Harris Online Appendix

A graph of the number of states in the united states

Description automatically generatedFigure A.1. Trends in High School Graduation for Southern Versus Other States

*Source*: Authors’ tabulation.

*Note*: weighted by cohort size, *N* (district) = 648 for southern states, and *N* (district) = 4,193 for other states. Southern states in our sample are AL, AR, DE, FL, KY, MD, SC, TN, TX, VA; non-Southern states are AK, AZ, CA, CO, CT, IA, ID, IN, MA, ME, MN, MO, NE, NH, NV, NY, OH, OR, PA, RI, SD, WA, and WY.

A graph of a number of years

Description automatically generated with medium confidenceFigure A.2. Trends in High School Cohort Size

*Source*: Authors’ tabulation.

*Note*: Sample A includes districts with nonmissing graduation rates of 2016–22, weighted by cohort size, *N* (district) = 3,163. Sample B includes districts with nonmissing graduation rates of 2016–21, weighted by cohort size, *N* (district) = 4,841.

A graph of a graph with numbers and lines

Description automatically generated with medium confidenceFigure A.3. Trends in Two-Year College Entry, For-Profit Versus Nonprofit

*Source*: Authors’ tabulation.

A graph of a number of students

Description automatically generated with medium confidenceFigure A.4. Trends in Four-Year College Enrollment, For-Profit versus Nonprofit

*Source*: Authors’ tabulation.

A graph of growth in different colors

Description automatically generated with medium confidenceFigure A.5. Trends in High School Graduation by Race

*Source*: Authors’ tabulation.

*Note*: The number of districts with Black less than 50 percent is 179, White less than 50 percent is 2,455, and Hispanic less than 5 percent is 334.

A graph of a number of years

Description automatically generated with medium confidenceFigure A.6. Trend in High School Graduation Rates by Poverty Level

*Source*: Authors’ tabulation.

*Note*: The number of districts for FRL>50% is 1,464, and for FRL<=50% is 1,631.

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| Table A.1. Samples of States in High School Analyses | | | |
| State | 2016–21 | 2022 | Cohort size |
| Alaska | Yes | Yes | Yes |
| Alabama | Yes | Yes | Yes |
| Arkansas | Yes | Yes | Yes |
| Arizona | Yes |  | Yes |
| California | Yes | Yes | Yes |
| Colorado | Yes | Yes | Yes |
| Connecticut | Yes |  | Yes |
| District Of Columbia |  |  |  |
| Delaware | Yes |  | Yes |
| Florida | Yes |  | Yes |
| Georgia | Yes | Yes |  |
| Hawaii |  |  |  |
| Iowa | Yes | Yes | Yes |
| Idaho | Yes |  | Yes |
| Illinois | Yes |  |  |
| Indiana | Yes | Yes | Yes |
| Kansas | Yes | Yes |  |
| Kentucky | Yes |  | Yes |
| Louisiana | Yes |  |  |
| Massachusetts | Yes |  | Yes |
| Maryland | Yes | Yes | Yes |
| Maine | Yes | Yes | Yes |
| Michigan |  |  |  |
| Minnesota | Yes |  | Yes |
| Missouri | Yes | Yes | Yes |
| Mississippi | Yes | Yes |  |
| Montana |  |  |  |
| North Carolina | Yes |  |  |
| North Dakota | Yes |  |  |
| Nebraska | Yes | Yes | Yes |
| New Hampshire | Yes |  | Yes |
| New Jersey | Yes |  |  |
| New Mexico | Yes |  |  |
| Nevada | Yes | Yes | Yes |
| New York | Yes | Yes | Yes |
| Ohio | Yes | Yes | Yes |
| Oklahoma |  |  |  |
| Oregon | Yes | Yes | Yes |
| Pennsylvania | Yes |  | Yes |
| Rhode Island | Yes |  | Yes |
| South Carolina | Yes | Yes | Yes |
| South Dakota | Yes | Yes | Yes |
| Tennessee | Yes | Yes | Yes |
| Texas | Yes |  | Yes |
| Utah |  |  |  |
| Virginia | Yes | Yes | Yes |
| Vermont |  |  |  |
| Washington | Yes | Yes | Yes |
| Wisconsin | Yes |  | Yes |
| West Virginia | Yes |  |  |
| Wyoming | Yes | Yes | Yes |
| Total | 44 | 24 | 34 |
| *Source*: Authors’ tabulation. | | | |

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| Table A.2. Comparing 2022 High School Samples of States on Covariates | | | | | | |
| Covariates | Sample A  (Twenty-Four States) | | Sample B  (Forty-Four States) | | All States | |
| Mean | SD | Mean | SD | Mean | SD |
| In-person | 0.36 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 |
| Remote | 0.17 | 0.25 | 0.16 | 0.24 | 0.15 | 0.23 |
| LFP | 48.22 | 5.20 | 47.79 | 5.64 | 47.88 | 5.58 |
| StdRelax | 1.79 | 1.01 | 1.78 | 0.91 | 2.01 | 0.93 |
| COVID cases | 89.51 | 26.49 | 91.64 | 24.12 | 90.64 | 23.86 |
| Black | 0.08 | 0.16 | 0.09 | 0.15 | 0.09 | 0.17 |
| Hispanic | 0.19 | 0.22 | 0.21 | 0.24 | 0.17 | 0.22 |
| White | 0.64 | 0.28 | 0.62 | 0.28 | 0.66 | 0.28 |
| *Source*: Authors’ tabulation.  *Note*: Sample A includes states that have nonmissing graduation rates for 2016–22, and Sample B includes states that have nonmissing graduation rates for 2016-2021. See table A.1 for the complete list of states. | | | | | | |

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| --- | --- | --- | --- |
| Table A.3. Regression Results Dropping District-Specific Linear Trends | | | |
|  | (1) | (2) | (3) |
| In-Person | 0.487\*\*\* | 0.660\*\*\* | 0.558 |
|  | [0.183] | [0.185] | [1.099] |
| Remote | 0.445 | -0.017 | 1.879 |
|  | [0.371] | [0.414] | [1.679] |
| LFP |  | 0.039 | 0.041 |
|  |  | [0.044] | [0.044] |
| StdRelax |  | -0.124 | -0.125 |
|  |  | [0.093] | [0.093] |
| StdRelax\* GradExam |  | 0.139\*\* | 0.137\*\* |
|  |  | [0.065] | [0.065] |
| COVID cases |  | -0.021\*\*\* | -0.018\*\* |
|  |  | [0.004] | [0.008] |
| In-person\* COVID cases |  |  | 0.001 |
|  |  |  | [0.012] |
| Remote\* COVID cases |  |  | -0.022 |
|  |  |  | [0.018] |
| Total *R*2 | 0.810 | 0.810 | 0.810 |
| Observations | 34,245 | 34,245 | 34,245 |
| District FE, Year FE | Y | Y | Y |
| *Source:* Authors’ tabulations.  *Note*: Linear regression of high school graduation rate (0 to 100) on learning mode and other covariates Learning mode has three categories: in-person, hybrid, and remote, with hybrid as the reference group. The sample period is school years 2015–16 to 2020–21, excluding 2019–20. *Covid Case* was defined as cases per 1,000 population. Standard errors in parenthesis are clustered at the district level.  \* *p* < .1; \*\* *p* < .05; \*\*\* *p* < .01 | | | |