The Economics of Pell Grants

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What? Who? Why?

- Largest federal grant program ($30b in 2014-15)
- Targets college students from low- & middle-income hhs
- Economic rationale?
  - Large private returns to postsecondary education
  - Credit constraints, positive externalities
- Key questions:
  - Effect of Pell Grant aid on students’ postsecondary attainment? Other outcomes?
  - Implications for social welfare
Effects of Pell Grant Aid on Attainment

• Not much evidence that traditional aged students’ decisions of whether or where to go are affected (Kane 1995; Rubin 2011; Turner 2014; Carruthers & Welch 2015; Marx & Turner 2017)

• Increased enrollment among older, nontraditional students (Seftor & Turner 2002)

• On average, no effects on credits attempted, earned, persistence for students enrolled in CUNY schools (Marx & Turner 2017)
Why (Not)?

• Complex application process (Bettinger et al. 2012)

• $1 of Pell Grant aid ≠ $1 increases in cash on hand
  – Institutional & state grant aid crowd-out (Long 2004; Turner 2014; Bettinger & Williams 2015)
  – Reductions in borrowing (Marx & Turner 2017)

• Lots of variation (across states, schools, students)
  – Context-specific effects... how to evaluate?
Evaluating Pell Grant Effectiveness: Evidence from Texas (joint w/ Ben Marx & Jeff Denning)

• Variation from automatic zero EFC (AZ) provision
  – If AGI < threshold, qualify for $0 EFC => maximum Pell Grant
  – Threshold in [$20k, $30k] => relatively low income population

• First-time students enrolling in Texas public institutions
  – Bachelor’s degree seeking, 2008-2011 entry cohorts

• Outcomes of interest
  – Finances (other grants, loans)
  – Contemporaneous attainment (credits attempted, GPA, persistence)
  – Long(er)-run attainment (4-, 5-, 6-year graduation rates)
  – Earnings
Probability of $0 EFC

The graph shows the share of students with EFC = 0 as a function of recentered adjusted gross income (in $10K). The share decreases as the income increases, indicating a higher likelihood of students receiving $0 EFC as their income rises.
Effects on Pell Grant Aid

$508
Effects on Total Grant Aid

Amount Received vs. Recentered Adjusted Gross Income ($10K)

$709
Effects on Contemporaneous Outcomes

• No effects on college entry decisions

• Crowds-out nongrant sources of funding
  – Borrowing ($0.56 per $1 PG)
  – Earnings (insignificant; $0.31 per $1PG)

• Small, insignificant effects on attainment
  – E.g., can rule out effects larger than a 1.5% increase in first-year credits attempted, 4% increase in first-year GPA
Effects on Longer-Run Attainment

A. Credits Attempted

Years since entry

Point estimate, 95% CI
Effects on Longer-Run Attainment

B. Graduation Rate

[Graph showing graduation rate over different years of entry with point estimates and 95% confidence intervals]
Effects on Earnings
Is this an efficient use of govt. funds?

• Need to weigh effects on public expenditures against effects on public benefits (Denning, Marx, Turner 2017)
  – Expenditures: total grants, loans received, cost of additional years in school, foregone tax revenue if students work less, etc.
  – Benefits: additional tax revenue from increased earnings, decreased time-to-degree

• Observe (most) expenditures

• Impute taxes based on earnings
Is this an efficient use of govt. funds?

A. Total Grant Aid Received

$1294
D. Estimated FICA

Estimated FICA

Recentered Adjusted Gross Income ($10K)
Is this an efficient use of govt. funds?

• Seven years after college entry, initial $500 increase in Pell =>
  – ~$1300 increase in expenditures on grants and loans
  – ~$1400 increase in estimated tax revenue (incl. FICA)
  – Excluding FICA, program pays for itself in 10 years if earnings gains persist three additional years

• Answer is clearly yes in this setting

• In other settings, will depend on extent to which postsecondary expenditures and tax-generating activities respond to changes in initial grant generosity
Thank you!

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References


References


Marx, Benjamin M. and Lesley J. Turner. 2017. “Borrowing Trouble? Student Loans, the Cost of Borrowing, and Implications for the Effectiveness of Need-Based Grant Aid.” NBER working paper 20850.


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