Corrigendum to “Academic Achievement and Economic Attainment: Reexamining Associations Between Test Scores and Long-Run Earnings”

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On working with the data for this project after the publication of the article, the author discovered several small coding errors involving control variables used in the analysis. In general, these errors involved responses for “I don’t know” or “NA” receiving numeric codes on several variables. None of the primary measures used in the analysis (i.e., test scores or earnings) were affected by this error. The family income variable for age 16 was also recoded because approximately 16% of cases had family income undercounted due to inconsistencies in missing data values between those reporting monthly versus weekly income (updated descriptives for age-16 family income are shown below). These coding updates led to almost no change in the key results.

The updated data-cleaning syntax has been added to the OpenICSPR page corresponding to this article, along with an additional README explaining which variables were altered (https://www.openicpsr.org/openicpsr/project/119183/). Please consult this updated README before using the posted syntax files for analytic purposes. It is recommended that anyone using the syntax files for this analysis use the updated cleaning file for data preparation. The multiple imputation and analysis files have not been altered.

For sake of clarity, the key results tables from the main text of the article have been reproduced here using the updated data preparation file with the recoded control variables. As these tables reflect, alterations to the control variables led to very minor changes in the results—with most regression coefficients altered at only the third decimal place. These minor changes do not affect the findings or conclusions from the published article. Changes to tables shown in the supplemental material for the article are similarly minor, and the updated supplemental material is available in the online version of the original article.

The corrected Tables 2 to 7 are provided below:

### TABLE 2
*High School Descriptive Characteristics by Average Adult Earnings*

|                         | Men                      | Women                     |
|-------------------------|--------------------------|---------------------------|
|                         | Full sample              | Top 50% earners          | Bottom 50% earners |
| Mathematics (0 to 31)   | 14.25                    | 16.79                     | 11.96              |
| Reading (0 to 35)       | 26.29                    | 28.57                     | 24.24              |
| Socioemotional and personality ratings (scaled 1 to 5) |                         |                           |                    |
| Impulsive to cautious   | 3.26                     | 3.22                      | 3.30               |
| Lazy to hardworking     | 3.20                     | 3.42                      | 3.00               |
| Withdrawn to sociable   | 3.60                     | 3.75                      | 3.46               |
| Rigid to flexible       | 3.24                     | 3.31                      | 3.18               |
| Moody to even-tempered  | 3.62                     | 3.72                      | 3.53               |
| Timid to aggressive     | 2.95                     | 3.00                      | 2.90               |
### TABLE 2 (CONTINUED)

| Demographics | **Men** | | | **Women** | | |
| | **Full sample** | **Top 50% earners** | **Bottom 50% earners** | **Full sample** | **Top 50% earners** | **Bottom 50% earners** |
| Financial problems in past year (prop.) | 0.09 | 0.06 | 0.11 | 0.09 | 0.06 | 0.11 |
| Family monthly income (2018 USD) | 2943 | 3114 | 2788 | 2930 | 3071 | 2813 |
| Family owns home (prop.) | 0.52 | 0.61 | 0.44 | 0.52 | 0.61 | 0.44 |
| School characteristics | | | | | | |
| School enrollment | 922.56 | 915.48 | 928.94 | 921.51 | 913.90 | 927.86 |
| Student/teacher ratio | 16.81 | 16.61 | 17.00 | 16.98 | 16.74 | 17.18 |
| Percent of boys in school taking 0-levels | 27.60 | 34.20 | 21.66 | 16.24 | 20.82 | 12.42 |
| Percent of girls in school taking 0-levels | 18.03 | 22.20 | 14.27 | 26.82 | 34.08 | 20.76 |
| Observations | 3826 | 1812 | 2014 | 2772 | 1262 | 1510 |

*Note*. The top 50% of earners represent men or women that, on average, were at or above the 50th percentile in earnings across each of the earnings waves (sample restricted to participants who indicated full-time work at a given follow-up wave). The behavioral and personality scales were measured on a continuum from “1” to “5” (e.g., for “Timid to Aggressive” a value of “1” would indicate maximum timidity and a value of “5” would indicate maximum aggressiveness). Prop. = proportion.
TABLE 3
Associations Between High School Test Scores and Log-Monthly Earnings Conditional on Working Full Time for Men

|                  | Bivariate | Math and reading only | Family background and health | Behaviors and personality | Cognitive ability and pretests | Concurrent characteristics |
|------------------|-----------|-----------------------|----------------------------|---------------------------|-------------------------------|----------------------------|
|                  | A         | B                     | C                          | D                         | E                             | F                          |
|                  | (1)       | (2)                   | (3)                        | (4)                       | (5)                           | (6)                        |
| Mathematics      | 0.130***  | 0.079***              | 0.066***                   | 0.065***                  | 0.043***                      | 0.040***                   |
| Reading          | 0.141***  | 0.086***              | 0.075***                   | 0.066***                  | 0.054***                      | 0.051***                   |
| p-value of difference | .525       |                        |                            |                           |                               |                            |
| N                | 2,847     |                        |                            |                           |                               |                            |
| Age 41 years     |           |                       |                            |                           |                               |                            |
| Mathematics      | 0.159***  | 0.115***              | 0.101***                   | 0.103***                  | 0.091***                      | 0.082***                   |
| Reading          | 0.157***  | 0.075***              | 0.068***                   | 0.058***                  | 0.048**                       | 0.042*                     |
| p-value of difference | .145       |                        |                            |                           |                               |                            |
| N                | 2,838     |                        |                            |                           |                               |                            |
| Age 46 years     |           |                       |                            |                           |                               |                            |
| Mathematics      | 0.164***  | 0.122***              | 0.106***                   | 0.108***                  | 0.086***                      | 0.075***                   |
| Reading          | 0.168***  | 0.077***              | 0.072***                   | 0.064***                  | 0.055**                       | 0.043*                     |
| p-value of difference | .212       |                        |                            |                           |                               |                            |
| N                | 2,325     |                        |                            |                           |                               |                            |
| Age 50 years     |           |                       |                            |                           |                               |                            |
| Mathematics      | 0.167***  | 0.118***              | 0.102***                   | 0.106***                  | 0.088***                      | 0.082***                   |
| Reading          | 0.171***  | 0.085***              | 0.081***                   | 0.076***                  | 0.056*                        | 0.057*                     |
| p-value of difference | .456       |                        |                            |                           |                               |                            |
| N                | 2,205     |                        |                            |                           |                               |                            |

Note: Robust standard errors are presented in parentheses. Test scores were transformed to z scores. The "p-value of difference" rows list p values from post hoc tests that tested whether the math and reading coefficients were equal to one another. The first row of the table lists the additional control variables added in the models presented in each column (e.g., for the models listed in column C, behavioral and personality measures were added to the already included set of family background and health controls). For the full list of control variables included in each column, see Supplementary Table A1.

*p < .05. **p < .01. ***p < .001.
|                      | A      | B      | C      | D      | E      | F      |
|----------------------|--------|--------|--------|--------|--------|--------|
| **Mathematics**      |        |        |        |        |        |        |
| 33 years             | 0.161*** (0.010) | 0.105*** (0.012) | 0.094*** (0.013) | 0.086** (0.013) | 0.073*** (0.016) | 0.058** (0.016) |
|                      | 0.187*** (0.013) | 0.108*** (0.015) | 0.097*** (0.017) | 0.088** (0.017) | 0.080*** (0.021) | 0.069** (0.021) |
| **Reading**          |        |        |        |        |        |        |
| 33 years             | 0.187*** (0.013) | 0.108*** (0.015) | 0.097*** (0.017) | 0.088** (0.017) | 0.080*** (0.021) | 0.069** (0.021) |
|                      | 0.187*** (0.013) | 0.108*** (0.015) | 0.097*** (0.017) | 0.088** (0.017) | 0.080*** (0.021) | 0.069** (0.021) |
| **Mathematics**      |        |        |        |        |        |        |
| 34 years             | 0.163*** (0.017) | 0.076*** (0.019) | 0.075*** (0.018) | 0.076*** (0.018) | 0.056** (0.021) | 0.049** (0.023) |
|                      | 0.163*** (0.017) | 0.076*** (0.019) | 0.075*** (0.018) | 0.076*** (0.018) | 0.056** (0.021) | 0.049** (0.023) |
| **Reading**          |        |        |        |        |        |        |
| 34 years             | 0.186*** (0.012) | 0.134*** (0.012) | 0.120*** (0.017) | 0.116*** (0.017) | 0.095*** (0.020) | 0.094*** (0.021) |
|                      | 0.186*** (0.012) | 0.134*** (0.012) | 0.120*** (0.017) | 0.116*** (0.017) | 0.095*** (0.020) | 0.094*** (0.021) |
| **Mathematics**      |        |        |        |        |        |        |
| 35 years             | 0.159*** (0.012) | 0.092*** (0.016) | 0.089*** (0.018) | 0.079*** (0.018) | 0.058** (0.019) | 0.052** (0.020) |
|                      | 0.159*** (0.012) | 0.092*** (0.016) | 0.089*** (0.018) | 0.079*** (0.018) | 0.058** (0.019) | 0.052** (0.020) |
| **Reading**          |        |        |        |        |        |        |
| 35 years             | 0.139** (0.015) | 0.128** (0.020) | 0.123*** (0.021) | 0.123*** (0.021) | 0.097*** (0.026) | 0.089** (0.027) |
|                      | 0.139** (0.015) | 0.128** (0.020) | 0.123*** (0.021) | 0.123*** (0.021) | 0.097*** (0.026) | 0.089** (0.027) |

*Note:* See Table 3 note. *p < .05, **p < .01, ***p < .001.
|               | Bivariate | Family background and health | Behaviors and personality | Cognitive ability and pretests | Concurrent characteristics |
|---------------|-----------|-----------------------------|---------------------------|--------------------------------|----------------------------|
|               | A         | B                           | C                         | D                              | E                          |
| Age 33 years  |           |                             |                           |                                |                            |
| Achievement composite | **0.150*** (0.007) | **0.128*** (0.008) | **0.120*** (0.008) | **0.088*** (0.014) | **0.083*** (0.014) |
| N            |           |                             |                           |                                |                            |
|               | 2,847     |                             |                           |                                |                            |
| Age 41 years  |           |                             |                           |                                |                            |
| Achievement composite | **0.175*** (0.010) | **0.155*** (0.012) | **0.149*** (0.012) | **0.129*** (0.022) | **0.114*** (0.022) |
| N            |           |                             |                           |                                |                            |
|               | 2,838     |                             |                           |                                |                            |
| Age 46 years  |           |                             |                           |                                |                            |
| Achievement composite | **0.185*** (0.010) | **0.165*** (0.011) | **0.161*** (0.012) | **0.132*** (0.020) | **0.110*** (0.019) |
| N            |           |                             |                           |                                |                            |
|               | 2,325     |                             |                           |                                |                            |
| Age 50 years  |           |                             |                           |                                |                            |
| Achievement composite | **0.187*** (0.012) | **0.168*** (0.016) | **0.168*** (0.018) | **0.134*** (0.023) | **0.128*** (0.023) |
| N            |           |                             |                           |                                |                            |
|               | 2,205     |                             |                           |                                |                            |

*Note.* See Table 3 note. The “achievement composite” variable is the standardized average of the age-16 math and reading tests. *p < .05. **p < .01. ***p < .001.
| Bivariate | Family background and health | Behaviors and personality | Cognitive ability and pretests | Concurrent characteristics |
|-----------|-----------------------------|---------------------------|-------------------------------|----------------------------|
| (1)       | (2)                         | (3)                       | (4)                          | (5)                        |
| Age 33 years |                             |                           |                               |                            |
| Achievement composite | 0.194*** (0.011)          | 0.174*** (0.013)          | 0.158*** (0.014)          | 0.139*** (0.022)          |
| N          | 1,315                       |                           |                               |                            |
| Age 41 years |                             |                           |                               |                            |
| Achievement composite | 0.169*** (0.018)          | 0.159*** (0.018)          | 0.157*** (0.019)          | 0.128*** (0.027)          |
| N          | 1,670                       |                           |                               |                            |
| Age 46 years |                             |                           |                               |                            |
| Achievement composite | 0.188*** (0.012)          | 0.166*** (0.014)          | 0.159*** (0.014)          | 0.112*** (0.025)          |
| N          | 1,550                       |                           |                               |                            |
| Age 50 years |                             |                           |                               |                            |
| Achievement composite | 0.196*** (0.013)          | 0.181*** (0.014)          | 0.176*** (0.015)          | 0.136*** (0.024)          |
| N          | 1,600                       |                           |                               |                            |

Note: See Table 5 note.
*p < .05. **p < .01. ***p < .001.
TABLE 7
Pooled Models: Associations Between High School Test Scores and Log-Average Earnings Between Age 33 and Age 50 Conditional on Working Full Time

|                           | Math and reading separately | Achievement composite | Achievement composite with high school controls |
|---------------------------|-----------------------------|-----------------------|-----------------------------------------------|
|                           | Men (1)                    | Women (2)             | Men (3)                                      | Women (4)                                      |
| Mathematics               | 0.069*** (0.011)           | 0.049*** (0.013)      | —                                            | —                                            |
| Reading                   | 0.048*** (0.011)           | 0.082*** (0.015)      | —                                            | —                                            |
| Achievement composite     | —                          | —                     | 0.107*** (0.013)                             | 0.115*** (0.016)                              |
| Socioemotional skills and personality |                    |                       |                                               |                                               |
| Impulsive to cautious     | −0.015 (0.008)             | −0.011 (0.009)        | −0.016* (0.008)                              | −0.011 (0.009)                                |
| Lazy to hardworking       | 0.028*** (0.008)           | 0.018 (0.011)         | 0.029*** (0.008)                             | 0.018 (0.011)                                |
| Withdrawn to sociable     | 0.041*** (0.008)           | 0.006 (0.009)         | 0.041*** (0.008)                             | 0.006 (0.009)                                |
| Rigid to flexible         | −0.001 (0.008)             | 0.007 (0.009)         | −0.001 (0.008)                               | 0.007 (0.009)                                |
| Moody to even-tempered    | −0.008 (0.009)             | 0.000 (0.010)         | −0.008 (0.009)                               | 0.000 (0.010)                                |
| Timid to aggressive       | 0.027*** (0.008)           | 0.007 (0.010)         | 0.027*** (0.008)                             | 0.007 (0.010)                                |
| Control variables         |                            |                       |                                               |                                               |
| Follow-up wave fixed effects | Inc.                      | Inc.                  | Inc.                                         | Inc.                                         |
| Fam background and health | Inc.                       | Inc.                  | Inc.                                         | Inc.                                         |
| Socioemotional skills and personality |                  | Inc.                  | Inc.                                         | Inc.                                         |
| Cognitive ability and pretests | Inc.                    | Inc.                  | Inc.                                         | Inc.                                         |
| Concurrent characteristics | Inc.                       | Inc.                  | Inc.                                         | Inc.                                         |
| Pooled observations       | 10,215                     | 6,135                 | 10,215                                       | 6,135                                        |
| Unique observations       | 3,826                      | 2,772                 | 3,826                                        | 2,772                                        |
| $R^2$                     | 0.190                      | 0.162                 | 0.190                                        | 0.162                                        |
| Adjusted $R^2$            | 0.182                      | 0.149                 | 0.182                                        | 0.149                                        |

Note. Robust standard errors were adjusted for student-level clustering and are presented in parentheses. All independent variables shown were transformed to z scores. All models include the full set of controls used in the “Column F” models of Table 3. Pooled models were generated by treating each respective earnings measure (taken at ages 33, 41, 46, and 50, respectively) as an independent observation, and “follow-up” wave fixed effects were included in each regression. Columns 1 and 2 correspond to the models shown in Tables 3 and 4 (i.e., math and reading achievement modeled independently). Columns 3 and 4 correspond to the “achievement composite” estimates shown in Tables 5 and 6. In columns 5 and 6, measures indicating high school quality were added to the model. Inc. = included. *p < .05. **p < .01. ***p < .001.