

The Effects of Need-Based Financial Aid on Employment, Earnings, and Receipt of Public Benefits

Deven Carlson
Alex Schmidt
Barbara Wolfe

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Introduction

- Rapidly increasing costs of postsecondary education
 - Public, 4-year institutions (constant 2017-18 dollars)
 - 1999-00: \$12,127
 - 2017-18: \$20,050
 - Private, nonprofit, 4-year institutions (constant 2017-18 dollars)
 - 1999-00: \$31,118
 - 2017-18: \$46,150
- How can we provide equitable access in the face of high and ever-increasing increasing costs?
 - Need-based aid one arrow in the quiver

Introduction

- Large research base on effects of need-based aid on postsecondary access, persistence, and completion
- Also affect labor market behavior?
 - During period of postsecondary enrollment
 - During period following postsecondary exit
- Much smaller evidence base on labor market effects
 - Pell Grant- reallocates effort from labor to coursework (Park & Scott-Clayton 2018)
 - Cal Grant- increased earnings 10 to 14 years after aid award? (Bettinger et al. 2019)
 - FFWS- decreased self-reported employment by 6 pp year after aid offer (Broton, Goldrick-Rab, & Benson 2016)

Our Paper

- Estimates causal effect of need-based aid offer on:
 - Employment & earnings in Wisconsin
 - Participation in public assistance programs in WI
 - SNAP, TANF, UI
- Need-based aid source: Fund for Wisconsin Scholars
- Data: Several sets of Wisconsin administrative records
- Design: Exploit random assignment of aid offer
- Time span: Up to 8 years after receipt of randomized aid offer

The Fund for Wisconsin Scholars

- Established in 2007 with \$167 million founding gift
- Goal of increasing postsecondary persistence & completion among economically-disadvantaged students in WI
- Works to achieve goal by providing need-based grants
 - First grants awarded in Fall 2008
 - During period we study, student was eligible if:
 - Graduated from a public WI high school;
 - Less than 21 years old;
 - Pell eligible;
 - Pursuing a first degree at UW-System or WTCS school
 - UW-System: 13 four-year universities; 13 two-year colleges
 - WTCS: 16 technical colleges

FFWS Administration

- Students do not directly apply for FFWS grant
- Annually, each institution sends a list of newly eligible students to Wisconsin Higher Educational Aids Board (HEAB)
 - Students at four- and two-year institutions combined into separate pools
 - Randomization within each pool
 - Early in fall semester—students already enrolled
 - Target of approximately 500 award acceptances in each pool
 - Selected students receive an award letter they must sign and return to FFWS to access award

FFWS Administration

- Grant details
 - Can receive grant up to 10 semesters
 - Transfer students maintain eligibility
 - Students at four-year institutions
 - \$3,500 annually through 2014-15
 - \$4,000 annually from 2015-16 forward
 - Students at two-year institutions
 - \$1,800 annually
 - WTCS students no longer eligible beginning Fall 2016; UW-College students no longer eligible beginning Fall 2017
 - Existing award recipients remain grant-eligible
- “Last dollar” aid program
 - Only applied after all other forms of grant/scholarship aid are exhausted

Number of FFWS Recipients

Cohort	4-Year Institution		2-Year Institution	
	FFWS Offer	No Offer	FFWS Offer	No Offer
2009-10	500	3,635	544	2,188
2010-11	550	4,521	600	2,489
2011-12	621	4,204	649	2,308
2012-13	625	3,499	675	2,178
2013-14	600	3,718	700	2,430
2014-15	557	3,588	750	1,686
2015-16	540	3,387	700	1,365
2016-17	575	3,101	200	321
Total	4,568	29,653	4,818	14,965

Data

- Five sets of administrative records
 1. HEAB records
 - Annual set of grant-eligible students—indicator for offer receipt
 2. DPI records
 - National Student Clearinghouse records—enrollment & completion
 - Info from high school years
 3. UW-System records
 - Student postsecondary outcomes at UW-System schools
 - Enrollment, graduation, credits, financial aid, major, GPA
 4. Unemployment Insurance records
 - Quarterly earnings in WI
 5. CARES records via the MSPF
 - Participation in public assistance programs
- Dataset: Annual information for 54,004 FFWS-eligible students
 - Spans 2009 to 2018

Baseline Characteristics

Characteristic	4-Year Institution		2-Year Institution	
	FFWS Offer	No Offer	FFWS Offer	No Offer
Female	59.3***	56.6	50.7*	52.5
White	76.7	76.7	77.9	78.3
Underrep. race	15.2	14.8	15.9	15.1
Other race	8.1	8.4	6.2	6.6
Ever ELL	8.8	8.6	8.2	8
SNAP	17.1	16.8	27.8	25.5
<i>N</i>	3,993	26,552	4,618	14,644

Asterisks indicate difference from No Offer group mean at: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Analytic Strategy

- Registered pre-analysis plan with AEA RCT Registry
- Estimate effect of the grant offer—ITT parameter—with following model:
 - $$Y_{ijt} = \alpha + \sum_{t=1}^{t=8} \gamma_t F_{ij} + \tau_j + \psi_t + \varepsilon_{ijt}$$
 - i, j, t index students, cohorts, and post-randomization year
 - Y is the outcome of interest
 - α is a constant
 - F is an indicator for receipt of FFWS grant offer
 - τ_j is a cohort fixed effect
 - ψ_t is a fixed effect for post-randomization year
 - ε is the error term
 - Estimate via OLS; cluster SEs by student
 - Estimate separately for 4-year & 2-year samples

Outcomes

- Annual employment in WI
- Annual earnings in WI
- Public program participation
 - SNAP, TANF, UI
 - Receipt & dollar amount of benefits
- Records from only WI suboptimal
 - Still provides relevant information to policymakers
 - Additional work to gain insight into overall employment and earnings effects

Employment Results

Year	4-Year Institution		2-Year Institution	
	Control Group Mean	Coef. (S.E.)	Control Group Mean	Coef. (S.E.)
Year 1	0.812	-0.023*** (0.006)	0.877	-0.004 (0.006)
Year 2	0.826	-0.021*** (0.007)	0.892	-0.003 (0.005)
Year 3	0.811	-0.007 (0.007)	0.876	0.001 (0.006)
Year 4	0.819	-0.004 (0.008)	0.862	0.002 (0.007)
Year 5	0.812	-0.007 (0.009)	0.854	-0.004 (0.008)
Year 6	0.778	-0.027** (0.011)	0.841	-0.001 (0.010)
Year 7	0.750	-0.031** (0.015)	0.823	0.002 (0.013)
Year 8	0.729	-0.0299 (0.022)	0.816	-0.033* (0.020)

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Earnings Results

Year	4-Year Institution		2-Year Institution	
	Control Group Mean	Coef. (S.E.)	Control Group Mean	Coef. (S.E.)
Year 1	\$3,884	-278*** (58.5)	\$6,655	-123 (91.6)
Year 2	\$5,798	-524*** (93.9)	\$9,883	-53 (140.6)
Year 3	\$7,171	-377*** (131.8)	\$12,463	89 (193.7)
Year 4	\$8,908	-285 (174.8)	\$14,438	253 (246.3)
Year 5	\$13,472	-651** (282.7)	\$16,788	339 (316.9)
Year 6	\$18,008	-869** (421.7)	\$19,262	166 (413.4)
Year 7	\$20,406	-1,145* (595.9)	\$21,148	-269 (550.7)
Year 8	\$21,434	-1,646* (941.9)	\$22,052	-995 (859.4)

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Further Analysis

- Additional insight into employment and earnings effects for students at 4-year schools
 - Treatment-on-the-treated estimates
 - In-school employment and earnings declines accompanied by improved academic performance
 - Potential mechanisms for negative effects in post-college years
 - Reduced debt burden provides degree of financial flexibility?
 - Offer-induced outstate migration?
 - Asymmetric outstate migration
 - Bounding effect of grant offer on total earnings
 - Not just in-state earnings

Summary

- Need-based aid offer reduces in-state employment and, especially, earnings for students at 4-year schools
 - During in-college & post-college time periods
 - In-college reductions accompanied by evidence of improved academic performance
 - No effects for students at 2-year institutions
 - Some evidence of difference between WTCS and UW-Colleges
- Potential mechanisms
 - Offer-induced out-state migration
 - Unlikely to explain entire effect
 - Reduced loan debt provides labor market flexibility?
 - Other possibilities
- No systematic effects on SNAP, TANF, or UI receipt in WI
 - Either 2-year or 4-year

Discussion

- Highlights a tension in program design for policymakers
 - Welfare of aid recipient vs. taxpayers
 - FFWS philanthropically funded
 - RI & NY impose residency requirements on aid
 - Other states have no such requirement
- Estimates only capture early portion of students' careers
 - Different long-run dynamics?
 - Salary trajectories differ?
 - Future work
- Other important dimensions not captured at all

Thank you!

Deven Carlson
decarlson@ou.edu

Alex Schmidt
ajschmidt6@wisc.edu

Barbara Wolfe
wolfe@lafollette.wisc.edu