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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)

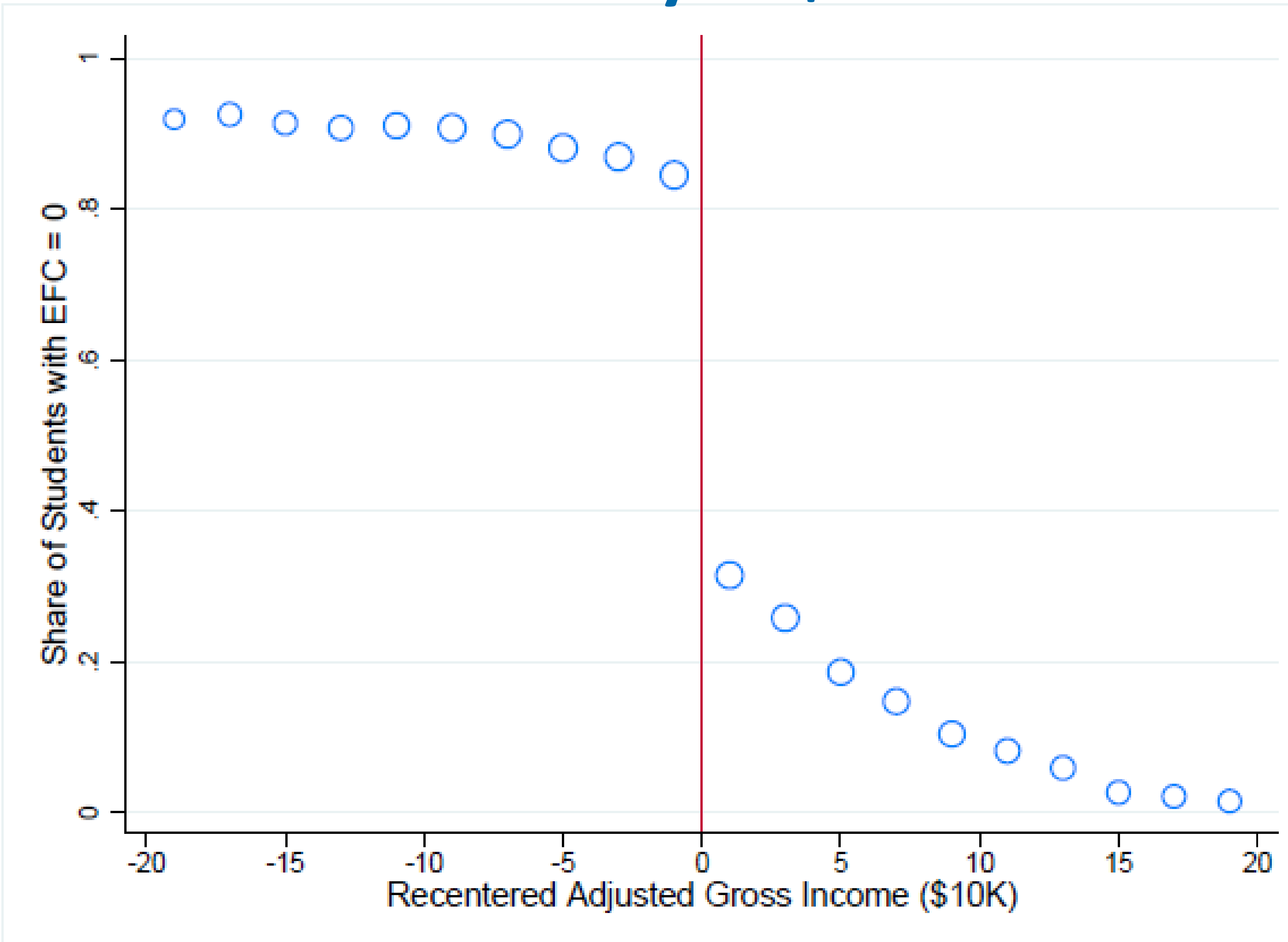
Why (Not)?

- 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



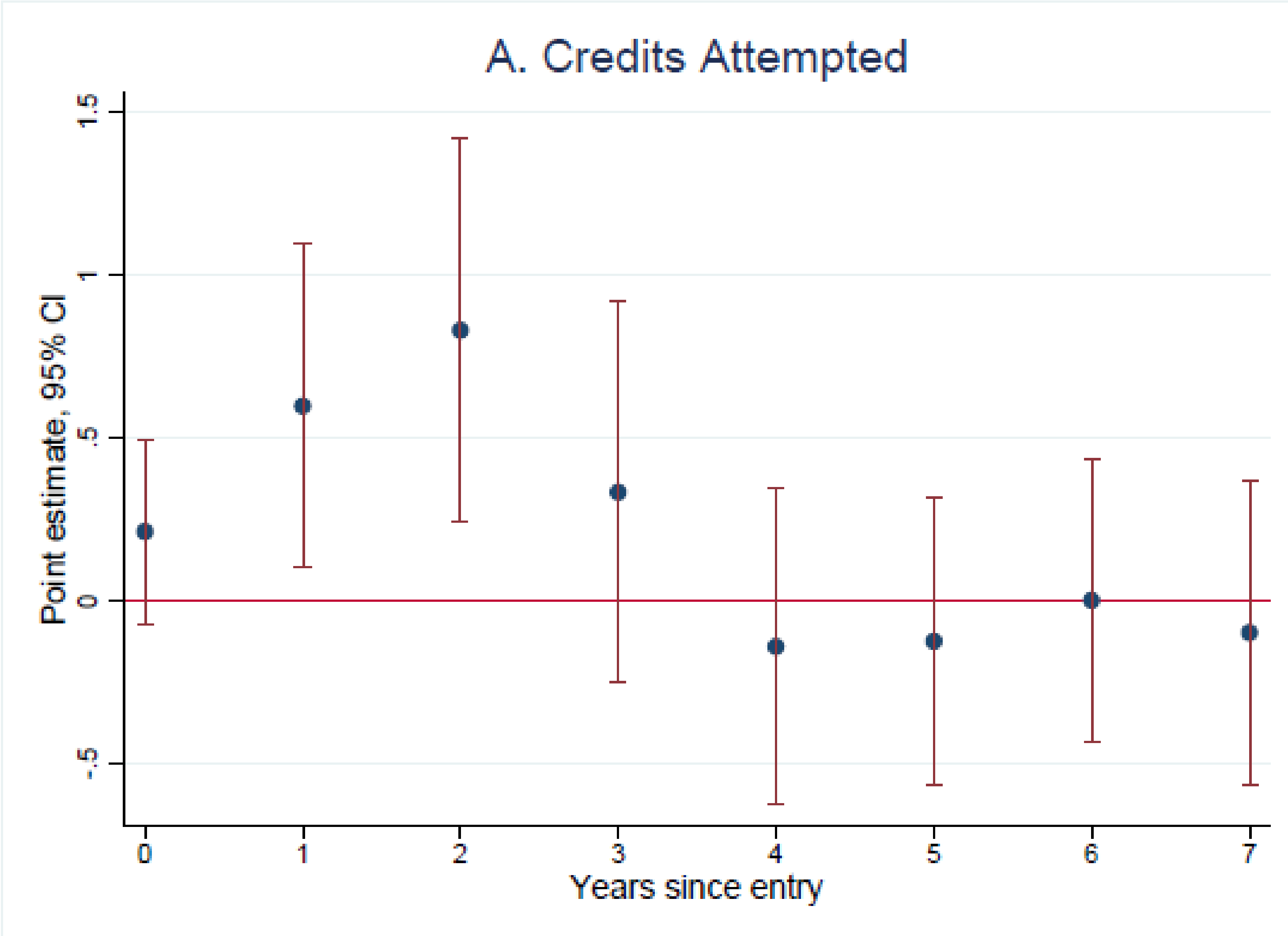
Effects on Pell Grant Aid

Effects on Total Grant Aid

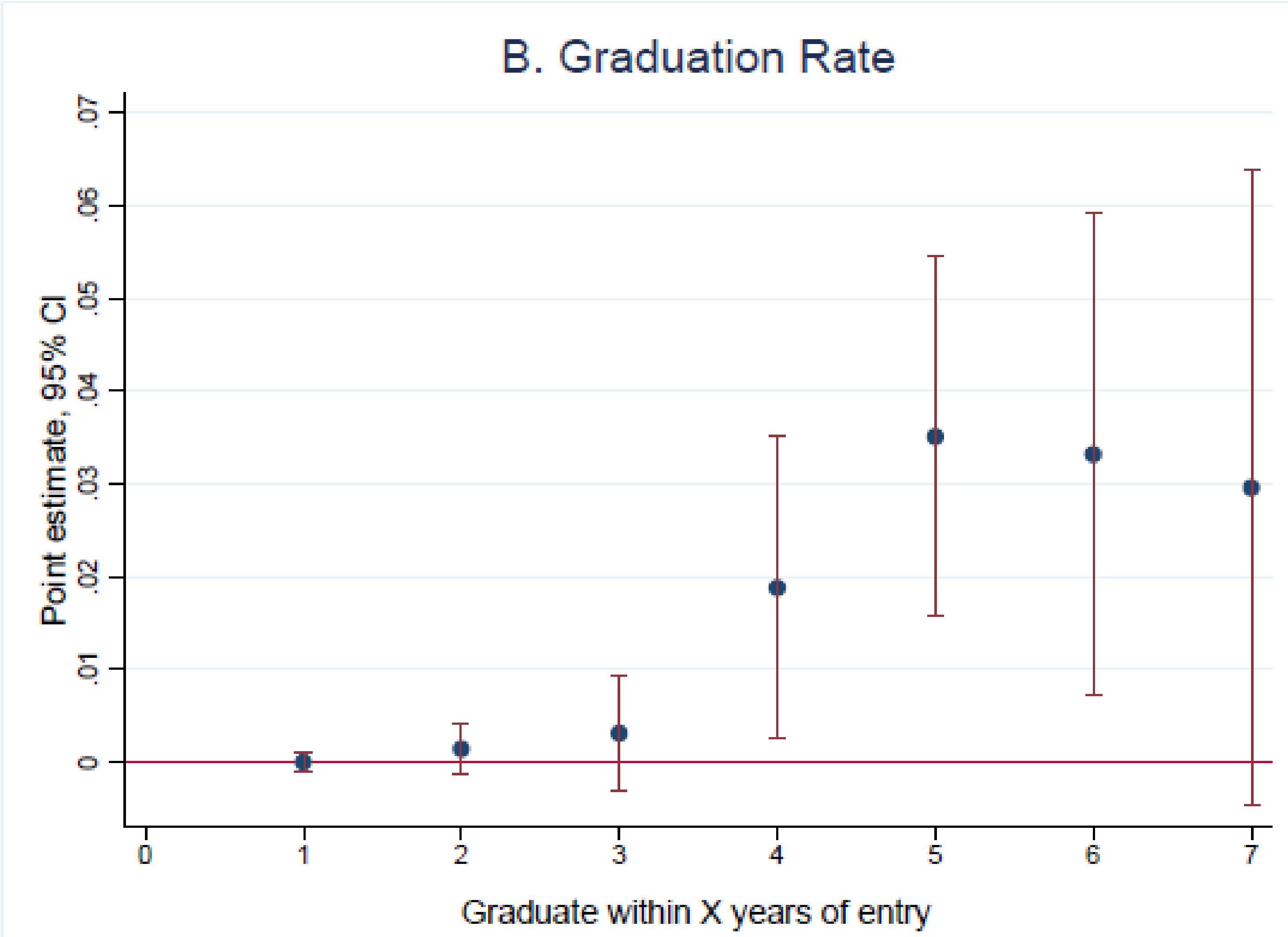
Effects on Contemporaneous Outcomes

- 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

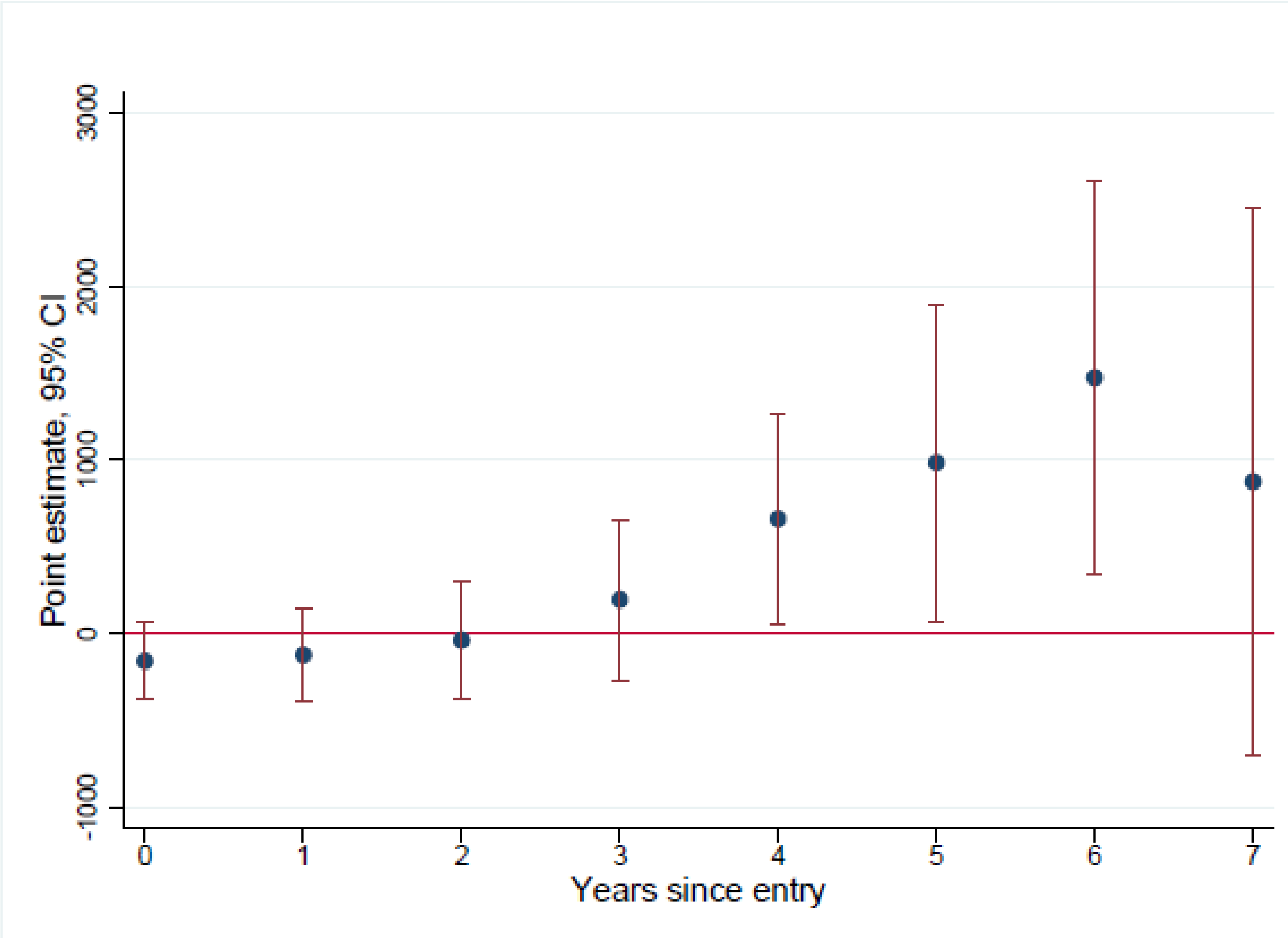
Effects on Longer-Run Attainment



Effects on Longer-Run Attainment

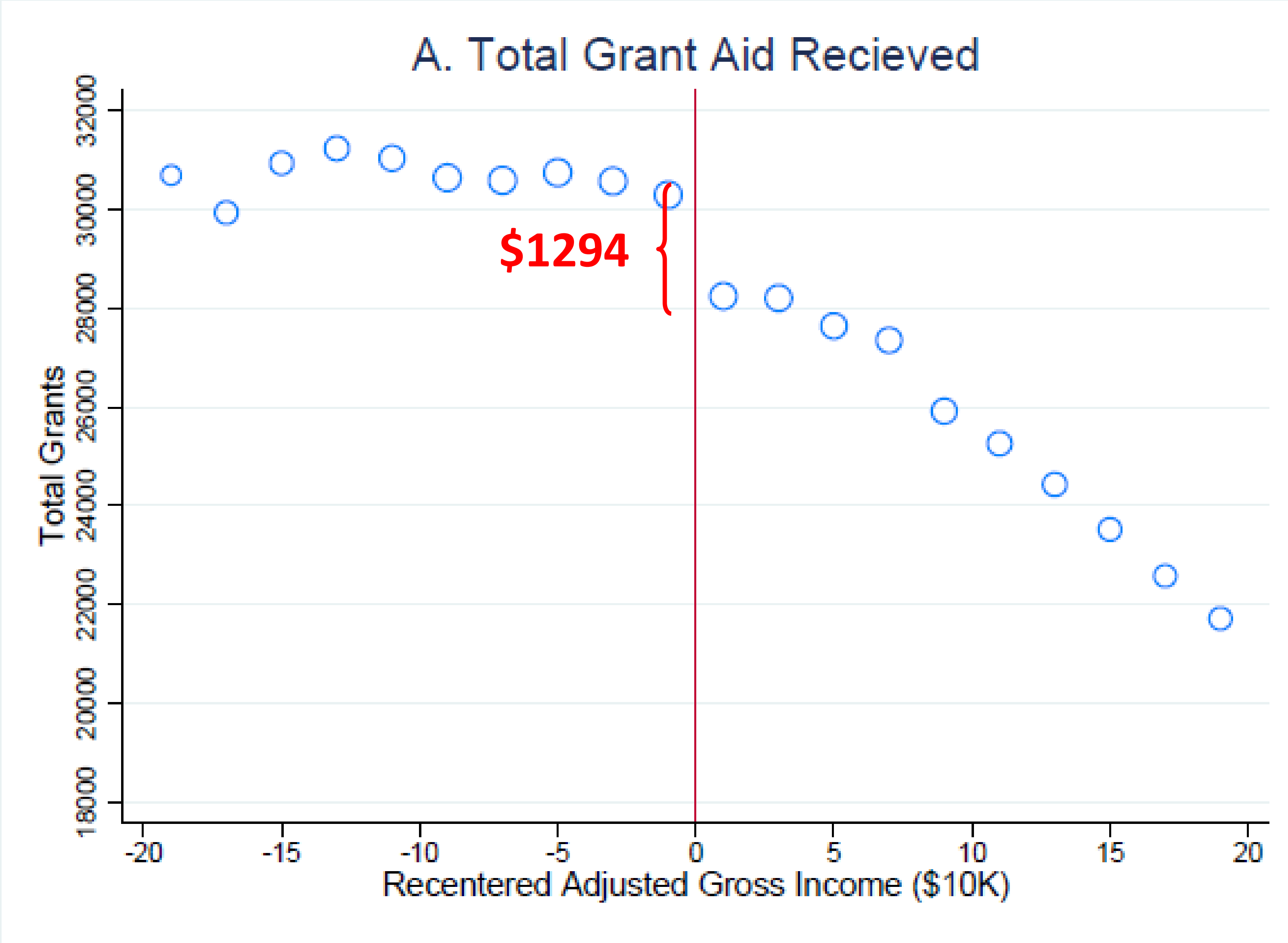


Effects on Earnings

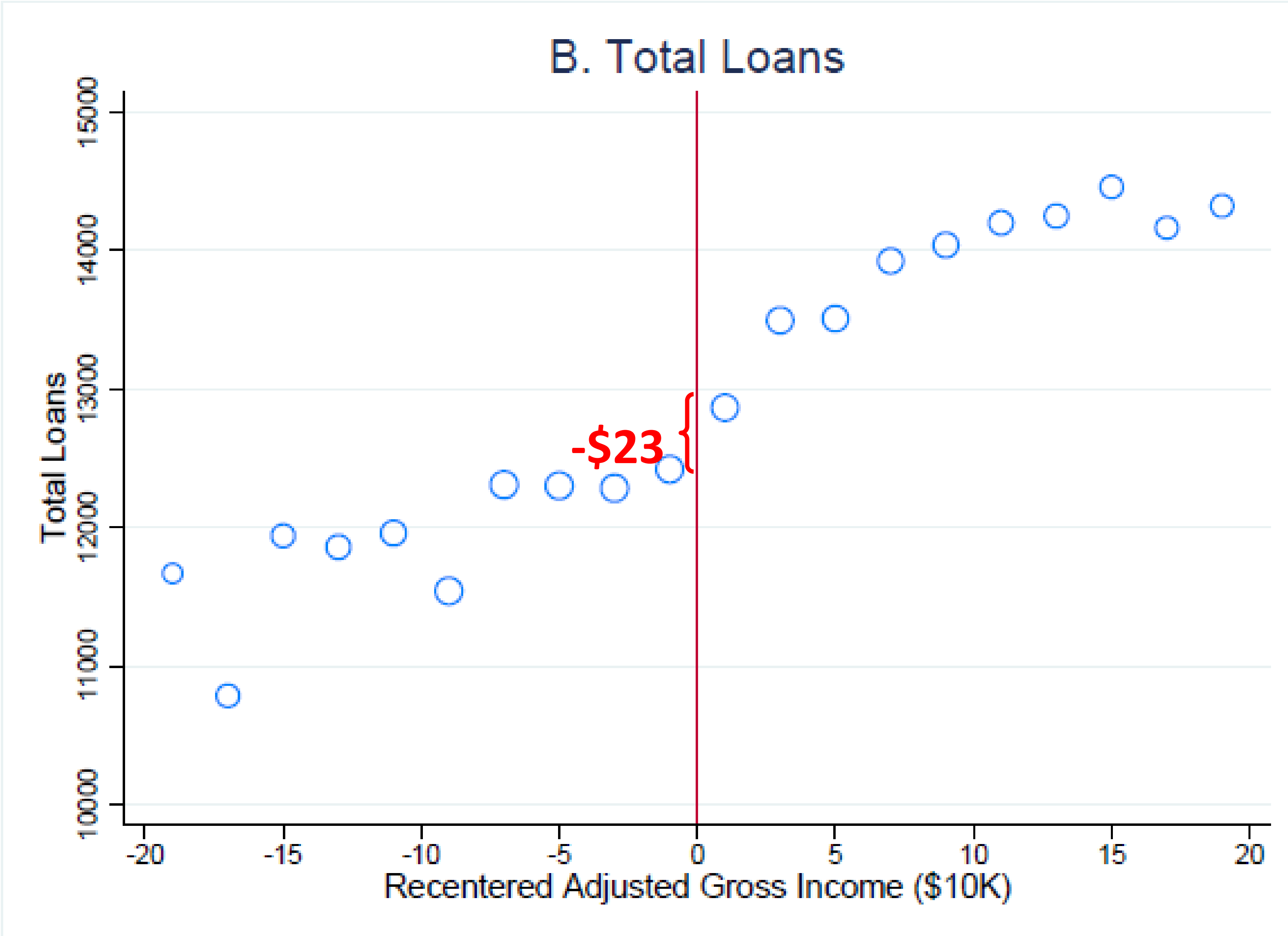


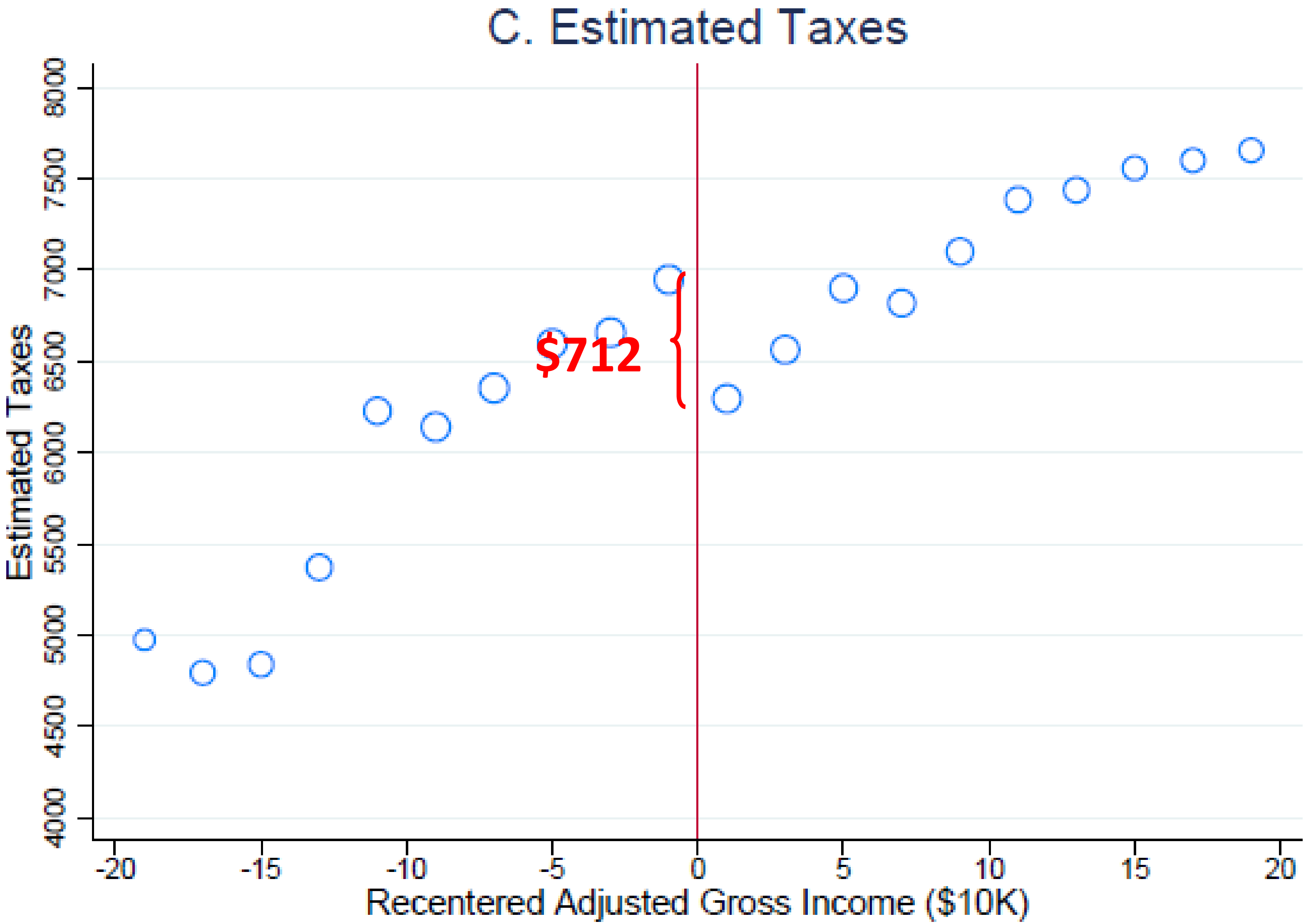
Is this an efficient use of govt. funds?

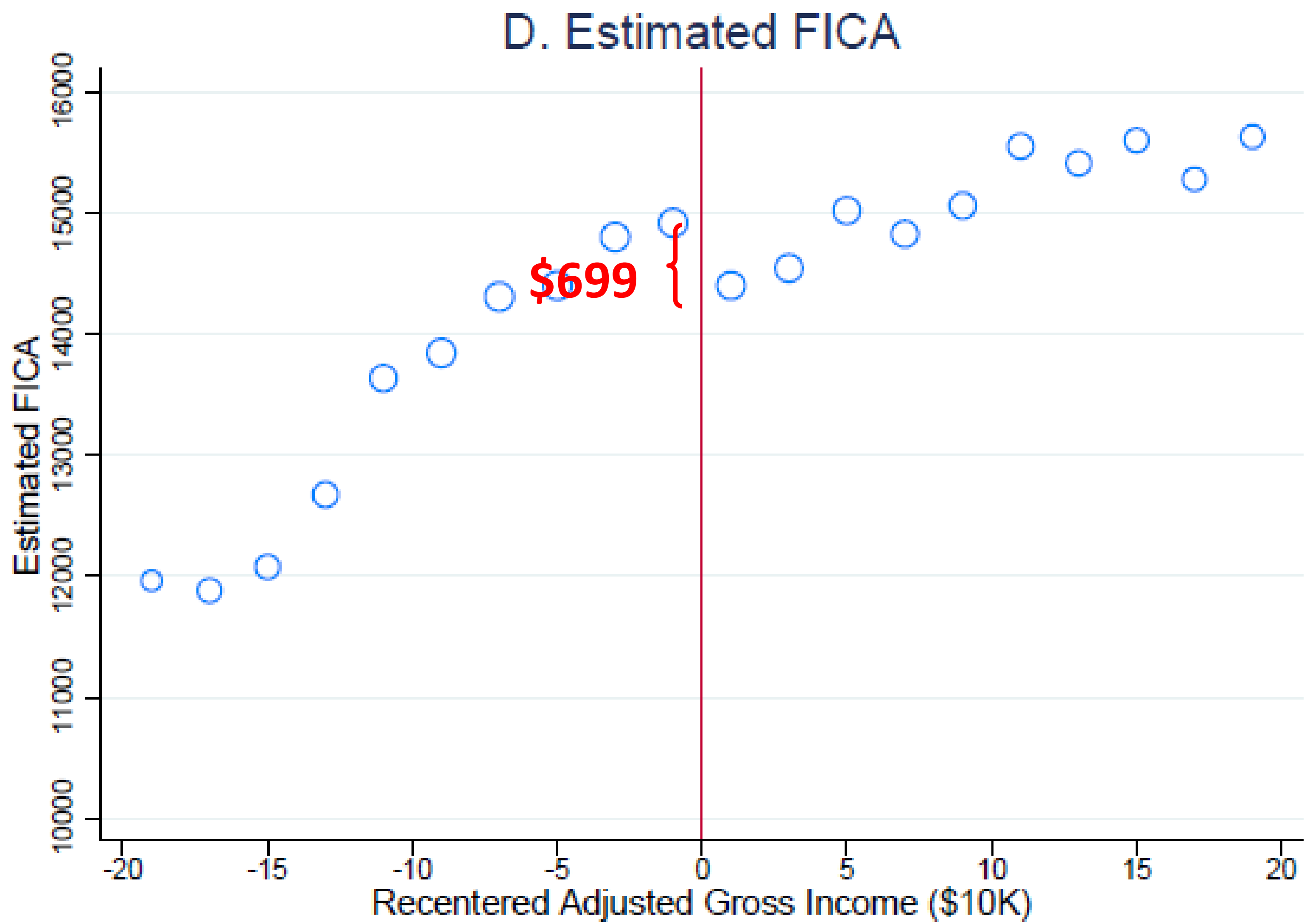
- Need to weigh effects on public expenditures against effects on public benefits (Denning, Marx, Turner 2017)
  - Expenditures: total grants, loans received, cost of additional years in school, foregone tax revenue if students work less, etc.
  - Benefits: additional tax revenue from increased earnings,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



A. Total Grant Aid Recieved
Total Grants
32000
30000
28000
26000
24000
22000
20000
18000
$1294
-20
-15
-10
-5
0
5
10
15
20
Recentered Adjusted Gross Income ($10K)


B. Total Loans
Total Loans
15000
14000
13000
12000
11000
10000
-$23
-20
-15
-10
-5
0
5
10
15
20
Recentered Adjusted Gross Income ($10K)


C. Estimated Taxes
Estimated Taxes
8000
7500
7000
6500
6000
5500
5000
4500
4000
$712
-20
-15
-10
-5
0
5
10
15
20
Recentered Adjusted Gross Income ($10K)


D. Estimated FICA
Estimated FICA
16000
15000
14000
13000
12000
11000
10000
$699
-20
-15
-10
-5
0
5
10
15
20
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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