## Education



Table 3. Effect of the Old-Age Pension Program on Weight for Height: ols and 2sls Regressions

|  | ols |  |  |  |  |  | 2sLs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Girls |  |  |  |  |  |  |  |
| Eligible household | $\begin{array}{r} 0.14 \\ (0.12) \end{array}$ | $\begin{aligned} & 0.35 \text { * } \\ & (0.17) \end{aligned}$ | $\begin{aligned} & 0.34^{*} \\ & (0.17) \end{aligned}$ |  |  |  |  |
| Woman eligible ${ }^{\text {a }}$ |  |  |  | $\begin{aligned} & 0.24 \text { * } \\ & (0.12) \end{aligned}$ | $\begin{aligned} & 0.61^{*} \\ & (0.19) \end{aligned}$ | $\begin{aligned} & 0.61^{*} \\ & (0.19) \end{aligned}$ | $\begin{aligned} & 1.19^{*} \\ & (0.41) \end{aligned}$ |
| Man eligible ${ }^{\text {b }}$ |  |  |  | $\begin{array}{r} -0.011 \\ (0.22) \end{array}$ | $\begin{array}{r} 0.11 \\ (0.28) \end{array}$ | $\begin{aligned} & 0.056 \\ & (0.19) \end{aligned}$ | $\begin{array}{r} -0.097 \\ (0.74) \end{array}$ |
| Observations | 1574 | 1574 | 1533 | 1574 | 1574 | 1533 | 1533 |
| Boys |  |  |  |  |  |  |  |
| Eligible household | $\begin{array}{r} 0.0012 \\ (0.13) \end{array}$ | $\begin{aligned} & 0.022 \\ & (0.22) \end{aligned}$ | $\begin{aligned} & 0.030 \\ & (0.24) \end{aligned}$ |  |  |  |  |
| Woman eligible ${ }^{\text {a }}$ |  |  |  | $\begin{aligned} & 0.066 \\ & (0.14) \end{aligned}$ | $\begin{gathered} 0.28 \\ (0.28) \end{gathered}$ | $\begin{array}{r} 0.31 \\ (0.28) \end{array}$ | $\begin{array}{r} 0.58 \\ (0.53) \end{array}$ |
| Man eligible ${ }^{\text {b }}$ |  |  |  | $\begin{array}{r} -0.059 \\ (0.22) \end{array}$ | $\begin{aligned} & -0.25 \\ & (0.34) \end{aligned}$ | $\begin{aligned} & -0.25 \\ & (0.35) \end{aligned}$ | $\begin{aligned} & -0.69 \\ & (0.91) \end{aligned}$ |
| Observations | 1670 | 1670 | 1627 | 1670 | 1670 | 1627 | 1627 |
| Control variables |  |  |  |  |  |  |  |
| Presence of older members ${ }^{\text {c }}$ | No | Yes | Yes | No | Yes | Yes | Yes |
| Family background variables ${ }^{\text {d }}$ | No | No | Yes | No | No | Yes | Yes |
| Child age dummy variables ${ }^{\text {e }}$ | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

*Significant at the 5 percent level.
Note: The instruments in column 7 are woman eligible and man eligible (the first stage is in table A-1). Standard errors (robust to correlation of residuals within households and heteroscedasticity) are in parentheses.
${ }^{a}$ In column 7 this variable is replaced by a dummy for whether a woman receives the pension.
${ }^{\mathrm{b}}$ In column 7 this variable is replaced by a dummy for whether a man receives the pension.
cPresence of a woman over age 50 , a man over age 50 , a woman over age 56 , a man over age 56 , and a man over age 61.
${ }^{\text {dFather's age and education; mother's age and education; rural or metropolitan residence (urban is }}$ the omitted category); size of household; and number of members ages $0-5,6-14,15-24$, and 25-49.
${ }^{\text {e}}$ Dummy variables for whether the child was born in 1991, 1990, or 1989.
Source: Author's calculations.

## EFFECT OF SSA COLLEGE AID ON PROBABILITY OF ATTENDING COLLEGE

Table 2-OLS, Effect of Eligibility for Student Benefits on Probability of Attending College by Age 23

|  | $(1)$ <br> Difference- <br> in-differences | $(2)$ <br> Add <br> covariates |
| :--- | :---: | :---: |
| Deceased father $\times$ before | 0.182 | 0.219 |
|  | $(0.096)$ | $(0.102)$ |
| Deceased father | -0.123 | Y |
| Before | $(0.083)$ |  |
|  | 0.026 | Y |
|  | $(0.021)$ |  |

# EFFECT OF PROVIDING INFORMATION ABOUT RETURNS TO COLLEGE IN DOMINICAN REPUBLIC 

|  | $\Delta$ Implied Return (Self) |  | Returned Next Year |  |  | Completed Secondary |  | Years of Schooling |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (7) | (8) | (9) |  |
| Treatment | $\begin{aligned} & 366 \\ & (29) \end{aligned}$ | $\begin{aligned} & 366 \\ & (29) \end{aligned}$ | $\begin{aligned} & .039 \\ & (.025) \end{aligned}$ | $\begin{aligned} & .041 \\ & (.023) \end{aligned}$ |  | $\begin{array}{r} .020 \\ (.024) \end{array}$ | $\begin{aligned} & .023 \\ & (.020) \end{aligned}$ | $\begin{gathered} .18 \\ (.098) \end{gathered}$ | $\xrightarrow[(.083)]{.20}$ |
| Log (income per capita) |  | $\begin{gathered} 30.0 \\ (48) \end{gathered}$ |  | $\begin{aligned} & .075 \\ & (.042) \end{aligned}$ |  |  | $\underset{(.044)}{.21}$ |  | $\begin{aligned} & .75 \\ & (.16) \end{aligned}$ |
| School Performance |  | $\begin{aligned} & 1.1 \\ & (13) \end{aligned}$ |  | $\begin{aligned} & .011 \\ & (.010) \end{aligned}$ |  |  | $\begin{aligned} & .019 \\ & (.008) \end{aligned}$ |  | $\begin{aligned} & .085 \\ & (.035) \end{aligned}$ |
| Father's education |  | $\begin{aligned} & -26 \\ & (33) \end{aligned}$ |  | $\begin{aligned} & .082 \\ & (.029) \end{aligned}$ |  |  | $\begin{aligned} & .061 \\ & (.029) \end{aligned}$ |  | $\begin{gathered} .28 \\ (.12) \end{gathered}$ |
| Interviewed |  |  |  |  | $\begin{gathered} .014 \\ (.027) \end{gathered}$ |  |  |  |  |

Source: Jensen 2010

Figure 1
Distribution of Family Income Among Families with a Child in the 12 th Grade, 2008


Source: Hoxby, C. M., \& Avery, C. 2012

Table 1
College Costs and Resources by Selectivity

| Selectivity (Barron's) | Out-of-Pocket Cost for a Student at the $20^{\text {th }}$ Percentile of Family Income (includes room and board) | Comprehensive Cost (includes room and board) | Instructional Expenditure per Student |
| :---: | :---: | :---: | :---: |
| most competitive | 6,754 | 45,540 | 27,001 |
| highly competitive plus | 13,755 | 38,603 | 13,732 |
| highly competitive | 17,437 | 35,811 | 12,163 |
| very competitive plus | 15,977 | 31,591 | 9,605 |
| very competitive | 23,813 | 29,173 | 8,300 |
| competitive plus | 23,552 | 27,436 | 6,970 |
| competitive | 19,400 | 24,166 | 6,542 |
| less competitive | 26,335 | 21,262 | 5,359 |
| some or no selection, 4year | 18,981 | 16,638 | 5,119 |
| private 2-year | 14,852 | 17,822 | 6,796 |
| public 2-year | 7,573 | 10,543 | 4,991 |
| for-profit 2-year | 18,486 | 21,456 | 3,257 |

Notes: The sources are colleges' net cost calculators for the out-of-pocket cost column and IPEDS for the remaining columns. The net cost data were gathered for the 2009-10 school year by the authors, for the institutions at the very competitive and more selective levels. For the institutions of lower selectivity, net cost estimates are based on the institution's published net cost calculator for the year closest to 2009-10--never later than 2011-12. Net costs are then reduced to approximate 2009-10 levels using the institution's own room and board and tuition net of aid numbers from IPEDS, for the relevant years.

Figure 8
High Income Students' Portfolios of College Applications
( 1 student $=$ weight of 1 )


Sour ce: Hoxby, C. M, \& Avery, C. 2012

Figure 10
Low Income Students' Portfolios of College Applications
$(1$ student $=$ weight of 1$)$


Sour ce: Hoxby, C. M, \& Avery, C. 2012

## The Role of the Government in Higher Education

## Current Government Role

- FIGURE 11-4


Government Spending on Higher Education • Eighty-five percent of the roughly $\$ 199$ billion the government spends annually on higher education is in the form of state and local funding for colleges and universities. The remainder is split among Pell Grants, tax breaks, and student loans.

## Figure 1

## College Graduation Rates (by $\mathbf{3 5}$ years) for Men and Women: Cohorts Born from

 1876 to 1975

Sources: 1940 to 2000 Census of Population Integrated Public Use Micro-data Samples (IPUMS).

Figure 2: Amount of Annual Cash Allowance Awarded to Applicants with an FNA Score of 3 Points, as Function of their Parents' Taxable Income


Notes: The figure shows the amount of annual cash allowance awarded in 2009 to BCS grant applicants with a family needs assessment (FNA) score of 3 points (median value), as a function of their parents' taxable income two years before the application. Applicants eligible for a level 0 grant qualify for fee waivers only. Applicants eligible for higher levels of grant qualify for fee waivers and an annual cash allowance, the amount of which varies with the level of grant: 1,476 euros (level 1), 2,223 euros (level 2), 2,849 euros (level 3), 3,473 euros (level 4), 3,988 euros (level 5) and 4,228 euros (level 6). Income thresholds and allowance amounts are expressed in 2011 euros.

## (b) €1,500 Allowance (L1/L0 Cutoffs)



College Enrollment; All Years; bw=2


## Density of last-chance scores




Fig. 1.-Last-chance exam scores and diploma receipt. The graphs are based on the lastchance sample. See table 1 and the text. Dots are test score cell means. The scores on the $x$ axis are the minimum of the section scores (recentered to be zero at the passing cutoff) that are taken in the last-chance exam. Lines are fourth-order polynomials fitted separately on either side of the passing threshold.


Fig. 2.-Earnings by last-chance exam scores. The graphs are based on the last-chance samples. See table 1 and the text. Dots are test score cell means. The scores on the $x$-axis are the minimum of the section scores (recentered to be zero at the passing cutoff) that are taken in the last-chance exam. Lines are fourth-order polynomials fitted separately on either side of the passing threshold.

Mobility Report Cards for Columbia and SUNY-Stony Brook


Note: Bars show estimates of the fraction of parents in each quintile of the income distribution. Lines show estimates of the fraction of students from each of those quintiles who reach the top quintile as adults.

## Top 10 Colleges by Mobility Rate (from Bottom to Top Quintile)

| Rank | Name | Mobility Rate | $=$ | Access | X | Success Rate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Cal State University - LA | 9.9\% |  | 33.1\% |  | 29.9\% |
| 2 | Pace University - New York | 8.4\% |  | 15.2\% |  | 55.6\% |
| 3 | SUNY - Stony Brook | 8.4\% |  | 16.4\% |  | 51.2\% |
| 4 | Technical Career Institutes | 8.0\% |  | 40.3\% |  | 19.8\% |
| 5 | University of Texas - Pan American | 7.6\% |  | 38.7\% |  | 19.8\% |
| 6 | City Univ. of New York System | 7.2\% |  | 28.7\% |  | 25.2\% |
| 7 | Glendale Community College | 7.1\% |  | 32.4\% |  | 21.9\% |
| 8 | South Texas College | 6.9\% |  | 52.4\% |  | 13.2\% |
| 9 | Cal State Polytechnic - Pomona | 6.8\% |  | 14.9\% |  | 45.8\% |
| 10 | University of Texas - El Paso | 6.8\% |  | 28.0\% |  | 24.4\% |

Note: Table lists highest-mobility-rate colleges with more than 300 students per cohort.

Trends in Low-Income Access from 2000-2011 at Selected Colleges


## Figure B2.1. Public and private expenditure on educational institutions, as a percentage of GDP (2013) <br> From public $^{1}$ and private ${ }^{2}$ sources



Note: Public expenditure figures presented here exclude undistributed programme.

1. Including public subsidies to households attributable to educational institutions, and direct expenditure on educational institutions from international sources.
2. Net of public subsidies attributable for educational institutions.
3. Year of reference 2012.
4. Public does not include international sources.
5. Year of reference 2014.

Countries are ranked in descending order of expenditure from both public and private sources on educational institutions.
Source: OECD. Table B2.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

## Chart PF1.2.A Expenditure on education as \% of GDP, by level of education and source of funds, $2013^{a}$

Expenditure on primary, secondary and post-secondary non-tertiary and on tertiary education by public or private source ${ }^{\text {b }}$, as $\%$ of GDP


Figure 10.15. The rise of the social State in Europe, 1870-2015


Interpretation. In 2015, fiscal revenues represented 47\% of national income on average in Western Europe et were used as follows: 10\% of national income for regalian expenditure (army, police, justice, general administration, basic infrastructure: roads, etc.); 6\% for education; $11 \%$ for pensions; $9 \%$ for health; $5 \%$ for social transfers (other than pensions); $6 \%$ for other social spending (housing, etc.). Before 1914, regalian expenditure absorbed almost all fiscal revenues. Note. The evolution depicted here is the average of Germany, France, Britain and Sweden (see figure 10.14). Sources and séries: see piketty.pse.ens.ffrideology.

## ONLINE APPENDIX FIGURE I

College Attendance Rates by Parent Income and Age


Notes: This figure plots the fraction of children in the 1980-82 birth cohorts in our analysis sample who attend college at any time during or before the year in which they turn ages 22,28 , and 32 , by parent income ventile. This figure is constructed directly from the individual-level microdata.

Parent Income Distributions by Quintile for 1980-82 Birth Cohorts
At Selected Colleges


School enrollment at ages 5-14, 1830-1930


Fraction of children aged 5-14 enrolled in school (public or private).
Sources and series: Lindert (2004) Growing Public and Historical Statistics of the US

School enrollment at ages $5-14,1830-1930$


Fraction of children aged 5-14 enrolled in school (public or private).
Sources and series: Lindert (2004) Growing Public and Historical Statistics of the US

Primary School Enrollment in Russia, Korea and Indonesia


Fraction of children enrolled in primary school (public or private).
Source: Lee and Lee (2016).

Figure 2a | Trends in Borrowing and Costs Over Time Source: Dancy and Barrett (2018)
Share Borrowing


Source: New America analysis of data from the National Postsecondary Student Aid Study, 1999-2000 through 2015-16.


Figure 1. The Effect of the UCSC Economics GPA Threshold on Majoring in Economics

Note: Each circle represents the percent of economics majors (y axis) among 2008-2012 UCSC students who earned a given $E G P A$ in Economics 1 and 2 (x axis). The size of each circle corresponds to the proportion of students who earned that $E G P A$. EGPAs below 1.8 are omitted, leaving 2,839 students in the sample. Fit lines and beta estimate (at the 2.8 GPA threshold) from linear regression discontinuity specification; standard error (clustered by $E G P A$ ) in parentheses. Source: The UC-CHP Student Database.


## Figure 2. The Effect of the UCSC Economics GPA Threshold on Annual Wages

Note: Each circle represents the mean 2017-2018 wages (y axis) among 2008-2012 UCSC students who earned a given $E G P A$ in Economics 1 and 2 (x axis). The size of each circle corresponds to the proportion of students who earned that EGPA. 2017-2018 wages are the mean EDD-covered California wages in those years, omitting zeroes. Wages are CPI-adjusted to 2018 and winsorized at $2 \%$ above and below. $E G P A$ s below 1.8 are omitted, leaving 2,446 students with observed wages. Fit lines and beta estimate (at the 2.8 GPA threshold) from linear regression discontinuity specification and instrumental variable specification (with majoring in economics as the endogenous variable); standard errors (clustered by $E G P A$ ) in parentheses. Sources: The UC-CHP Student Database and the CA Employment Development Department.

