Mobility Report Cards:
The Role of Colleges in Intergenerational Mobility

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The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors and do not necessarily represent the views of the U.S. Department of Treasury.
What role do colleges play in intergenerational income mobility?

- Large returns to college attendance suggest that higher education can be an important pathway to upward mobility.
- But inequality in access between high- and low-income families may limit (or even reverse) this effect.

Evaluating colleges’ role in mobility requires analysis of two factors:

- [Outcomes] Which colleges are most effective in helping children climb the income ladder?
- [Access] How can we increase access to such colleges for students from low-income families?
Prior Research

- Prior work on these questions typically uses quasi-experimental methods to analyze outcomes and access at a subset of colleges

- Outcomes: significant returns to college attendance and “quality,” based on studies of specific colleges
  

- Access: few children from low-income families at elite colleges, even after tuition cuts; tuition matters more at other colleges
  
We take a different approach: a descriptive characterization of mobility for all colleges and students in the U.S.

For each college, construct a publicly available *Mobility Report Card* that measures children’s earnings outcomes and parents’ incomes.

- Use de-identified data from population tax returns.
- Build upon statistics in College Scorecard (2015) by including all students and fully characterizing joint income distributions.

Use variance decompositions to document a set of facts on access, outcomes, and mobility rates across colleges.
We do not identify the causal effects ("value added") of colleges

Instead, our descriptive approach highlights the colleges that deserve further study as potential engines of mobility

Ex: certain public colleges (e.g., Cal State LA, City Univ. of New York) have excellent outcomes while providing low-income access
1. Access: Parents’ Marginal Income Distributions by College

2. Outcomes: Distributions of Students’ Earnings by College

3. Differences in Mobility Rates Across Colleges

4. Trends in Access and Mobility Rates
Data

- Data source: de-identified data from 1996-2014 income tax returns
  - Includes data on income of non-filers through information returns filed by employers (W-2 forms)

- Primary sample: all children in 1980-82 birth cohorts claimed as dependents by tax filers in the U.S.
  - Earliest cohorts where we can link almost all children to parents
  - Approximately 11 million children

- Extended sample: 1978-1991 birth cohorts
  - Used to study changes in access over time and for robustness
Measuring College Attendance

- All Title IV institutions report student attendance to IRS on Form 1098-T
  - 1098-T data covers 95% of enrolled students; students who pay no tuition sometimes not covered
  - Use Dept. of Ed data (NSLDS) on students receiving Pell grants to identify these students

- Baseline: define college attendance as most-attended college between ages 19-22
  - Similar results obtained with alternative definitions (e.g., college attended at age 20)

- Following established disclosure standards, all college-specific numbers are estimates (approx. +/- 1% measurement error)
Part 1
Access: Parents’ Income Distributions by College
Measuring Parent Income

- Parent income: mean pre-tax **household** income during five year period when child is aged 15-19
  - For filers, use Adjusted Gross Income reported on form 1040
  - For non-filers, use W-2 wage earnings + UI income
  - All incomes measured in 2015 dollars

- Focus on percentile ranks, ranking parents relative to other parents with children in same birth cohort
20th Percentile = $25k
Median = $60k
60th Percentile = $74k
80th Percentile = $111k
99th Percentile = $512k

Parent Household Income Distribution
For Parents with Children in 1980 Birth Cohort

Parents' Mean Household Income when Child is Age 15-19 ($1000)
Parent Income Distribution at Harvard
1980-82 Child Birth Cohorts

Parent Income Quintile

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Percent of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.0%</td>
</tr>
<tr>
<td>2</td>
<td>5.3%</td>
</tr>
<tr>
<td>3</td>
<td>8.1%</td>
</tr>
<tr>
<td>4</td>
<td>13.2%</td>
</tr>
<tr>
<td>5</td>
<td>70.3% Top 1%</td>
</tr>
</tbody>
</table>

15.4%
Parent Income Distribution by Percentile
Ivy Plus Colleges

Note: “Ivy Plus” = Ivy League, Chicago, Stanford, MIT, Duke
14.5% of students from top 1%

Note: “Ivy Plus” = Ivy League, Chicago, Stanford, MIT, Duke
14.5% of students from top 1%

13.5% of students from bottom 50%
More students from the top 1% than the bottom 50%

14.5% of students from top 1%

13.5% of students from bottom 50%
3.8% of students from bottom 20%
14.5% of students from top 1%
Probability of attending an elite private college is **77 times** higher for children in the top 1% compared to the bottom 20%.
Parent Income Distributions by Quintile for 1980-82 Birth Cohorts
At Selected Colleges

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

Harvard University
UC Berkeley

Percent of Students

Parent Income Quintile

1 2 3 4 5

0 20 40 60 80
Parent Income Distributions by Quintile for 1980-82 Birth Cohorts
At Selected Colleges

- Harvard University
- UC Berkeley
- SUNY-Stony Brook

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

- Harvard University
- UC Berkeley
- SUNY-Stony Brook
- Glendale Community College

Data provided for Parent Income Quintile distributions at selected colleges.
Distribution of Access Across Colleges (Enrollment-Weighted)

- Harvard = 3.0%
- Berkeley = 8.8%
- SUNY-Stony Brook = 16.4%
- Glendale Community College = 32.4%
Distribution of Access Across Colleges (Enrollment-Weighted)

Harvard = 3.0%
Berkeley = 8.8%
SUNY-Stony Brook = 16.4%
Glendale Community College = 32.4%
Distribution of Access Across Colleges (Enrollment-Weighted)

Percent of Parents in Bottom Quintile

- p10 = 3.7%
- p50 = 9.3%
- p90 = 21.0%

SD(Pct. of Parents in Q1) = 7.6%
Income Segregation Across Colleges is Comparable to Segregation Across Census Tracts in Average American City
Fact #1: Income segregation across colleges is comparable to segregation across Census tracts in the average American city.

Income is especially concentrated at elite private schools.

No evidence of a “missing middle” at elite private colleges.

Likelihood of attending elite private schools is strictly increasing in parental income, even relative to elite public schools.
Part 2
Outcomes: Distributions of Student’s Earnings by College
Measuring Student Earnings

- Individual labor earnings = wages + self-emp. Income + foreign wages

- Compute percentile ranks by ranking children within birth cohorts

- Using data going back to 1978 cohort, we see that ranks stabilize by age 32 at all colleges
Mean Child Rank vs. Age at Income Measurement, By College Tier

- Ivy Plus
- Other Elite
- Other Four-Year
- Two-Year

Mean Child Earnings Rank

Age of Income Measurement

Mean Child Rank vs. Age at Income Measurement, By College Tier
Mean Child Rank vs. Age at Income Measurement, By College Tier

- Ivy Plus
- Other Elite
- Other Four-Year
- Two-Year

Corr(Rank at 32, Rank at 36) = 0.986

Cannot Link Children to Parents
Measuring Student Earnings

- Individual labor earnings = wages + self-emp. income + foreign wages

- Compute percentile ranks by ranking children within birth cohorts

- Using data going back to 1978 cohort, we see that ranks stabilize by age 32 at all colleges

- Broader income concepts (e.g., AGI) differ from individual labor earnings primarily because of marriage
Mean Child Rank at Age 34 vs. Parent Income Rank
Full Population

Individual Earnings (Slope: 0.288)
Mean Child Rank at Age 34 vs. Parent Income Rank

Full Population

Individual Earnings (Slope: 0.288)
Household Earnings (Slope: 0.357)
Mean Child Rank at Age 34 vs. Parent Income Rank

Full Population

- Individual Earnings (Slope: 0.288)
- Household Earnings (Slope: 0.357)
- Household Income (Slope: 0.365)
Measuring Student Earnings

- Individual labor earnings = wages + self-emp. income + foreign wages

- Compute percentile ranks by ranking children within birth cohorts

- Using data going back to 1978 cohort, we see that ranks stabilize by age 32 at all colleges

- Broader income concepts (e.g., AGI) differ from individual labor earnings primarily because of marriage

→ Baseline definition: individual earnings in 2014, measured at ages 32-34 for 1980-82 birth cohorts
20th Percentile = $1k

Median = $28k

80th Percentile = $58k

99th Percentile = $197k
Characterize children’s earnings ranks conditional on their parents’ rank by college
Mean Child Rank at Age 34 vs. Parent Income Rank
Full Population

National (Slope: 0.288)
Mean Child Rank at Age 34 vs. Parent Income Rank

UC-Berkeley

National (Slope: 0.288)
UC Berkeley (Slope: 0.060)
Mean Child Rank at Age 34 vs. Parent Income Rank
Elite Colleges

- National (Slope: 0.288)
- Elite Colleges (Slope: 0.065)
Mean Child Rank at Age 34 vs. Parent Income Rank

All 4-Year Colleges

- National (Slope: 0.288)
- Elite Colleges (Slope: 0.065)
- Other 4-Year Colleges (Slope: 0.095)
Mean Child Rank at Age 34 vs. Parent Income Rank

All Colleges

- National (Slope: 0.288)
- Elite Colleges (Slope: 0.065)
- Other 4-Year Colleges (Slope: 0.095)
- 2-Year Colleges (Slope: 0.110)
Mean Child Rank at Age 34 vs. Parent Income Rank
All Colleges – Male Children Only

- National (Slope: 0.334)
- Elite Colleges (Slope: 0.091)
- Other 4-Year Colleges (Slope: 0.115)
- 2-Year (Slope: 0.127)
Fact #2: At any given college, students from low- and high-income families have very similar earnings outcomes.

- Colleges effectively “level the playing field” across students with different socioeconomic backgrounds whom they admit.

- No indication of “mismatch” of low-SES students who are admitted to selective colleges under current policies.

- Low-SES students at less-selective colleges are unlikely to do better than high-SES students at more-selective colleges.

- Within-college earnings gradient therefore places a tight upper bound on the degree of mismatch.

- Any current affirmative action policies for low-income students have little cost to universities in terms of students’ outcomes.
Part 3
Differences in Mobility Rates Across Colleges
Combine data on parents’ incomes and students’ outcomes to characterize colleges’ mobility rates

Begin by measuring upward mobility as reaching top quintile

- Turn to upper-tail success (reaching top 1%) later
Mobility Report Cards
Columbia vs. SUNY-Stony Brook

Percent of Students

Parent Income Quintile

Columbia
SUNY-Stony Brook
Mobility Report Cards
Columbia vs. SUNY-Stony Brook

Success Rates (Students' Outcomes)

Access (Parents' Incomes)

Percent of Students

Parent Income Quintile

Success Rates (Students' Outcomes)

Access (Parents' Incomes)
Rates of Mobility

- Define a college’s *mobility rate* (MR) as the fraction of its students who come from bottom quintile and end up in top quintile

\[
\text{Mobility Rate} \uparrow = \frac{\text{Success Rate}}{\text{Access}}
\]

\[
P(\text{Child in Q5 & Parent in Q1}) \quad P(\text{Child in Q5| Parent in Q1}) \quad P(\text{Parent in Q1})
\]

- E.g., SUNY-Stony Brook: \(8.4\% = 51.2\% \times 16.4\%\)

- The mobility rate should be interpreted as an accounting measure rather than a causal effect
Mobility Rates: Success Rate vs. Access by College

Success Rate: \( P(\text{Child in Q5} \mid \text{Par in Q1}) \)

Access: Percent of Parents in Bottom Quintile

- Columbia
- SUNY-Stony Brook
Mobility Rates: Success Rate vs. Access by College

MR = 1.6% (50th Percentile)

MR = Success Rate \times Access

Success Rate: P(Child in Q5 \mid Par in Q1)

Access: Percent of Parents in Bottom Quintile
Mobility Rates: Success Rate vs. Access by College

MR = 3.5% (90th Percentile)
MR = 1.6% (50th Percentile)
MR = 0.9% (10th Percentile)

MR = Success Rate × Access
SD of MR = 1.30%
Mobility Rates: Success Rate vs. Access by College

- Princeton
- Brown
- Harvard
- Duke
- Stanford
- Yale
- Columbia
- MIT

Success Rate: \( P(\text{Child in Q5} | \text{Par in Q1}) \)

Access: Percent of Parents in Bottom Quintile

Ivy Plus Colleges (Avg. MR = 2.2%)
Mobility Rates: Success Rate vs. Access by College

Success Rate: \( P(\text{Child in Q5} \mid \text{Par in Q1}) \)

Access: Percent of Parents in Bottom Quintile

- Ivy Plus Colleges (Avg. MR = 2.2%)
- Public Flagships (Avg. MR = 1.7%)

Institutions:
- Princeton
- MIT
- Stanford
- Columbia
- Yale
- Harvard
- Brown
- Duke
- University Of California, Berkeley
- University Of Michigan - Ann Arbor
- University Of North Carolina - Chapel Hill
- Chicago
- State University Of New York At Buffalo
- University Of New Mexico
Mobility Rates: Success Rate vs. Access by College

MR = 3.5% (90th Percentile)

MR = 1.6% (50th Percentile)

MR = 0.9% (10th Percentile)

MR = Success Rate \times Access

SD of MR = 1.30%

- **Ivy Plus Colleges (Avg. MR = 2.2%)**
- **Public Flagships (Avg. MR = 1.7%)**
Mobility Rates: Success Rate vs. Access by College

Success Rate: $P(\text{Child in Q5} \mid \text{Par in Q1})$

Access: Percent of Parents in Bottom Quintile

Community Colleges
<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
<th>Mobility Rate</th>
<th>Access</th>
<th>x</th>
<th>Success Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cal State University – LA</td>
<td>9.9%</td>
<td>33.1%</td>
<td></td>
<td>29.9%</td>
</tr>
<tr>
<td>2</td>
<td>Pace University – New York</td>
<td>8.4%</td>
<td>15.2%</td>
<td></td>
<td>55.6%</td>
</tr>
<tr>
<td>3</td>
<td>SUNY – Stony Brook</td>
<td>8.4%</td>
<td>16.4%</td>
<td></td>
<td>51.2%</td>
</tr>
<tr>
<td>4</td>
<td>Technical Career Institutes</td>
<td>8.0%</td>
<td>40.3%</td>
<td></td>
<td>19.8%</td>
</tr>
<tr>
<td>5</td>
<td>University of Texas – Pan American</td>
<td>7.6%</td>
<td>38.7%</td>
<td></td>
<td>19.8%</td>
</tr>
<tr>
<td>6</td>
<td>CUNY System</td>
<td>7.2%</td>
<td>28.7%</td>
<td></td>
<td>25.2%</td>
</tr>
<tr>
<td>7</td>
<td>Glendale Community College</td>
<td>7.1%</td>
<td>32.4%</td>
<td></td>
<td>21.9%</td>
</tr>
<tr>
<td>8</td>
<td>South Texas College</td>
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<td>52.4%</td>
<td></td>
<td>13.2%</td>
</tr>
<tr>
<td>9</td>
<td>Cal State Polytechnic – Pomona</td>
<td>6.8%</td>
<td>14.9%</td>
<td></td>
<td>45.8%</td>
</tr>
<tr>
<td>10</td>
<td>University of Texas – El Paso</td>
<td>6.8%</td>
<td>28.0%</td>
<td></td>
<td>24.4%</td>
</tr>
<tr>
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<td>Name</td>
<td>Mobility Rate</td>
<td>Access</td>
<td>x</td>
<td>Success Rate</td>
</tr>
<tr>
<td>------</td>
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<td></td>
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</tr>
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<td>Cal State Polytechnic – Pomona</td>
<td>6.8%</td>
<td>14.9%</td>
<td></td>
<td>45.8%</td>
</tr>
<tr>
<td>10</td>
<td>University of Texas – El Paso</td>
<td>6.8%</td>
<td>28.0%</td>
<td></td>
<td>24.4%</td>
</tr>
</tbody>
</table>
STEM = 14.9%

Business = 20.1%

All Other Colleges

STEM = 17.9%

Business = 19.9%

High Mobility Rate Colleges

Pct. of Degree Awards by Major in 2000 (%)
Much of the variation in mobility rates is driven by differences in access at a given success rate.

Not just driven by “vertical selection” across colleges that have very different students and outcomes.

Ex: SUNY-Stony Brook and CUNY have similar success rates to Fordham, NYU, and Wagner, but very different levels of access.
Success Rate vs. Low-Income Access by College

Unconditional SD of Access = 7.59%
Success Rate vs. Low-Income Access by College

Unconditional SD of Access = 7.59%

SD of Access at 75^{th} Pctile of Success Rate = 6.88%
Success Rate vs. Low-Income Access by College

Unconditional SD of Access = 7.59%
Average SD (Access | Success Rate) = 6.16%

SD of Access at 75th Pctile of Success Rate = 6.88%
Success Rate vs. Low-Income Access by College

Unconditional SD of Access = 7.59%
Average SD (Access | Success Rate) = 6.16%

SD of Access at 75th Pctile of Success Rate = 6.88%
Success Rate vs. Low-Income Access by College

Unconditional SD of Access = \textbf{7.59\%}

Avg. SD (Access | Success Rate, Above Median) = \textbf{5.41\%}
Which Colleges Have the Highest Mobility Rates?

- Characterize the types of colleges with high vs. low rates of mobility
  - Correlate Mobility Rate, $P(\text{Child in Q5 and Parent in Q1})$, with various college characteristics
- Analysis is purely descriptive: does not directly identify causal pathways that can be manipulated to change mobility
Mobility Rates: Success Rate vs. Access by College

- Public Colleges (Avg. MR = 1.93%)
- Private Non-Profit Colleges (Avg. MR = 1.87%)
- For-Profit Colleges (Avg. MR = 2.41%)
Correlates of Top 20% Mobility Rate

- **College Type**: Public, For-Profit, 4-Year College
- **Selectivity**: Rejection Rate, Rejection Rate, Public, Rejection Rate, Private
- **Institutional Characteristics**: Enrollment, Completion Rate, Avg. Faculty Salary, STEM Major Share, Instr. Expenditures per Student, Net Cost for Poor, Sticker Price

Magnitude of Correlation

- Positive Correlation
- Negative Correlation
Success Rates vs. Share of Asian Students

Percentage of Students with Earnings in Top Quintile vs. Percentage of Asian Students

Empirical Values and Non-Parametric Bound

Success Rates

Empirical Values

Non-Parametric Bound
Now examine mobility rates for upper tail success: fraction of students who come from bottom quintile and reach top 1%
Mobility Report Cards (Top 1%)
Columbia vs. SUNY-Stony Brook

Columbia

SUNY-Stony Brook

Percent of Students in Top 1%

Pct. Students by Parent Quintile

Parent Income Quintile

0% 10% 20% 30% 40% 50% 60% 70% 80%

0% 5% 10% 15% 20% 25% 30% 35% 40%

1 2 3 4 5

Parent Income Quintile

Pct. Students by Parent Quintile
Mobility Report Cards (Top 1%)

Columbia vs. SUNY-Stony Brook

Upper Tail Success Rate

Access

Percent of Students by Parent Quintile

Parent Income Quintile

0%  5%  10%  15%  20%  25%  30%  35%  40%  45%  50%  55%  60%  65%  70%  75%  80%
Upper Tail Success Rate (Top 1%) vs. Access by College

Upper Tail Success Rate: \( P(\text{Child in Top1} \mid \text{Par in Q1}) \)

Access: Percent of Parents in Bottom Quintile

Ivy-Plus Colleges
Upper Tail Success Rate (Top 1%) vs. Access by College

Upper Tail MR = Upper Tail Success Rate x Access
SD of MR = 0.10%

- Ivy-Plus Colleges (Avg. MR = 0.5%)
- Public Flagships (Avg. MR = 0.1%)

MR = 0.15% (90th Percentile)
MR = 0.03% (50th Percentile)
<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
<th>Mobility Rate</th>
<th>Access</th>
<th>Upper-Tail Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>University of California – Berkeley</td>
<td>0.76%</td>
<td>8.8%</td>
<td>8.6%</td>
</tr>
<tr>
<td>2</td>
<td>Columbia University</td>
<td>0.75%</td>
<td>5.0%</td>
<td>14.9%</td>
</tr>
<tr>
<td>3</td>
<td>MIT</td>
<td>0.68%</td>
<td>5.1%</td>
<td>13.4%</td>
</tr>
<tr>
<td>3</td>
<td>Stanford University</td>
<td>0.66%</td>
<td>3.6%</td>
<td>18.5%</td>
</tr>
<tr>
<td>4</td>
<td>Swarthmore College</td>
<td>0.61%</td>
<td>4.7%</td>
<td>13.0%</td>
</tr>
<tr>
<td>6</td>
<td>Johns Hopkins University</td>
<td>0.54%</td>
<td>3.7%</td>
<td>14.7%</td>
</tr>
<tr>
<td>7</td>
<td>New York University</td>
<td>0.52%</td>
<td>6.9%</td>
<td>7.5%</td>
</tr>
<tr>
<td>8</td>
<td>University of Pennsylvania</td>
<td>0.51%</td>
<td>3.5%</td>
<td>14.5%</td>
</tr>
<tr>
<td>9</td>
<td>Cornell University</td>
<td>0.51%</td>
<td>4.9%</td>
<td>10.4%</td>
</tr>
<tr>
<td>10</td>
<td>University of Chicago</td>
<td>0.50%</td>
<td>4.3%</td>
<td>11.5%</td>
</tr>
</tbody>
</table>
Success Rate (Top 20%) vs. Access by College

SD (Access| Top 20% Success Rate of Ivy Plus) = 3.33%

Ivy Plus Colleges
Correlates of Top 1% Mobility Rate

- College Type
  - Public
  - For-Profit
  - 4-Year College

- Selectivity
  - Rejection Rate
  - Rejection Rate, Public
  - Rejection Rate, Private

- Institutional Characteristics
  - Enrollment
  - Completion Rate
  - Avg. Faculty Salary
  - STEM Major Share
  - Instr. Expenditures per Student
  - Net Cost for Poor
  - Sticker Price

- Expend. & Cost
  - Selectivity
  - Magnitude of Correlation
  - Negative Correlation
  - Positive Correlation

Magnitude of Correlation
Fact #3: Certain mid-tier public institutions (e.g., CUNY, Cal-State) have the highest bottom-to-top quintile mobility rates

But highly selective institutions (e.g., Berkeley, Harvard) channel more low-income students to the top 1%
Part 4
Trends in Access and Mobility Rates
How have access and mobility rates changed since 2000?

- Many efforts to expand financial aid at elite private colleges
- Budgets have been cut at many public colleges

Begin by examining changes in access from 2000-2011
Trends in Low-Income Access from 2000-2011 at Selected Colleges

Percent of Parents in the Bottom Quintile

Year When Child was 20

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

Percent of Parents in the Bottom Quintile

Year When Child was 20

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

Percent of Parents in the Bottom Quintile

Year When Child was 20


Harvard  Stanford  UC Berkeley
Trends in Low-Income Access from 2000-2011 at Selected Colleges

- Glendale CC
- SUNY Stony Brook
- Harvard
- Stanford
- UC Berkeley
Our percentile-based statistics show small increases in the fraction of low-income students at elite schools.

Pell statistics suggest much larger increases; why the difference?
- Pell income eligibility threshold has increased since 2000
- Incomes have fallen at the bottom: for parents with college-age kids, 20th percentile fell from $25K to $20K from 1980-1991 cohorts

Accounting for these factors, increases in Pell shares are consistent with our findings of small changes in quintile shares.
Lack of change in fraction of students from bottom quintile does not mean that changes in financial aid had no effect.

Counterfactual is unclear: absent these changes, fraction of low-income students might have fallen given decline in incomes.

Key point is that on net, trends over last 15 years have not led to a significant change in low-income access to elite private colleges.
Trends in Access at High Mobility Rate Colleges

Percent of Parents in the Bottom Quintile

Year when Child was 20

- Colleges in Top Decile of Mobility Rates
- Colleges with Above-Median Access that are not in Top Decile of Mobility Rates
Changes in Success Rates and Mobility

- Have reductions in access been offset by increases in success rates?
  - Can only measure students’ earnings reliably for all schools up to 1984 birth cohort (whose earnings are measured at 30 in 2014)

- Regress changes in success rates on changes in access, conditional on school fixed effects
Changes in Success Rate vs. Changes in Access, 1980-84 Birth Cohorts

Trend in Success Rates (1980-84 Birth Cohorts, pp)

Trend in Access (1980-84 Birth Cohorts, pp)

Slope: -0.167 (0.080)
Changes in Success Rates and Mobility

- Success rate is essentially unrelated to changes in access → reduction in access translate 1-1 to reduced mobility rates

- Conclude by examining how trends over 2000s affected mobility rates at various subsets of colleges
Changes in Projected Mobility Rate from 2000 to 2011
Holding Success Rates Fixed at 2000 Levels

Ivy Plus (Avg. MR in 2000 = 2.26%)
Changes in Projected Mobility Rate from 2000 to 2011
Holding Success Rates Fixed at 2000 Levels

- Ivy Plus (Avg. MR in 2000 = 2.26%)
- Ivy Plus (Avg. MR in 2011 = 2.24%)

Success Rate: \( P(\text{Child in Q5} \mid \text{Par in Q1}) \)

Access: Percent of Parents in Bottom Quintile

Changes in Projected Mobility Rate from 2000 to 2011
Holding Success Rates Fixed at 2000 Levels

- Ivy Plus (Avg. MR in 2000 = 2.26%)
- Ivy Plus (Avg. MR in 2011 = 2.24%)
Changes in Projected Mobility Rate from 2000 to 2011
Holding Success Rates Fixed at 2000 Levels

- Ivy Plus (Avg. MR in 2000 = 2.26%)
- Ivy Plus (Avg. MR in 2011 = 2.24%)
- Top MR Colleges (Avg. MR in 2000 = 7.68%)

Success Rate: $P(\text{Child in Q5} \mid \text{Par in Q1})$
Access: Percent of Parents in Bottom Quintile
Changes in Projected Mobility Rate from 2000 to 2011
Holding Success Rates Fixed at 2000 Levels

Success Rate: $P(\text{Child in Q5} \mid \text{Par in Q1})$

Access: Percent of Parents in Bottom Quintile

- Ivy Plus (Avg. MR in 2000 = 2.26%)
- Ivy Plus (Avg. MR in 2011 = 2.24%)
- Top MR Colleges (Avg. MR in 2000 = 7.68%)
- Top MR Colleges (Avg. MR in 2011 = 5.87%)
Changes in Projected Mobility Rate from 2000 to 2011
Holding Success Rates Fixed at 2000 Levels

- Ivy Plus (Avg. MR in 2000 = 2.26%)
- Ivy Plus (Avg. MR in 2011 = 2.24%)
- Top MR Colleges (Avg. MR in 2000 = 7.68%)
- Top MR Colleges (Avg. MR in 2011 = 5.87%)

Note: Top MR colleges are fixed set of colleges with highest MR based on mean access, 2000-11
Fact #4: Trends in access are unfavorable in terms of mobility rates

Access has *fallen* at mid-tier public colleges with highest mobility rates

Access has risen relatively little at elite private colleges despite their efforts to increase financial aid and outreach

These efforts may have been offset by countervailing macroeconomic trends such as rising inequality
Discussion: Broad Lessons for Policy

1. Low-income students admitted to selective colleges do not appear over-placed, based on their earnings outcomes
   - Provides support for policies that seek to bring more such students to selective colleges

2. Efforts to expand low-income access often focus on elite colleges
   - But the high-mobility-rate colleges identified here may provide a more scalable model for upward mobility
     - Instructional costs at high-mobility-rate colleges are far lower…
Mobility Rates and Expenditures per Student

Ivy-Plus Colleges
Median Instr. Exp = $42,688/student
Mobility Rates and Expenditures per Student

Success Rate: $P(\text{Child in Q5} \mid \text{Par in Q1})$

Access: Percent of Parents in Bottom Quintile

Ivy-Plus Colleges
Median Instr. Exp = $42,688$/student

Top 10% MR colleges
Median Instr. Exp = $4,980$/student
Mobility Rates and Expenditures per Student

Ivy-Plus Colleges
Median Instr. Exp = $42,688/student

Top 10% MR colleges with Success Rate Similar to Ivy-Plus Colleges
Median Instr. Exp = $18,636/student
3. Recent unfavorable trends in access call for a re-evaluation of policies at the national, state, and college level

- Ex: changes in admissions criteria, expansions of transfers from the community college system, interventions at earlier ages

- New publicly available college-level statistics constructed here can facilitate analysis of such interventions

- Would be especially valuable to further study high-mobility-rate colleges as potential “engines of upward mobility”