The Affordable Care Act: The results

Health Economics

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Likely impacts

- Four main changes
  - Medicaid expansions
  - Exchanges and subsidies
  - Individual mandate
  - Employer mandate
- What are the likely effects of each?
- Why is this a tough question to answer (except Medicaid expansions)?

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Exhibit 1. Employment by Firm Size (percentages of U.S. workforce)

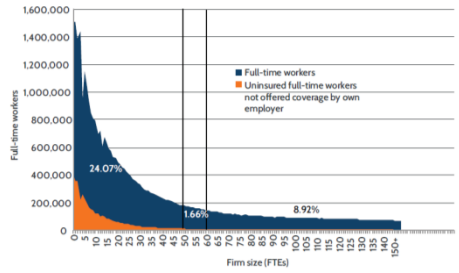

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Exhibit 2. Employment by Weekly Work Hours (percentages of U.S. workforce)

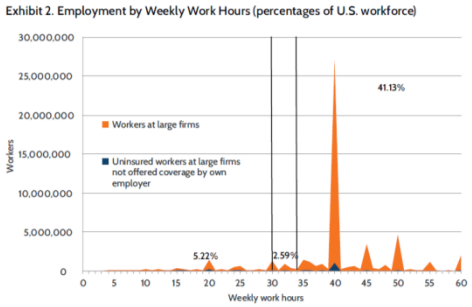

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Table 1. Full-Time Workers in Firms with 50 to 59 Full-Time-Equivalent Employees

	Employment	Percent of U.S. workforce	Percent of workers near threshold
Total workforce	111,970,095	100.00%	-
Full-time workers in firms with 50-59 FTE employees	1,670,000	1.66%	100.00%
Holding own ESI	1,199,000	1.07%	71.80%
Without own ESI	471,000	0.42%	28.20%
Not offered coverage by own employer	193,000	0.17%	11.56%
Uninsured and not offered coverage by own employer	100,000	0.09%	5.99%

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Figure 1

Gap in Coverage for Adults in States that Do Not Expand Medicaid Under the ACA

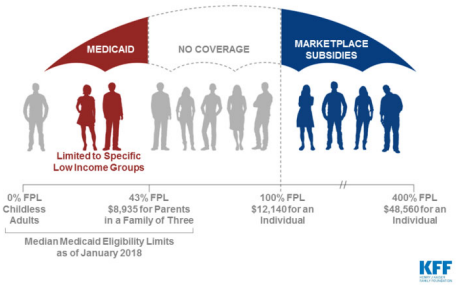

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Figure 2.

Uninsured Rate: 2008 to 2017

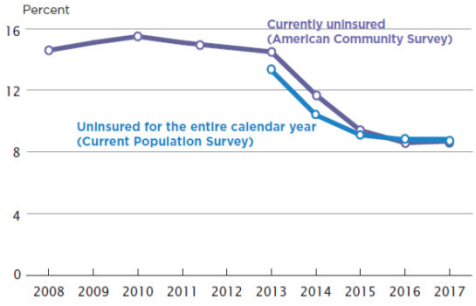

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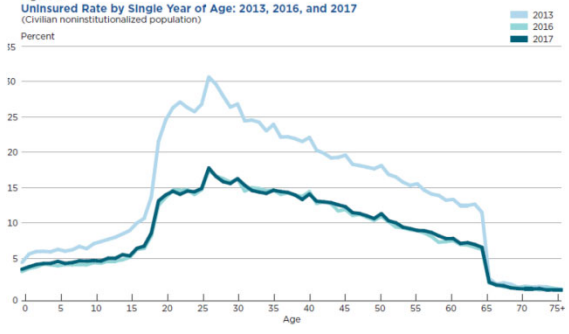
Figure 4.

Uninsured Rate by Single Year of Age: 2013, 2016, and 2017

(Civilian noninstitutionalized population)



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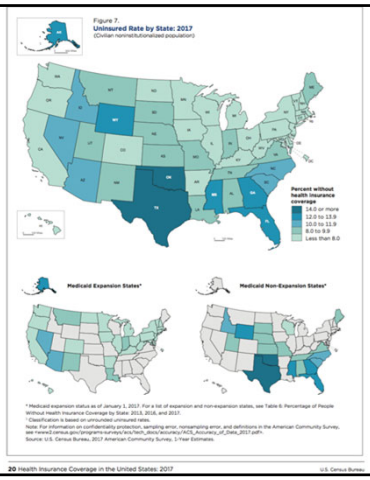

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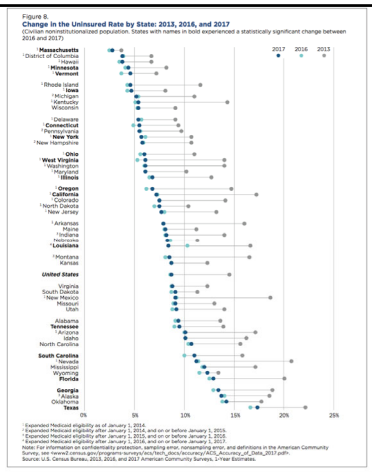

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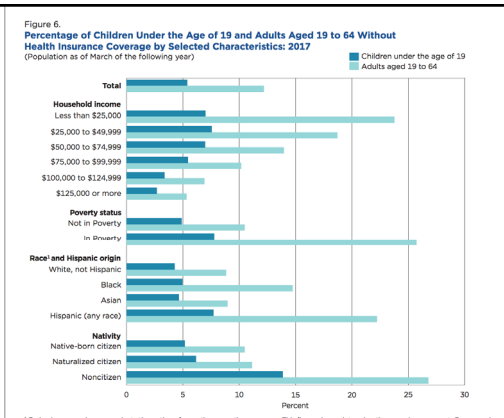

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Courtmarche et al.

- How much of the change in uninsurance can be attributed to
  - Medicaid expansions
  - Other factors
- Problem they face:
  - ACA was a national law
  - What is the control group?
  - Can easily identify them for Medicaid expansions

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Data

- 2011-2014 American Community Survey
- Annual 1% sample of the US population
- 2350 public use micro data areas (PUMAs)
  - Groups of 100,000 people in a similar geographic area
- Non-elderly
- Four outcomes – do you have
  - Medicaid? EPHI? Private insurance? No insurance?

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Variation used to identify model

- Medicaid expansions
  - State with expansions are treatment
  - Those that did not are control
- For aggregate impacts
  - Results should be different for high insured states
  - Out old friend comes back (Bleakley (Hookworms), Culter et al. (Malaria in India)

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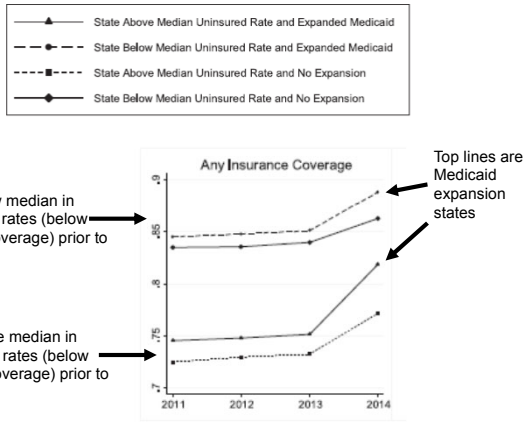

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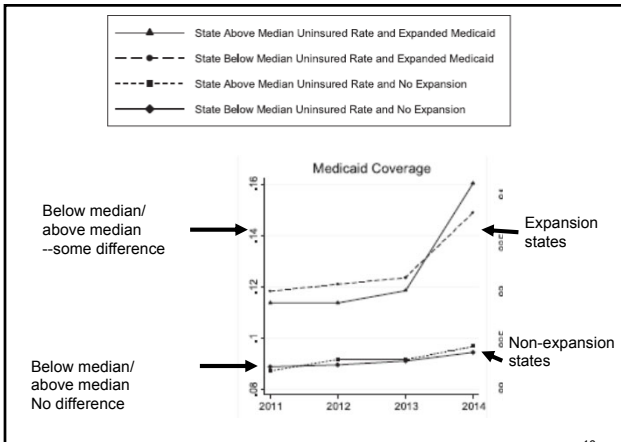

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What is missing from this DnD model?

We begin with a DD specification:

$$y_{iast} = \beta_0 + \beta_1 \text{POST}_t + \beta_2(\text{MEDICAID}_s \times \text{POST}_t) + \boldsymbol{\beta_3 X_{iast}} + \alpha_{as} + \varepsilon_{iast} \quad (1)$$

where y_{iast} is the outcome for individual i in local area a in state s in year t, POST_t is an indicator for whether period t is in the post-treatment year of 2014, MEDICAID_s is an indicator for whether state s participated in the ACA's 2014 Medicaid expansion, $\mathbf{X_{iast}}$ is a vector of control variables, α_{as} is a local area fixed effect, and ε_{iast} is the error term.[17] Standard errors are heteroscedasticity-robust and clustered by state.

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Augmented model

not been implemented, and also to allow for a Medicaid-expansion-state-specific shift in the fixed effect in 2014. Assuming that the extent of an area's treatment is proportional to its baseline uninsured rate, the DDD model is as follows:

$$y_{iast} = \gamma_0 + \gamma_1 (\text{UNINSURED}_{as} \times \text{POST}_t) + \gamma_2(\text{MEDICAID}_s \times \text{POST}_t) + \gamma_3 (\text{UNINSURED}_{as} \times \text{MEDICAID}_s \times \text{POST}_t) + \boldsymbol{\gamma_4 X_{iast}} + \tau_\tau + \alpha_{as} + \varepsilon_{iast} \quad (2)$$

where UNINSURED_{as} is the 2013 uninsured rate in local area a in state s and τ_τ is a year fixed effect. Note that POST_t is no longer included in the model since it is perfectly collinear with the year fixed effects, while MEDICAID_s, UNINSURED_s, and $\text{UNINSURED}_s \times \text{MEDICAID}_s$ are not separately included since they are perfectly collinear with the area fixed effects.

Now year effects added

This specification is similar to one we've seen in the past? Which one?

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Table 2. Effect of ACA on probability of having any insurance coverage with different sets of controls.

	Difference-in-differences all controls	All controls main specification
Coefficient estimates of interest		
Post	0.028*** (0.003)	–
Medicaid expansion × Post	0.009 (0.005)	**−0.012 (0.007)**
Post × Uninsured rate	–	**0.138*** (0.024)**
Medicaid expansion × Post × Uninsured rate	–	**0.151*** (0.032)**
Implied effects of ACA at mean pre-treatment uninsured rates		
ACA without Medicaid expansion	0.028*** (0.003)	**0.028*** (0.005)**
Medicaid expansion	0.009 (0.005)	**0.031*** (0.007)**
Full ACA (with Medicaid	0.037*** (0.003)	**0.059*** (0.004)**

Difference-in-difference-in-differences

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How to translate results

- Average baseline uninsurance rate is 0.203
- Impact of ACA without Medicaid expansion
  - Coef on post x uninsurance rate = 0.138(0.203)= 0.028 (2.8 per point increase in insurance coverage)
- Impact of ACA w Medicaid expansions
  - Medicaid exp. x post x unins. = 0.151*.203 = 0.031
  - Total Effect = 0.028 +0.031 = 0.059
  - Medicaid expansions are 0.031/0.059=52%

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Frean et al.

- Examine the impact of the ACA
- More ambitious that the previous paper
  - Try to unpack more components such as premium subsidies
- Problem
  - What is the variation used to identify the individual aspects?
  - Asking a lot of a limited data set – so results have large confidence intervals

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Data

- Same data as the previous paper diff. years
- 2012-2015 American Community Survey

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Policy measured

- Exchange subsidies
  - % subsidy = 1- new premium/unsubsidized premium
  - Use family income and subsidy rules to calculate
- Mandate
  - Use family income to calculate the fine
  - fine varies
    - Over time
    - Across people (some people hit the cap – some do not)

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Medicaid expansions

- % previous eligible
  - What is the woodwork effect?
- % eligible under ACA early expansion
  - 2011-2014 in 6 states
- % newly eligible in 2014

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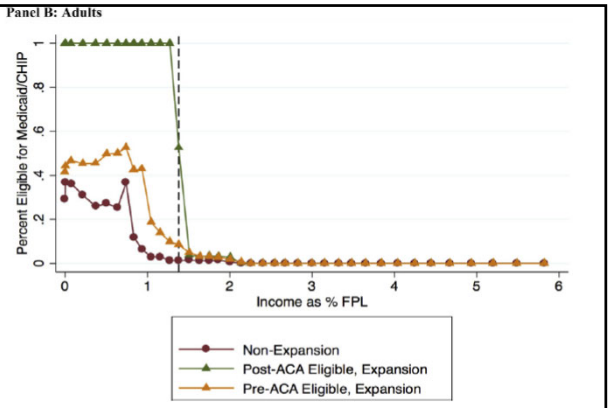
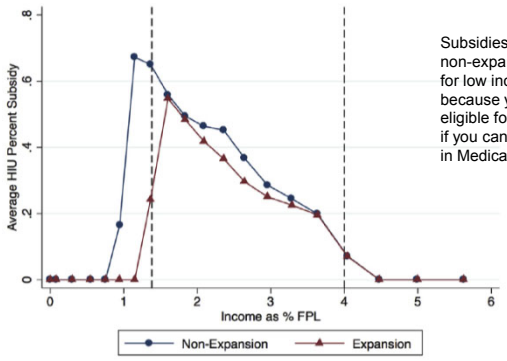


Fig. 1. Eligibility for Medicaid/CHIP by Income and State Medicaid Expansion Status. *Notes*: Top panel represents child eligibility and bottom panel represents adult eligibility. Dashed vertical line indicates 138% of the Federal Poverty Level (FPL).



Subsidies hugher in non-expansion states for low income families because you are not eligible for a subsidy if you can enroll in Medicaid

Fig. 2. Exchange percent subsidy in 2015 by Income and State Medicaid Expansion Status. *Notes*: Dashed vertical lines indicate 138% and 400% of the Federal Poverty Level (FPL).

Families with income < 138% FPL in non-expansion states not fined

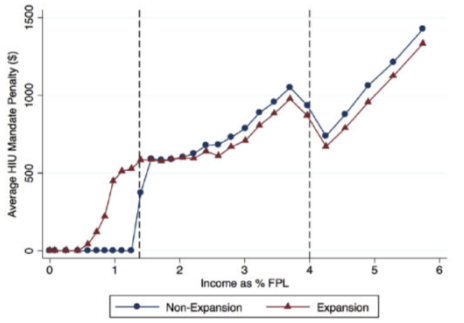


Fig. 3. Individual mandate penalty in 2015 by Income And State Medicaid Expansion Status. *Notes*: Dashed vertical lines indicate 138% and 400% of the Federal Poverty Level (FPL).

$$\%Uninsuredijt = \beta_0 + \beta_1\, PercentSubsidy2014_{ij} + \beta_2\, PercentSubsidy2015_{ij} + \beta_3 MandatePenalty2014_{ij} + \beta_4 MandatePenalty2015_{ij} + \beta_5 McaidEligiblePreACA_{ij} + \beta_6 McaidEarlyExpansionEligible_{ij} + \beta_7 McaidNewlyEligible2014_{ij} + \beta_8 McaidNewlyEligible2015_{ij}$$

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$$+\beta_9 PercentSubsidy2014_{ij} * Yr2014_t$$
$$+\beta_{10} MandatePenalty2014_{ij} * Yr2014_t$$
$$+\beta_{11} McaidEligiblePreACA_{ij} * Yr2014_t$$
$$+\beta_{12} McaidEarlyExpansionEligible_{ij} * Yr2014_t$$
$$+\beta_{13} McaidNewlyEligible2014_{ij} * Yr2014_t$$

Effects for 2014

$$+\beta_{14} PercentSubsidy2015_{ij} * Yr2015_t$$
$$+\beta_{15} MandatePenalty2015_{ij} * Yr2015_t$$
$$+\beta_{16} McaidEligiblePreACA_{ij} * Yr2015_t$$
$$+\beta_{17} McaidEarlyExpansionEligibleij * Yr2015_t$$
$$+\beta_{18} McaidNewlyEligible2015_{ij} * Yr2015_t$$

Effects for 2015

$$+\Omega\, Area_j * HIU\_Type_i + \partial\, Year_t * HIU\_Type_i$$
$$+\mu\, Income_i * HIU\_Type_i + \pi\, AreaUnemploymentRate_{jt}$$
$$+\beta_x X_{ijt} + \varepsilon_{ijt}$$

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Table 1
Summary statistics of simulated policy variables in 2014 and 2015.

	2014	2015
Medicaid eligibility		
Percent previously eligible[a]	23.0% (31.9%)	22.7% (31.7%)
Percent eligible under ACA early expansion	2.0% (11.1%)	1.9% (10.9%)
Percent newly eligible in 2014	4.5% (18.2%)	5.5% (19.7%)
Individual mandate		
Family mandate penalty	$458 ($632)	$956 ($1210)
Subject to mandate penalty	63.7% (41.0%)	64.5% (40.5%)
Exchange premiums		
Unsubsidized family premium	$8023 ($3282)	$8114 ($3298)
Net subsidized family premium	$6631 ($3488)	$6715 ($3519)
Percent subsidy	16.2% (24.4%)	16.1% (24.3%)

Notes: Table presents weighted means, with standard deviations in parentheses, for the population 0 to 64 years old. All measures are assessed at the level of the Health Insurance Unit and use ACS survey weights, excluding the state of Massachusetts.
[a] Based on state eligibility criteria as of 2013.

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Table 2
Time series change in insurance outcomes by family type (2012–2015).

	2012	2013	2014	2015
Overall				
Uninsured	17.5%	17.3%	14.0%	11.4%
Medicaid	18.3%	18.5%	20.0%	21.6%
Employer sponsored insurance	58.4%	58.1%	58.7%	59.1%
Non-group private	8.9%	8.6%	9.7%	10.7%
Single adults				
Uninsured	31.2%	30.3%	24.6%	20.0%
Medicaid	13.4%	13.7%	16.3%	18.7%
Employer sponsored insurance	47.5%	47.8%	49.1%	50.3%
Non-group private	8.7%	8.6%	10.4%	11.8%
Adult couples				
Uninsured	11.7%	11.8%	9.0%	7.1%
Medicaid	3.7%	3.9%	5.0%	5.8%
Employer sponsored insurance	75.1%	74.6%	74.6%	74.8%
Non-group private	11.5%	11.4%	12.9%	13.8%
Families with children				
Uninsured	12.6%	12.5%	10.2%	8.3%
Medicaid	24.3%	24.6%	25.8%	27.1%
Employer sponsored insurance	59.1%	58.7%	59.1%	59.3%
Non-group private	8.3%	7.8%	8.6%	9.3%

Notes: Table presents weighted means for the population 0–64 years old. All measures are assessed at the level of the Health Insurance Unit and use ACS survey weights, excluding the state of Massachusetts.

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Table 4
Projected time series impact of ACA policy variables on percent uninsured.

	Reduced form coefficient (1)	Population mean (simulated measure) (2)	Implied percentage point change (3)	Share of total ACA-related change (4)
2014 effects				
Family percent subsidy × 2014	−0.051	0.162	−0.83%	41%
Family mandate penalty × 2014 (in $100s)	0.0004	4.58	0.18%	N/A
Previously Medicaid-eligible × 2014	−0.026	0.230	−0.60%	29%
Early expansion Medicaid-eligible × 2014	−0.107	0.020	−0.21%	10%
Newly Medicaid-eligible × 2014	−0.089	0.045	−0.40%	20%
2015 effects				
Family percent subsidy × 2015	−0.089	0.161	−1.43%	40%
Family mandate penalty × 2015 (in $100s)	0.0003	9.56	0.29%	N/A
Previously Medicaid-eligible × 2015	−0.046	0.227	−1.04%	29%
Early expansion Medicaid-eligible × 2015	−0.197	0.019	−0.37%	10%
Newly Medicaid-eligible × 2015	−0.137	0.055	−0.75%	21%

Notes: Dependent variable was the percentage of each Health Insurance Unit without any health insurance. All variables are expressed at the level of the Health Insurance Unit (HIU) and use ACS survey weights, excluding the state of Massachusetts, for the population aged 0–64 years old. Models control for HIU type (single adult, couple, family with children); number of men and women in the family; number of children; educational attainment, age, and race/ethnicity of adults in the family; area-specific annual unemployment rates; and year and state fixed effects both interacted with HIU type.

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2015 effects		
Family percent subsidy × 2015	−0.089	40%
Family mandate penalty × 2015 (in $100s)	0.0003	N/A
Previously Medicaid-eligible × 2015	−0.046	29%
Early expansion Medicaid-eligible × 2015	−0.197	10%
Newly Medicaid-eligible × 2015	−0.137	21%

Subsidies in the exchange markets are 40%

Medicaid expansions are 31%

29% is previously Medicaid eligible

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