The Spillover Effects of Medicaid on the Financial Health of Low-Income Families

Michael M. Davis Lecture

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Acknowledgments

- Center for Health Administration Studies (CHAS)
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  - Co-PI Tal Gross (Boston University/NBER)
- Co-authors
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  - Evictions: Naomi Zwede (Columbia University), Erica Eliason (Columbia University), Tal Gross

Background

- The relationship between health & poverty is dynamic and synergistic

- Being uninsured has long been thought to contribute to income-based health disparities

- Policy context: ACA + SCOTUS

- Payday borrowing and evictions represent adverse financial outcomes concentrated among those in poverty with enduring consequences
  - Multiple potential causal pathways

Causal Pathways for Medicaid to Improve Financial Health

- Reduce cost exposure related to seeking care
  - OOP expenses could include: urgent care visits, upfront physician payments, hospital bills, and prescriptions
- Increase health to the extent that it impacts earnings
  - Increase probability of being in the workforce, fewer sick days, increased productivity, improved job performance and upward mobility
- Savings from ↓ medical OOP spending or ↑ wages could be otherwise used
  - Pay bills to avoid a debt spiral (↓ collections, ↑ credit rating, ↓ overdraft fees)
  - Improve or maintain standard of living (including housing)

There is prior evidence than Medicaid improves the finances of low-income families

- Oregon Health Insurance Experiment (Finkelstein et al., 2012; Baicker et al., 2014)
  - Reduced OOP spending, reduced financial strain, reduced medical collections
- Studies on credit scores (Brevvort, Grodzicki & Hackmann, 2017; Hu et al., 2016)
- Systematic reviews of the post-ACA expansions (Kominski, Nonzee & Sorensen, 2017; Mazurenko, et al., 2018)
- Studies on bankruptcy (Gross & Notowidigdo, 2011; Mazumder & Miller, 2016; Dobkin, Finkelstein, Kluender & Notowidigdo, 2018)

Research Questions

- How would ACA- related Medicaid expansion impact payday borrowing?

- How would ACA-related Medicaid expansion impact evictions?

- In both papers, we focus on California's early ACA Medicaid expansion
  - Why?!

County Name	Early Expansion (Y/N)	Date of Expansion
Alameda	Y	July 2011
Contra Costa	Y	July 2011
CMSP*	Y	January 2012
Fresno	N	N/A
Kern	Y	July 2011
Los Angeles	Y	July 2011
Merced	Y	January 2013
Monterey	Y	October 2012
Orange	Y	July 2011
Placer	Y	August 2012
Riverside	Y	January 2012
Sacramento	Y	October 2012
San Bernardino	Y	January 2012
San Diego	Y	July 2011
San Francisco	Y	July 2011
San Joaquin	Y	June 2012
San Luis Obispo	N	N/A
San Mateo	Y	July 2011
Santa Barbara	N	N/A
Santa Clara	Y	July 2011
Santa Cruz	Y	January 2012
Stanislaus	N	N/A
Tulare	Y	January 2013
Ventura	Y	July 2011

Allen, Swanson, Wang, & Gross (2017)

# EARLY MEDICAID EXPANSION ASSOCIATED WITH REDUCED PAYDAY BORROWING IN CALIFORNIA

Payday Loans

- About 12 million Americans borrowed in 2012
- For the employed who can demonstrate income
- Usually $300 to $500 with full repayment due in 2 weeks (CSFI 2012)
- Cost is estimated at $15 to $20 per $100 borrowed
- Can be rolled over into new loans

Criticism of Payday Lending

- Loans are expensive: APR usually between 300-400%
- When borrowers are counseled about payday borrowing, they borrow less (Bertrand & Morse, 2011)
- Advertised as short-term solutions for unexpected expenses, but most borrowers are borrowing for routine debts.
- Payday borrowers borrow often
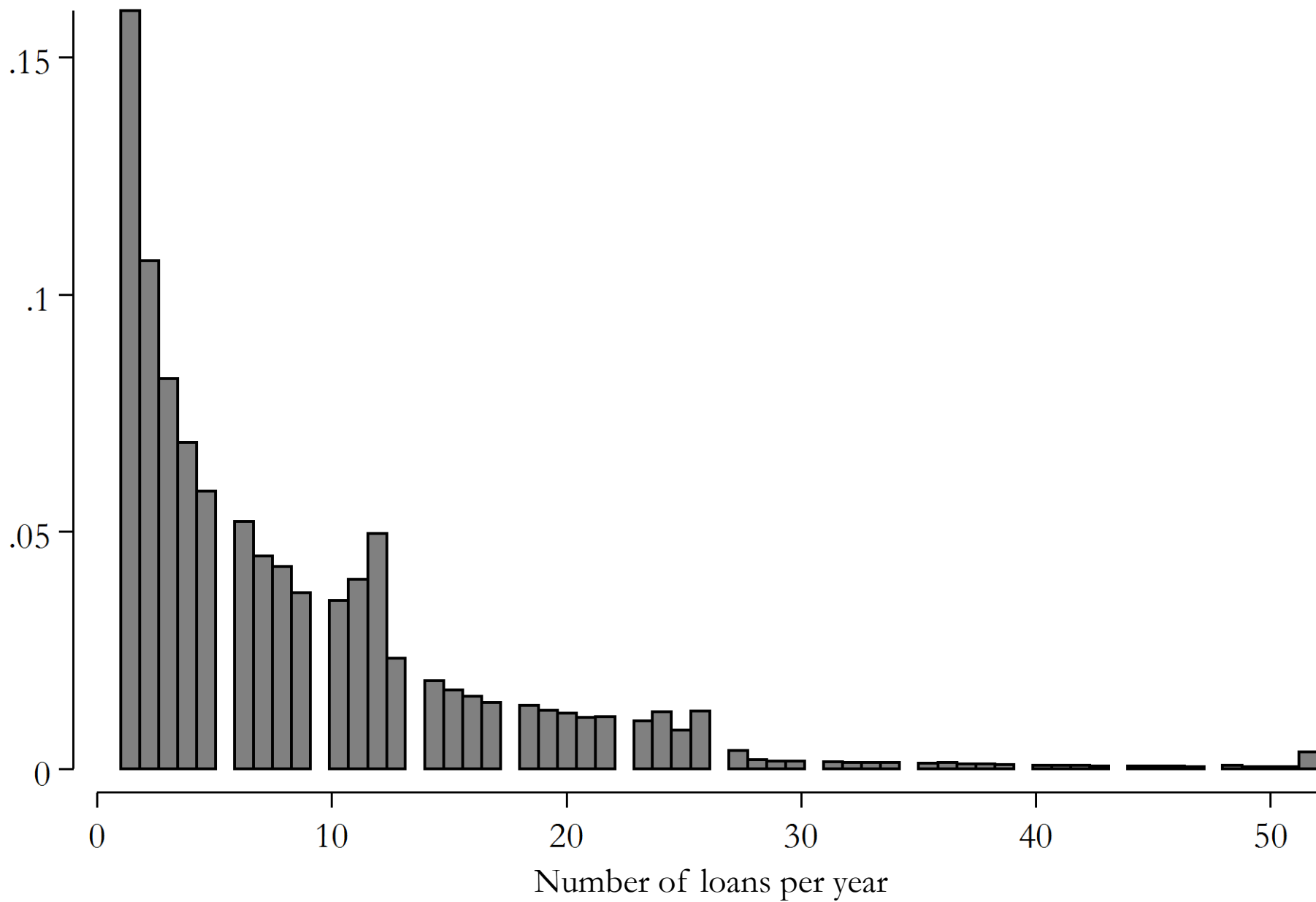
In defense of payday lending

- Constrained choices + serious need = better than nothing
- Alternative products may be worse
  - Consider bounced checks
- Payday lenders do not earn above-market returns
- Defaults drive fees up
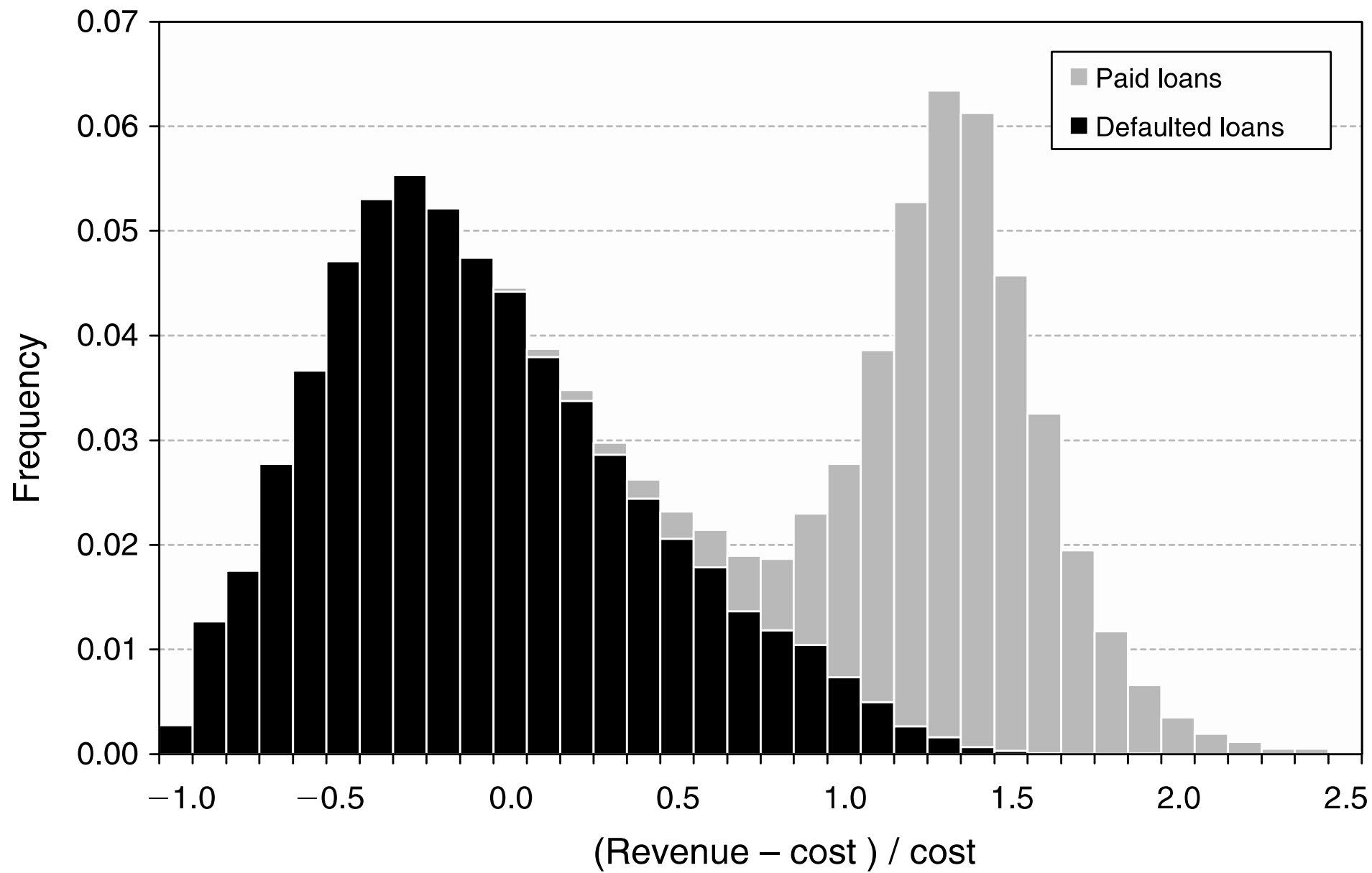
Source: Adams, Einav, and Levin (2009)

Clarity-CFSA Data

- The Community Financial Services Association of America (CFSA) compiled a dataset for our research purposes
- Data consists of the universe of payday lending for five payday lending chains with locations in many states
- Dataset consists of 93 million loans from 2009 – 2014
  - Approximately 24 months prior to and following California's Early Medicaid expansion
- For each loan we observe:
  - Encrypted SSN of borrower
  - Date loan tendered and due date
  - Zip code of lender
  - Outcome (default or late)

Number of loans
in thousands

- 34.0 − 171.2
- 15.5 − 34.0
- 9.3 − 15.5
- 3.8 − 9.3
- 1.4 − 3.8
- 0.2 − 1.4
- No data
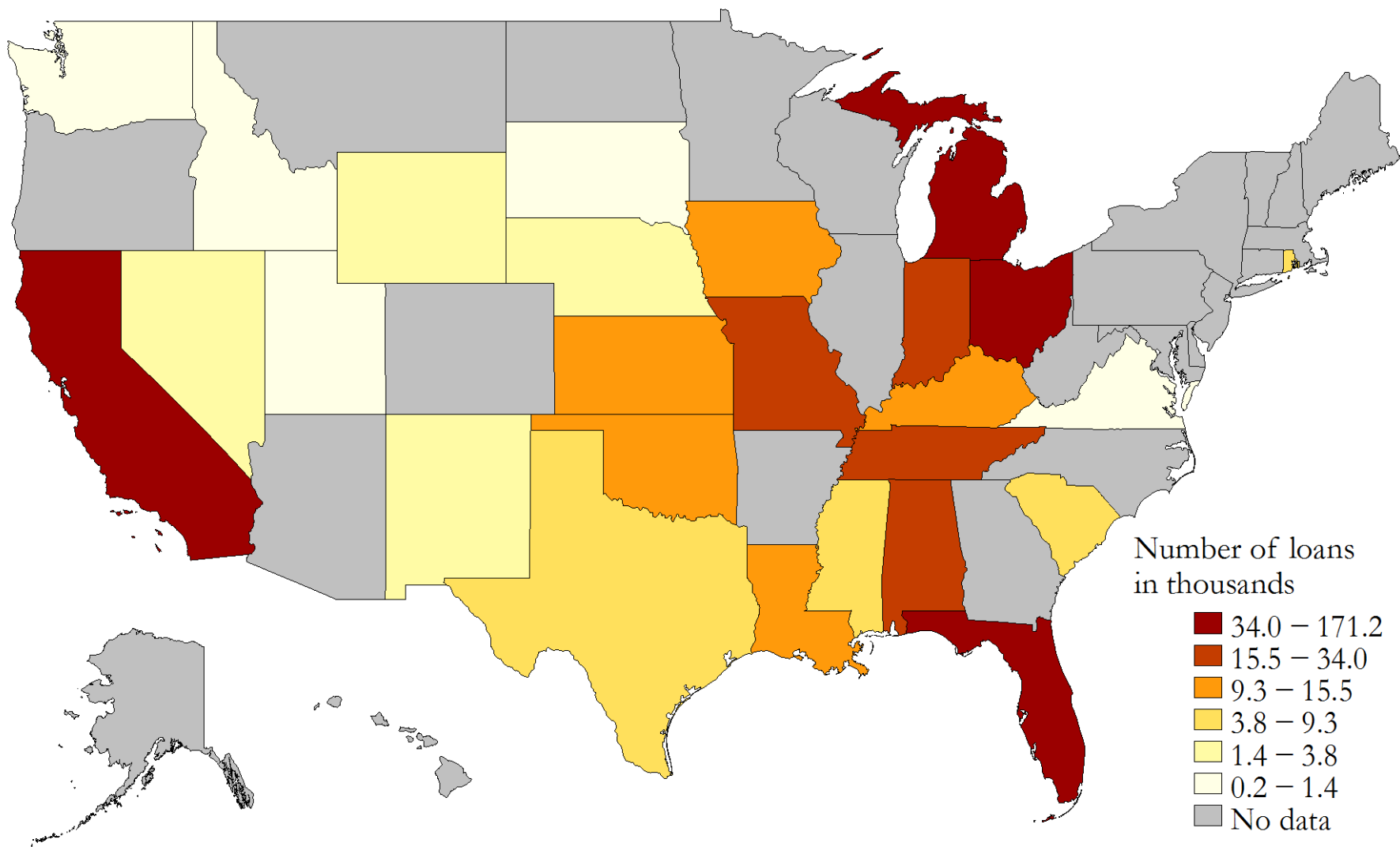
Table 1. Sample Statistics

|	Medicaid-expansion counties	Other counties
Number of counties	43	924
Number of payday loans	17,592,435	59,148,719
Mean annual income in thousands	$58.20	$63.57
Mean age	44.4	44.8
Total amount loaned in thousands	$4,168,162	$22,471,266

Methodological Approach

- Difference-in-difference
- Primary Outcomes
  - Number of loans
  - Dollars loaned
  - Unique borrowers
- Secondary Outcomes
  - Share default, share late, rollovers, # loans per borrower
- Age stratification (18-34, 35-49, 50-64)
- County stratification (high share uninsured vs. low share uninsured)
- Triple-difference-in-difference with > 65

Results

| Dependent Variable	(1) Number of loans	(2) Dollars loaned	(3) Unique borrowers
Medicaid-expansion county, post expansion	- 789.416 (215.206) [0.000]	- 171.524 (51.671) [0.001]	- 277.282 (89.868) [0.002]
Pre-expansion mean	6,947.6	1,644.4	3,602.6
R^2	0.971	0.969	0.981

$N = 58,020$. The sample consists of county-by-month observations for all counties in the payday-loan data. The standard errors in parentheses are clustered on county, associated p-values in brackets. County and year-month fixed effects not shown. Dollars loaned is measured in thousands.

Early Medicaid Expansion Reduced Payday Borrowing in California. Health Affairs, 2017. Allen, Swanson, Wang & Gross.
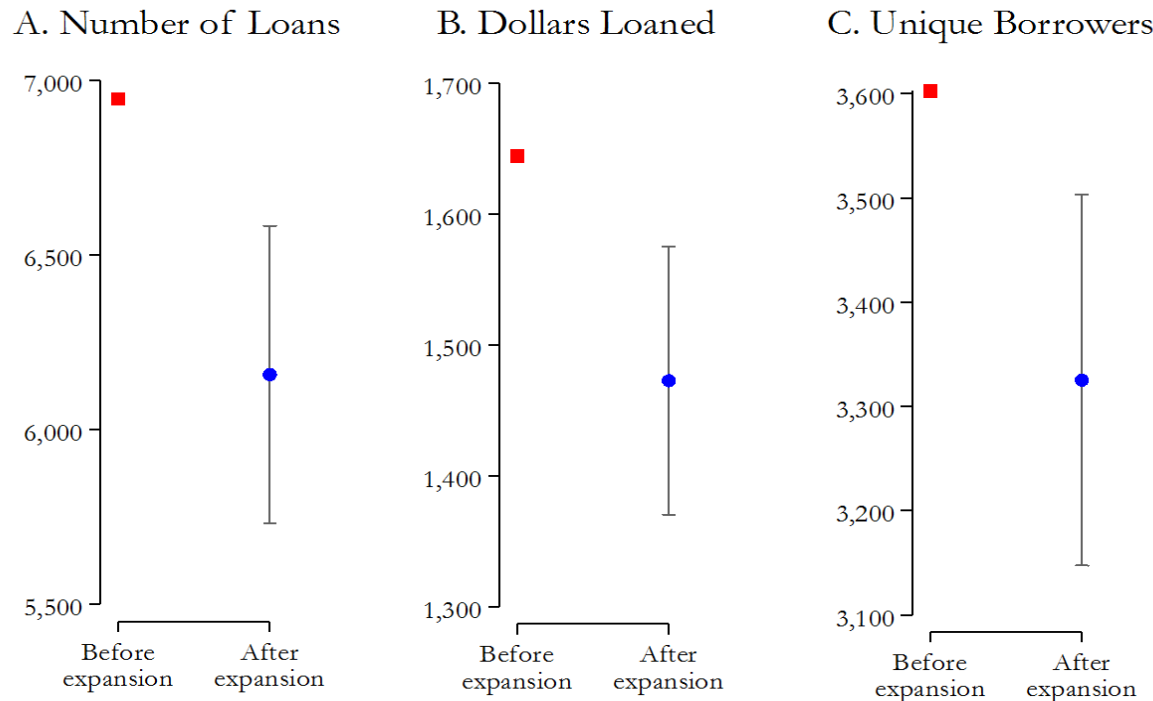
This figure plots the results of difference-in-difference regressions of the outcomes given for those under age 65. The sample consists of county-by-month observations for all counties in the payday-loan data, $N = 58,020$. Dollars loaned is measured in thousands. The vertical bars indicate 95-percent confidence intervals clustered on county. See Appendix Exhibit A4 for the regression estimates. For panel A, the R^2 is 0.971 and the p-value associated with a test that the Medicaid expansion had no effect is less than 0.001. For panel B, the R^2 is 0.969 and the p-value is 0.001. For panel C, the R^2 value is 0.981 and the p-value is 0.002.

Appendix Exhibit A8. The Effect of Medicaid-Expansion on Total Loan Volume
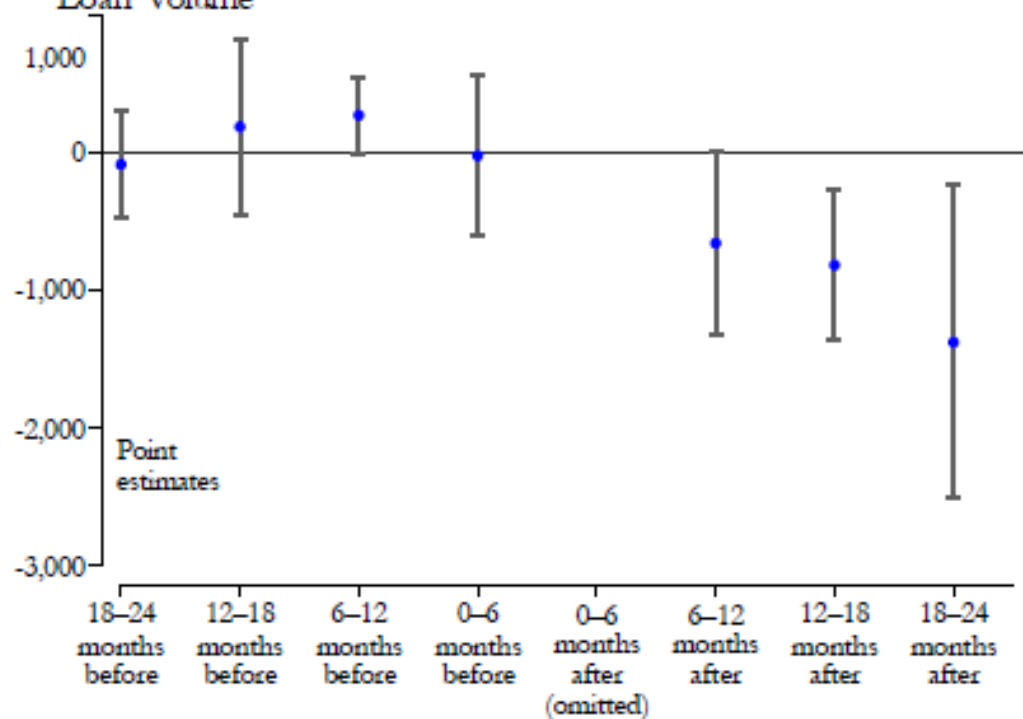
Notes: This figure plots the results of an "event study" regression of total loan volume for those under age 65 on months before and after a county expands Medicaid. The vertical bars indicate 95-percent confidence intervals.

By Age of Borrower

Dependent Variable: Number of loans for given age of borrower			
	(1)	(2)	(3)
Age of borrower	18–34	35–49	50–64
Medicaid-expansion county, post expansion	- 485.969 (141.521) [0.001]	- 345.085 (93.123) [0.000]	23.650 (29.429) [0.422]
Pre-expansion mean	2,268.1	2,715.2	1,900.8
R^2	0.951	0.969	0.976

N = 58,020. The sample consists of county-by-month observations for all counties in the payday-loan data. The standard errors in parentheses are clustered on county, associated p-values in brackets. County and year-month fixed effects not shown. The dollars loaned is measured in thousands.

By Share Previously Uninsured

Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)
	Number of loans		Dollars loaned		Unique borrowers	
Share uninsured	High	Low	High	Low	High	Low
Medicaid-expansion	- 986.588	- 612.114	- 206.862	- 139.447	- 360.541	- 203.163
county, post expansion	(418.535)	(144.414)	(100.672)	(34.086)	(179.793)	(46.985)
	[0.019]	[0.000]	[0.040]	[0.000]	[0.046]	[0.000]
Pre-expansion mean	9,265.3	5,047.6	2,196.5	1,191.7	4,855.6	2,575.3
R^2	0.971	0.972	0.967	0.973	0.981	0.979
N	26,640	31,380	26,640	31,380	26,640	31,380

The sample consists of county-by-month observations for all counties in the payday-loan data. The standard errors in parentheses are clustered on county, associated p-values in brackets. County and year-month fixed effects not shown. The dollars loaned is measured in thousands. Counties categorized as having high share-uninsured are those in which the share-uninsured under 138 percent of the Federal Poverty line is greater than 30 percent as measured in the 2010 Small Area Health Insurance Estimates.

Summary of Main Results

- Medicaid expansion is associated with a reduction in payday borrowing of 11 percent.

- Effect is largest among younger borrowers

- Effect is largest in counties with pre-expansion higher share of uninsured

Secondary Outcomes

	(1)	(2)	(3)	(4)	(5)
Dependent Variable	Age	Share default	Share late	Loans / borrower	Share rollovers
Medicaid-expansion	- 0.296	0.005	0.019	- 0.045	0.028
county, post expansion	(0.095)	(0.001)	(0.010)	(0.009)	(0.005)
	[0.002]	[0.000]	[0.060]	[0.000]	[0.000]
Pre-expansion mean	41.476	0.031	0.377	1.862	0.503
R^2	0.758	0.451	0.686	0.800	0.853

N = 58,020. The sample consists of county-by-month observations for all counties in the payday-loan data. The standard errors in parentheses are clustered on county, associated p-values in brackets. County and year-month fixed effects not shown.

Sensitivity Test with Older Borrowers

	(1)	(2)	(3)
Dependent Variable	Number of loans	Dollars loaned	Unique borrowers
	Panel A. Effect Among Over-65 Borrowers		
Medicaid-expansion	93.550	19.216	60.181
county, post expansion	(28.311)	(6.906)	(18.055)
	[0.001]	[0.006]	[0.001]
Pre-expansion mean	407.4	97.6	262.9
R^2	0.958339	0.949782	0.966122
	Panel B. Triple-Difference Specification		
Medicaid-expansion	- 835.505	- 180.947	- 318.639
county, post expansion,	(224.000)	(53.809)	(98.311)
under age 65	[0.000]	[0.001]	[0.001]
Pre-expansion mean	705.8	245.4	420.3
R^2	0.987	0.987	0.991

Discussion

- Health insurance coverage seems to reduce demand for high-interest, short-term loans
    - Fits into the broader literature describing the benefits of coverage
- Remaining borrowers may have different financial pressures than those who borrow related to medical debt
- Limitations:
    - We cannot link payday loans to Medicaid enrollment directly
- Did the findings influence policy?

Sen Dianne Feinstein ✓
@SenFeinstein

The Affordable Care Act does more than just provide health coverage—it contributes to improved financial stability for American families. Payday loans decreased by 11% per month in California associated with the expansion of Medicaid. #ACAWorks healthaffairs.org/doi/abs/10.137…

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The Most-Shared *Health Affairs* Articles Of 2017

Health Affairs

JANUARY 11, 2018   10.1377/hblog20180104.565753

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Health

A study published this week in Health Affairs has concluded that California residents with expanded access to Medicaid under the Affordable Care Act reduced the use of payday loans by 11 percent. ▸ saludmovil.com

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Allen, Zwede, Eliason & Gross (under review)

# CAN MEDICAID EXPANSION PREVENT HOUSING EVICTIONS?

Evictions and Health

- Health declines may contribute to evictions
  - Competition for $$
  - Labor force participation
- Eviction may lead to poorer physical and/or mental health, including a worsening of health-related behaviors (Vasquez-Vera, et al., 2017)
- Mechanisms:
  - Evictions impact future housing prospects (Desmond & Shollenberger, 2015)
  - Evictions precipitate acute risk of homelessness, which takes a well-known toll on health (Fazel, Geddes & Kushel, 2014)
  - Evictions can disrupt treatment continuity and patient/provider relationships (Jego, et al., 2016)
- Obtaining Medicaid could reduce evictions by protecting finances from health spending and/or by improving health

Evictions Data

- Commercial evictions database (AIRS) designed to help landlords screen tenants

- Monthly evictions in 289 counties from January 2009 – December 2013
  - ~24 months before and after California's early Medicaid expansion

**Exhibit A1. Composition of the Sample**
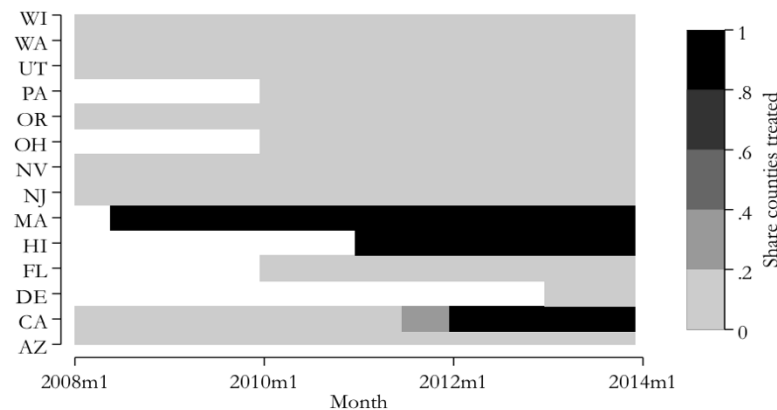
Methodological Approach

- Outcomes:
  - evictions per capita
  - number of evictions
  - natural logarithm of the number of evictions
- Difference-in-difference design with 51 early Medicaid expanding counties compared with 235 counties in 13 states not expanding
  - Evictions were aggregated to the county-month
  - Ran a number of specification to ensure findings were not dependent on inclusion or exclusion of particular states.
  - We include county-specific linear controls for time (allowing eviction trends to vary by county)
  - Standard errors were clustered on county
- Stratify counties by median share of uninsured residents with incomes <138% FPL

Alternative Analyses

- Synthetic control approach
  - Matched counties by pre-expansion trend (May 2009 – November 2011)
  - Exact inferential technique
    - Each control county is assigned a false Medicaid-expansion date of January 2012
    - For a given time period, we randomly select a group of control counties and calculate the average difference between actual counts and the synthetic control counts (4,000 times), creating a different pseudo-California collection of counties each time.
    - P-value is the share of the randomly selected differences that are larger in absolute value than the difference we calculate for California counties.
- Princeton University Evictions Lab
  - Replicated approach with alternative dataset, 48 states 2000-2016
    - Focus on all expansion states at the county level, using variation in timing and expansion status
    - County-year level (versus month)
    - Instead of per-capita, percent of renter-occupied households

Event Study Regression

Regression point estimate
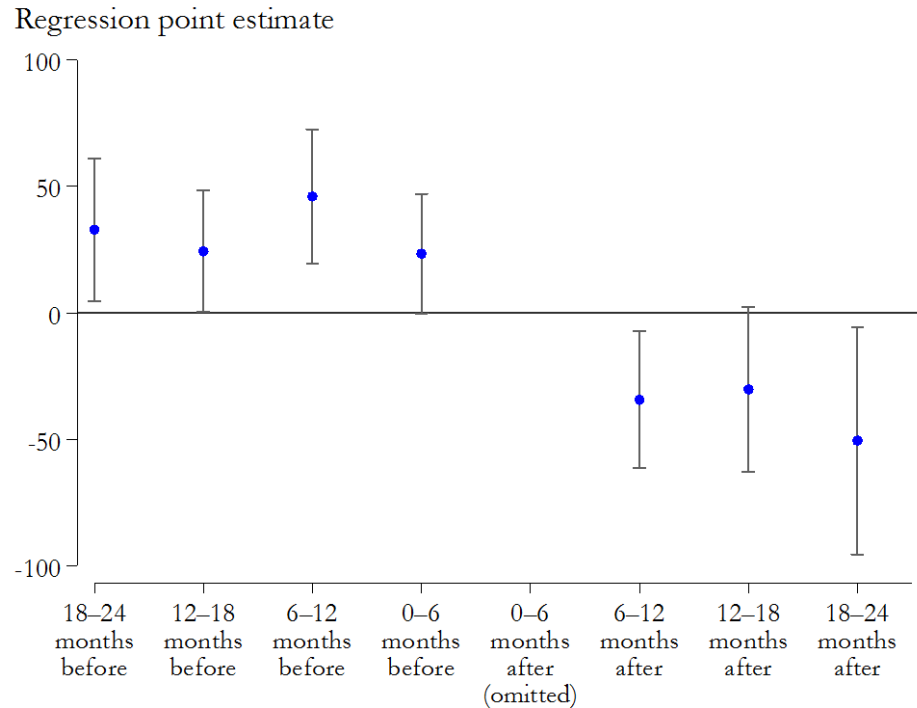
The Effect of Medicaid Expansion on the Number of Evictions.

This figure presents point estimates from one regression of evictions in each county on a series of indicator variables for time relative to Medicaid expansion.

Medicaid Expansion was Associated with a Reduction in Evictions

| Exhibit 2. Effects of early Medicaid expansion on number and rate of home evictions			
	(1)	(2)	(3)
Dependent variable:	Number of evictions	Evictions per capita	Log of evictions
California, after expansion	- 59.703	- 0.063	- 0.255
	(19.231)	(0.020)	(0.071)
	[0.002]	[0.002]	[0.000]
R²	0.939	0.902	0.934
N	18,826	18,826	16,974
County-specific linear trends			
	- 22.318	- 0.030	- 0.134
California, after expansion	(11.070)	(0.012)	(0.060)
	[0.045]	[0.015]	[0.027]
R²	0.948	0.920	0.946
N	18,826	18,826	16,974
Pre- existing mean	224.718	0.261	4.037
The sample consists of county-by-month observations. The standard errors in parentheses are clustered on county; associated p-values in brackets. County-specific and year-month-specific fixed effects not shown.			

Bigger Reduction in Counties with High-Share of Previously Uninsured

Exhibit 3: Stratifying by Share Uninsured in 2010		
Dependent variable: evictions per county and month		
	(1)	(2)
	Share uninsured above median	Share uninsured below median
California, after Medicaid expansion	- 92.351	- 13.694
	(31.482)	(7.464)
	[0.004]	[0.069]
Pre-existing mean	318.86	117.57
R²	0.937	0.945
N	8,936	9,890

This table presents difference-in-difference regressions in which counties have been stratified by the share of residents with income below 138% of the federal poverty line who were uninsured in the 2010 Small Area Health Insurance Estimates published by the US Census Bureau. Median uninsured across counties in our sample was 0.28. The sample consists of county-by-month observations. The standard errors in parentheses are clustered on county; associated p-values in brackets.

Summary of Main Results

- Prior to Medicaid expansion, California counties had slightly higher rates of eviction than comparison counties
- Following Medicaid expansion, we see a change in sign.
  - Decline in evictions in general, and per capita
  - Including county-specific linear trends, still statistically significant but of a smaller magnitude
  - Reduction is concentrated in communities with higher rates of pre-expansion low-income uninsured.

The Impact of Medicaid on Evictions: Synthetic Control Model
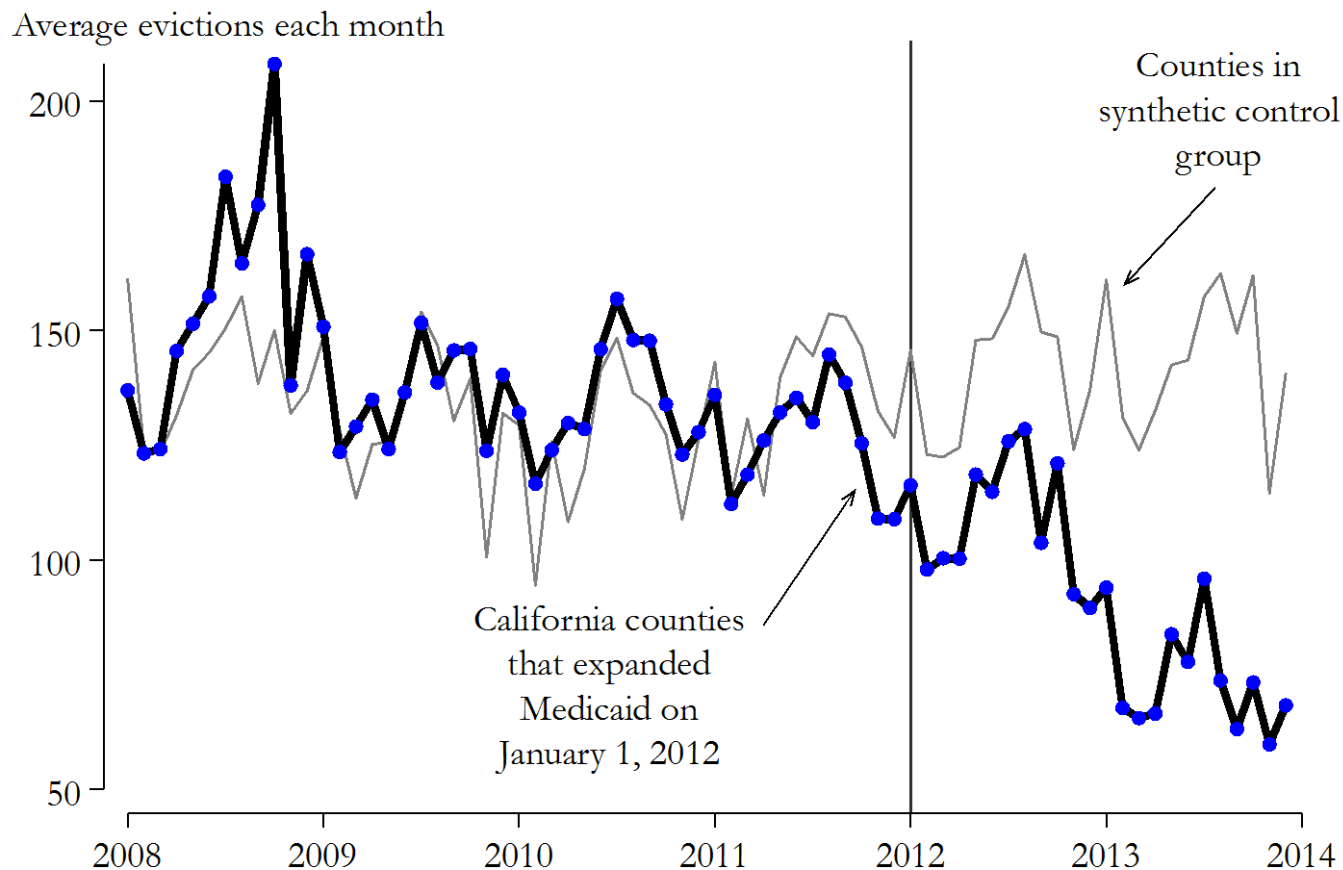
This table presents the average difference between evictions per county in California and evictions in a group of counties created as a synthetic control group. Dependent variable is count of evictions per county and month.

Exhibit 4: Synthetic-Control Approach

Year	Month	Difference between actual evictions and evictions in synthetic-control group	p-value
2011	1	-21.429	0.161
	2	-11.973	0.479
	3	-9.932	0.458
	4	-3.794	0.675
	5	-33.235	0.023
	6	-36.171	0.019
	7	-46.273	0.012
	8	-50.912	0.010
	9	-49.099	0.001
	10	-51.163	0.000
	11	-26.183	0.000
	12	83.051	0.266
2012	1	-50.246	0.000
	2	-19.108	0.024
	3	-34.429	0.004
	4	-40.347	0.001
	5	-57.484	0.001
	6	-83.545	0.002
	7	-77.351	0.002
	8	-76.884	0.000
	9	-92.195	0.000
	10	-55.338	0.009
	11	-53.423	0.069
	12	-75.534	0.000
2013	1	-85.227	0.000
	2	-81.662	0.000
	3	-61.150	0.002
	4	-74.502	0.000
	5	-77.062	0.000
	6	-91.363	0.000
	7	-80.716	0.000
	8	-113.080	0.000
	9	-111.954	0.000
	10	-91.279	0.000
	11	-70.896	0.001
	12	-84.155	0.000

This table presents the average difference between evictions per county in California and evictions in a group of counties created as a synthetic control group. Note: dependent variable is count of evictions per county and month.

Evictions Lab Analysis

Sample consists of county-by-year observations. Standard errors are clustered on county. P-values are in brackets.

Exhibit C1. National Estimates of effects of Medicaid expansion on number and rate of home evictions		
	(1)	(2)
Dependent variable:	Number of evictions	Evictions per renter-occupied household
All States, after expansion	-51.60	-0.271
	(28.208)	(.0327)
	[0.067]	[0.00]
R²	0.0019	0.0026
N	41,339	41,339
County-specific linear trends All States, after expansion	-89.928	-0.227
	(20.717)	(.0314)
	[0.000]	[0.000]
R²	0.923	0.843
N	41,339	41,339
County-specific linear trends and year- fixed- effects All States, after expansion	-56.948	-0.0551
	(22.505)	(.0372)
	[0.011]	[0.138]
R²	0.923	0.843
N	41,339	41,339
Year- fixed- effects and county- fixed- effects All States, after expansion	-82.375	-0.0873
	(24.362)	(.0324)
	[0.001]	[0.007]
R²	0.923	0.844
N	41,339	41,339
Pre-existing Mean	458.314	1.650

Discussion

- The consequences of eviction can be far-reaching
  - *Evicted*, by Matthew Desmond
- Health and housing may be coming into direct competition for families already on the brink
- Some states are using Medicaid to directly engage in housing support
  - Narrowing margins between rising rents and stagnant incomes
- Study adds to existing literature on the financial benefits of Medicaid
- Limitations: cannot directly link eviction records to insurance status
- Growing literature on the impact of evictions on health, but less about the impact of health on evictions
- AIRS data
  - Could do matches with other datsets on identifiers
  - Use of data raises some ethical concerns worth considering

Questions/Discussion

THANK YOU FOR ATTENDING!