 0.503 | 0.500 | 50,402 | 0.471 | 0.499 | 5,455 |
| Median income zipcode of birth*100,000 (USD) | 0.499 | 0.137 | 50,402 | 0.396 | 0.110 | 5,455 |
| Free Lunch | 0.211 | 0.408 | 50,402 | 0.612 | 0.487 | 5,455 |
| Special Education | 0.058 | 0.234 | 50,402 | 0.071 | 0.258 | 5,455 |
| Age (in months) | 157.718 | 16.122 | 50,402 | 158.867 | 16.260 | 5,455 |
| Mother married at birth | 0.875 | 0.330 | 50,402 | 0.480 | 0.500 | 5,455 |
| Mother age at birth of 1st child | 27.702 | 5.219 | 50,402 | 24.453 | 5.311 | 5,455 |
| Mother graduated high school | 0.301 | 0.459 | 50,402 | 0.371 | 0.483 | 5,455 |
| Mother attended some college | 0.283 | 0.451 | 50,402 | 0.285 | 0.451 | 5,455 |
| Mother graduated from college | 0.339 | 0.473 | 50,402 | 0.202 | 0.401 | 5,455 |
| Panel B. Sample: Firstborn males | | | | | | |
| Math score | 0.527 | 0.865 | 52,737 | -0.268 | 0.945 | 5,002 |
| Girl bias | 0.476 | 0.499 | 52,737 | 0.500 | 0.500 | 5,002 |
| Median income zipcode of birth*100,000 (USD) | 0.502 | 0.139 | 52,737 | 0.391 | 0.110 | 5,002 |
| Free Lunch | 0.209 | 0.407 | 52,737 | 0.615 | 0.487 | 5,002 |
| Special Education | 0.119 | 0.323 | 52,737 | 0.150 | 0.357 | 5,002 |
| Age (in months) | 158.176 | 16.033 | 52,737 | 159.978 | 16.273 | 5,002 |
| Mother married at birth | 0.880 | 0.325 | 52,737 | 0.478 | 0.500 | 5,002 |
| Mother age at birth of 1st child | 27.857 | 5.207 | 52,737 | 24.345 | 5.428 | 5,002 |
| Mother graduated high school | 0.302 | 0.459 | 52,737 | 0.358 | 0.479 | 5,002 |
| Mother attended some college | 0.273 | 0.446 | 52,737 | 0.298 | 0.457 | 5,002 |
| Mother graduated from college | 0.351 | 0.477 | 52,737 | 0.201 | 0.401 | 5,002 |

Notes. The table reports descriptive statistics for the Florida sample used in Table 2 and Table 3. The unit of observation is a student-year. The observations shown in this table are all subsamples of the sample shown in Appendix Table 1. In Panel A, Columns (1) to (3) we report mean, st. deviation and number of observations for the subsample of White firstborn females. This corresponds to the sample used in Table 2, Panel A, Column (1). In Panel A, Columns (4) to (6) we report mean, st. deviation and number of observations for the subsample of Black firstborn females. This corresponds to the sample used in Table 2, Panel B, Column (1). In Panel B, Columns (1) to (3) we report mean, st. deviation and number of observations for the subsample of White firstborn males. This corresponds to the sample used in Table 3, Panel A, Column (1). In Panel B, Columns (4) to (6) we report mean, st. deviation and number of observations for the subsample of Black firstborn males. This corresponds to the sample used in Table 3, Panel B, Column (1). "Boy bias" is a dummy variable equal to 1 if the last born in the family is a boy, and all the older children are girls, 0 otherwise. "Girl bias" is a dummy variable equal to 1 if the last born in the family is a girl, and all the older children are boys, 0 otherwise. The rest of the variables is defined as in Appendix Table 1. In our definition of firstborns we always exclude only children.

Description of the Variables

| <i>Name of the variable</i> | <i>Description</i> | <i>Source (and when possible and useful name of the raw variable)</i> |
|--|--|--|
| Math score | Development scale score in the Mathematics section of the FCAT. The scores are standardized by subtracting the mean test score in the sample used for the analysis and by dividing them by the standard deviation in the sample of girl and boys of families for which we observe completed fertility, for each test grade level-year combination. | Source: FLDOE Created using raw variables: DEV_SCALE_SCORE, SUBTEST_ID, TEST_GRADE_LEVEL, CURRENT_ACADEMIC_YEAR |
| Boy bias | A dummy equal to 1 if the last born in the family is a boy, and all the older children are girls, 0 otherwise. | Source: birth certificate, FLDOE Created using raw variables: GENDER_CD |
| Girl bias | A dummy equal to 1 if the last born in the family is a girl, and all the older children are boys, 0 otherwise. | Source: birth certificate, FLDOE Created using raw variables: GENDER_CD |
| Female | A dummy equal to 1 if the student is a girl, 0 otherwise. | Source: FLDOE Created using raw variables: GENDER_CD |
| Race dummies (White, Black, Hispanic, Asian, Other race) | A set of dummies equal to 1 if the student is of that ethnicity, 0 otherwise. | Source: FLDOE Created using raw variables: RACIAL_ETHNIC_CD |
| Median income in zip code of birth, (100,000 of \$) | The zipcode at time of birth (provided by the birth certificates) is matched with median zipcode income in 1999, obtained from the Census Bureau. | Source: birth certificate and Census |
| Age in months | Assuming the school year starts on September 1st, the variable is calculated as: Academic year*12+8-Student year of birth*12-student month of birth. | Source: FLDOE Created using raw variables: STUDENT_BIRTH_MONTH, STUDENT_BIRTH_YEAR, ENROLLMENT_YEAR |
| Free or Reduced Priced Lunch | A dummy equal to 1 if the student/year is eligible for free lunch, reduced-price lunch or attends a "provision 2" school and 0 otherwise (either the student did not apply or he/she applied but she/he was not eligible). | Source: FLDOE Created using raw variables: LUNCH_STATUS |
| Special Education | A dummy variable equal to 1 if the variable if the student is enrolled in the special education program, 0 otherwise. Gifted students are classified as 0. | Source: FLDOE Created using raw variables: PRIMARY_EXCPT_IND |
| Mother married at time of birth | A dummy variable equal to 1 if the mother is married at time of giving birth. | Source: birth certificate |
| Mother age at first birth | Age of the mother when the mother's first child was born. The variable was calculated using mother's year and month of birth, and child's year and month of birth. | Source: FLDOE, birth certificate STUDENT_BIRTH_MONTH, STUDENT_BIRTH_YEAR |

| | | |
|-------------------------------------|---|--|
| <p>Mother's educational dummies</p> | <p>We define three dummies for the maternal level of education: high school graduate (years of education is equal to 12), some college (years of education greater than 12 and strictly smaller than 16) and college graduate (years of education greater than or equal to 16).</p> | <p>Source: birth certificate</p> |
| <p>Family Free Lunch</p> | <p>A dummy variable equal to 1 if at least one child was enrolled in the Free Lunch program in at least one year of our sample, 0 otherwise.</p> | <p>Source: FLDOE Created using raw variables: LUNCH_STATUS</p> |