



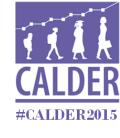
Charles Clotfelter (Duke)
Steven Hemelt (UNC, Chapel Hill)
Helen Ladd (Duke)

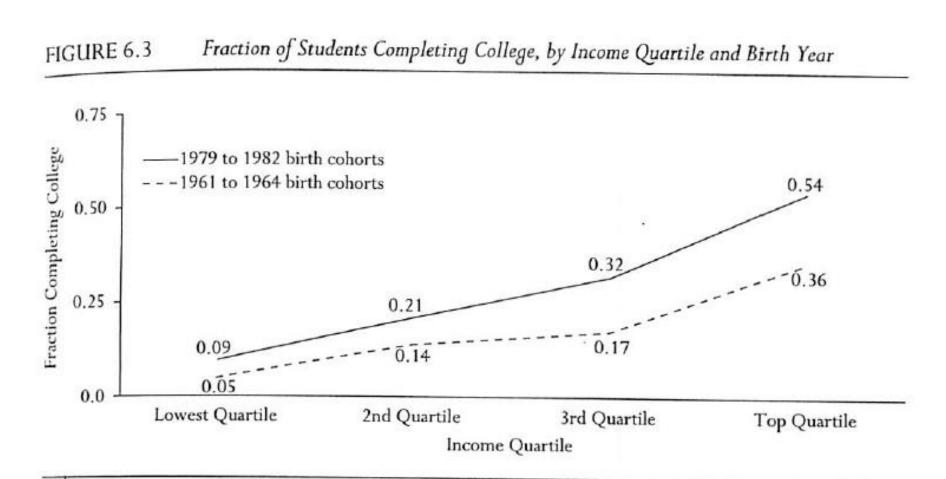
CALDER Meeting February 20, 2015 Washington D.C.



Evidence of Widening Gaps by Income: College Completion

Bailey and Dynarski in Duncan and Murnane 2011





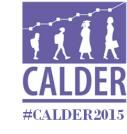
Source: Authors' calculations based on data from National Longitudinal Survey of Youth, 1979 and 1997 (U.S. Bureau of Labor Statistics 2010a, 2010b).





The Carolina Covenant

➤The financial component



A promise for students to graduate debt-free who are at or below 200% of the federal poverty guidelines (150% in 2004)
 (e.g. 200% in 2014 = \$47,700 for family of 4)

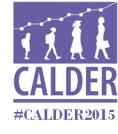
- Meet 100% of need with grants, scholarships, & work-study (no loans).
- Grant to pay for a laptop.





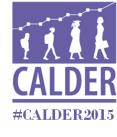
The Carolina Covenant

➤ More than Financial Aid



- Summer orientation for students and parents
- Faculty mentoring program
- Peer mentoring program (2006+ cohorts)
- Programming for students (e.g., Learning Center, Career Services, Medical School, Student Advisory Board)
- Academic counseling monitoring grades, and "intrusive contracts" for summer restoration of grades





Profile of Entering Scholarship Recipients (Fall 2008)

Average SAT = 1206

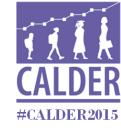
84% from North Carolina (from 74 of the 100 counties)

60% female

61% students of color

55% first generation





- -- No loans, less financial strain:
 - → Higher grades
 - → Better persistence, higher graduation rates
- -- Advising, mentoring
 - → Lighter course loads in first year
 - → Higher grades
 - → Better persistence, higher graduation rates

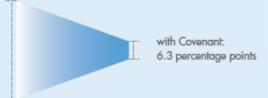


DESTINATION: POSSIBLE

National research said it couldn't be done, but the Carolina Covenant is closing the achievement gap for low-income students.

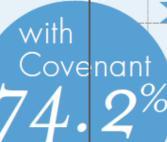
By 2012, two-thirds of the Graduation Achievement Gap between lowincome Covenant Scholars and all students had narrowed significantly.

before Covenant: 17.6 percentage points

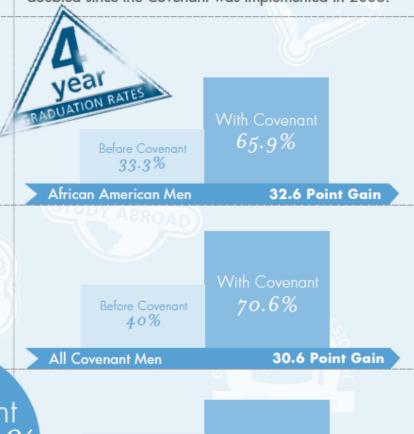


The Four-Year Graduation Rate of Covenant Scholars has increased by a striking 17.5 percentage points to 74.2% since the start of the program.

before Covenant 56.7%



The most remarkable gains have been made by Covenant Scholars have been made by men; most notably by Black men, whose graduation rates have nearly doubled since the Covenant was implemented in 2003.*



Before Covenant 64.3%

Vith Covenant 76.5%

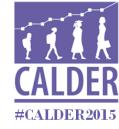
All Covenant Women

12.2 Point Gain

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* See Endnotes on inside back cover



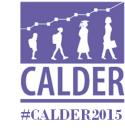


2 approaches to estimating effects

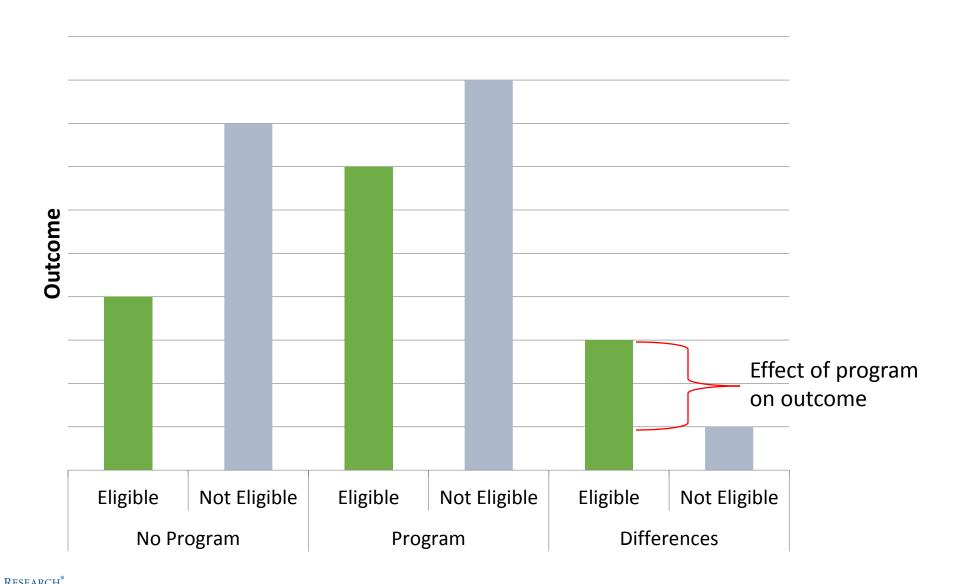
--differences in differences (diff-in-diff)

-- regression discontinuity (RD)



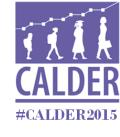


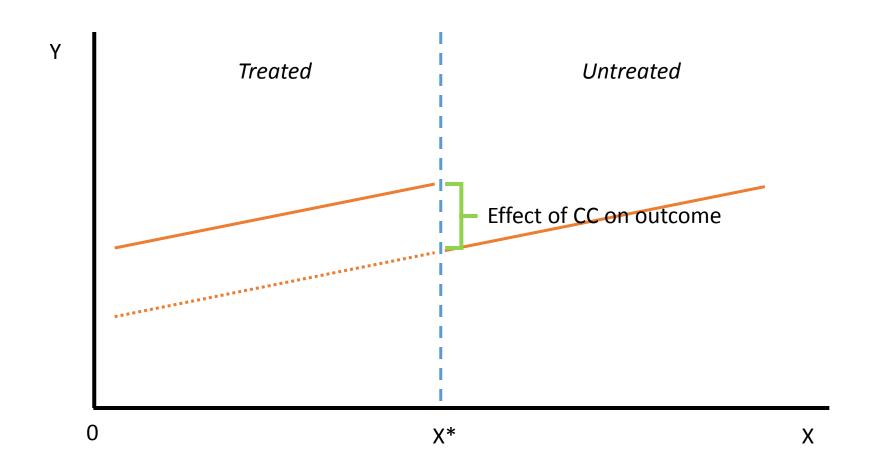
Difference-in-differences: The Intuition





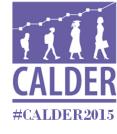
Regression Discontinuity (RD): The Intuition







Determining Eligibility



Number of UNC-CH Students Eligible for Carolina Covenant: Estimated and Actual

Estimated			Actual			
	< 150% Po	overty level	< 200% Po	verty Level	All	NC Residents
Year (Fall)	Family Income Cutoff	Family Income Cutoff + No Loans	Family Income Cutoff	Family Income Cutoff + No Loans		
2003	98	52			N/A	N/A
2004	114	85			224	196
2005			345	269	350	310
2006			356	272	417	348
2007			368	290	398	346
2008			380	295	410	347

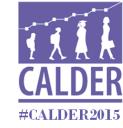
Notes: "No Loans" restricts to students below the poverty level cutoff who have no federal loans in their first year of college. The first cohort of Covenant scholars entered UNC-CH in the fall of 2004.



Diff-in-diff estimates for 4-year graduation rate

(each cohort compared to 2003)

Year cohort	"CC effect"	
entered		
2004	-0.006	
2005	0.046	
2006	0.052	
2007	0.025	
2008	0.113	**



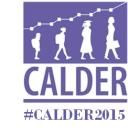
Diff-in-diff estimates for credits earned

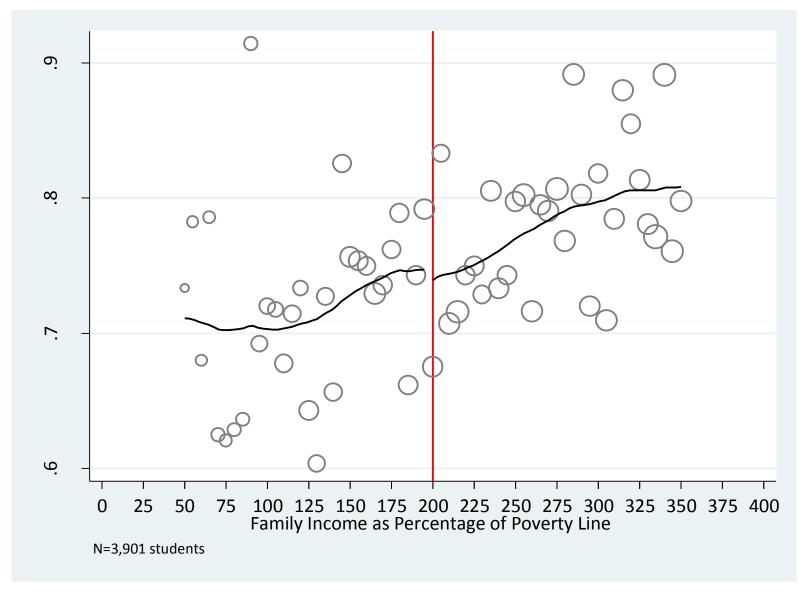
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(Four Carolina Covenant cohorts compared to 2003 cohort)

After:	"CC effect"	
Year 1	-1.42	***
Year 2	-0.76	
Year 3	0.96	
Year 4	0.60	

UNC-CH: Graduate in 4 Years — 2004-2008

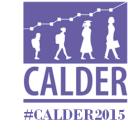


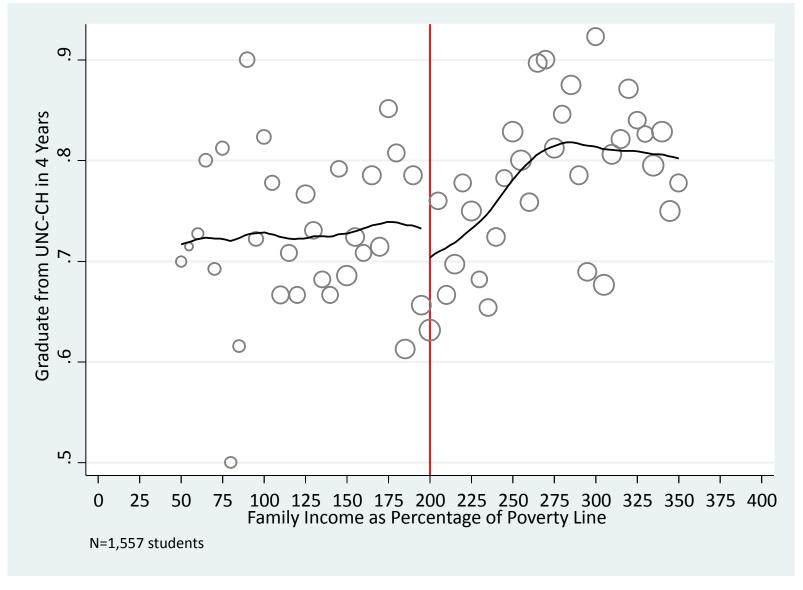




AMERICAN INSTITUTES FOR RESEARCH Sample includes CC Scholars in cohorts 2004 through 2008.

UNC-CH: Graduate in 4 Years — 2007-2008

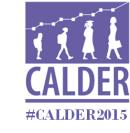


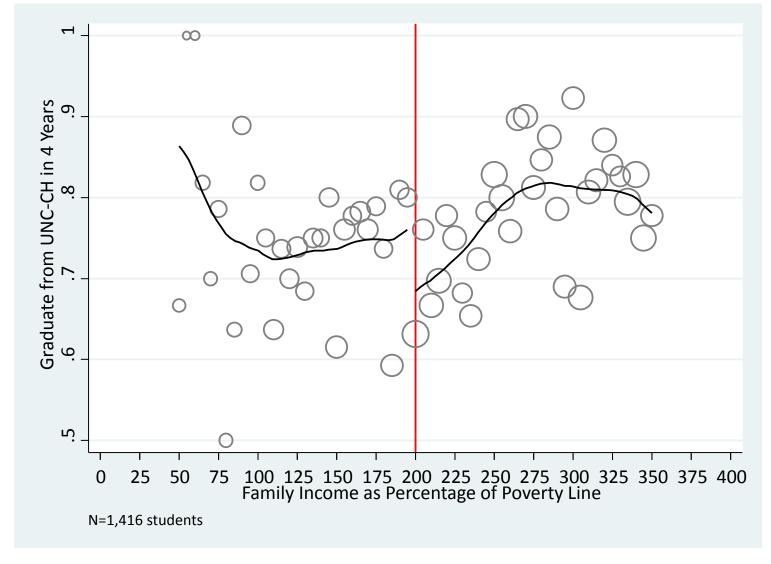




Sample includes CC Scholars in cohorts 2007 and 2008.

UNC-CH: Graduate in 4 Years — 2007-2008





Sample includes CC Scholars in cohorts 2007 and 2008 – who, in addition to meeting the income threshold, had no freshman-year federal loans.



Parametric RD Estimates: 4-Year Graduation

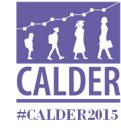
#CALDER2015

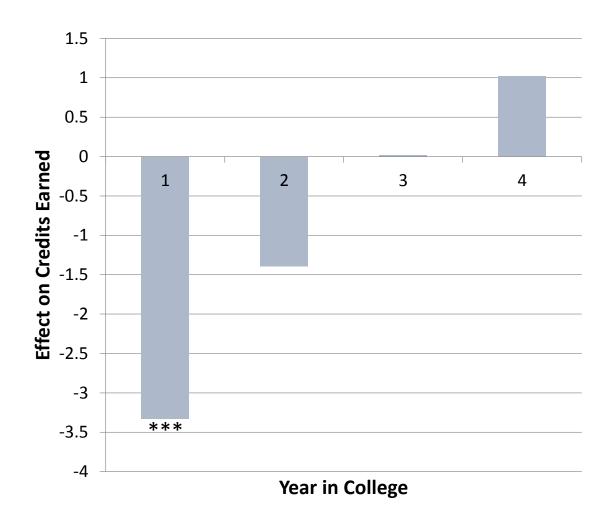
	Graduate college	Graduate college
	in 4 years	in 4 years
Data Window	0% to 400% PL	50% to 350% PL
Independent variable	(1)	(2)
Sample: 2006-2008		
CC eligible (with no freshman-year loans)	0.033	0.100
	(0.052)	(0.074)
N(students)	2969	2341
Outcome mean	0.77	0.76
Sample: 2007-2008		
CC eligible (with no freshman-year loans)	0.080	0.156*
	(0.062)	(0.089)
N(students)	1969	1557
Outcome mean	0.77	0.76
Sample: 2008		
CC eligible (with no freshman-year loans)	0.119	0.223*
	(0.088)	(0.127)
N(students)	979	776
Outcome mean	0.77	0.73

Notes: "PL" = poverty line; All models include the running variable (i.e., family income expressed as percentage of poverty line), an interaction between the running variable and the treatment indicator, year effects, and the following student covariates: gender, race and ethnicity, and high school GPA. In addition, all models include year effects except for the final panel (i.e., when the sample is limited to only the year 2008). Robust standard errors appear in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

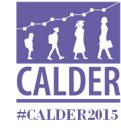








- CC-eligibility reduces credits earned by about one class (i.e., 3 credits) in the first year of college.
- In later years, CCeligible students earn the same number of credits as their non-CC counterparts.



Tentative Conclusions Re Program Effects

Reduces number of credits earned first year

May increase 4-year graduation rates (statistically significant for 2007 and 2008 cohorts)

....So, we have requested data for later cohorts...

