

THE MEDICAID EXPANSION AND LABOR MARKET ACTIVITY: EVIDENCE FROM THE AFFORDABLE CARE ACT

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Research Question

- What is the impact of the 2014 Medicaid expansion on labor markets?
- It is not likely to support the evidence towards the ease of “job-lock” .
 - ① This result supports the recent findings in Gooptu, Moriya, Simon, and Sommers (2016).
 - ② In fact, transition from full-time employment to part-time employment is observed for those above the eligibility cutoff.

Introduction

- The Affordable Care Act (ACA), also known as Obamacare, was enacted on March 23, 2010 by President Obama.
- The ultimate aim is to provide health insurance (low-cost or free) to every citizen and specifically for those with low socioeconomic status.
- One of the most important components of the reform is the Medicaid expansion.
- The individual mandate required all states to expand the coverage to everyone whose earnings are below 138% of the federal poverty level (FPL).
↔ \$16,105 (2014) and \$16,242 (2015) for a single household.
- But due to the Supreme Court decision states can opt out.

Expansion versus Non-Expansion States

State Medicaid Expansion Profile
(As of November, 2015)

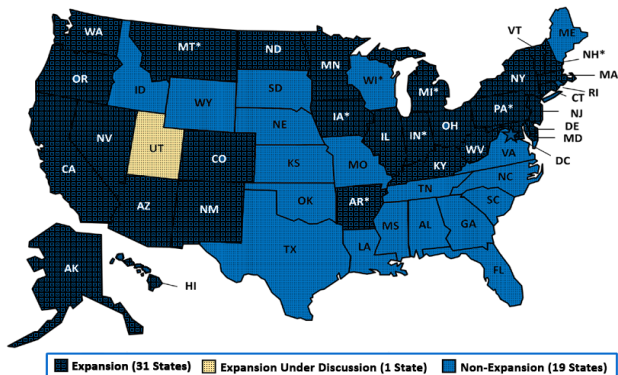


Figure: State Medicaid Expansion Profile

Medicaid Profile Across All States

States	Status of the Medicaid Expansion	Effective Date of Expansion [†]	Income Eligibility	
			Adults with Children	Childless Adults
Alabama	Not Expanding	-	18%	0%
Alaska	Expanded	9/1/2015	138%	138%
Arizona	Expanded	1/1/2014	138%	138%
Arkansas*	Expanded	1/1/2014	138%	138%
California	Expanded	1/1/2014	138%	138%
Colorado	Expanded	1/1/2014	138%	138%
Connecticut	Expanded	1/1/2014	201%	138%
Delaware	Expanded	1/1/2014	138%	138%
District of Columbia	Expanded	1/1/2014	221%	215%
Florida	Not Expanding	-	34%	0%
Georgia	Not Expanding	-	34%	0%
Hawaii	Expanded	1/1/2014	138%	138%
Idaho	Not Expanding	-	26%	0%
Illinois	Expanded	1/1/2014	138%	138%
Indiana*	Expanded	2/1/2015	138%	138%
Iowa*	Expanded	1/1/2014	138%	138%
Kansas	Not Expanding	-	38%	0%
Kentucky	Expanded	1/1/2014	138%	138%
Louisiana	Not Expanding	-	24%	0%
Maine	Not Expanding	-	105%	0%
Maryland	Expanded	1/1/2014	138%	138%
Massachusetts	Expanded	1/1/2014	138%	138%
Michigan*	Expanded	4/1/2014	138%	138%
Minnesota	Expanded	1/1/2014	138%	138%
Mississippi	Not Expanding	-	27%	0%
Missouri	Not Expanding	-	22%	0%

Medicaid Profile Across All States (continued)

States	Status of the Medicaid Expansion	Effective Date of Expansion [†]	Income Eligibility	
			Adults with Children	Childless Adults
Montana*	Expanded	1/1/2016	138%	138%
Nebraska	Not Expanding	-	54%	0%
Nevada	Expanded	1/1/2014	138%	138%
New Hampshire*	Expanded	8/15/2014	138%	138%
New Jersey	Expanded	1/1/2014	138%	138%
New Mexico	Expanded	1/1/2014	138%	138%
New York	Expanded	1/1/2014	138%	138%
North Carolina	Not Expanding	-	44%	0%
North Dakota	Expanded	1/1/2014	138%	138%
Ohio	Expanded	1/1/2014	138%	138%
Oklahoma	Not Expanding	-	44%	0%
Oregon	Expanded	1/1/2014	138%	138%
Pennsylvania*	Expanded	1/1/2015	138%	138%
Rhode Island	Expanded	1/1/2014	138%	138%
South Carolina	Not Expanding	-	67%	0%
South Dakota	Not Expanding	-	52%	0%
Tennessee	Not Expanding	-	101%	0%
Texas	Not Expanding	-	18%	0%
Utah	Under Discussion	-	45%	0%
Vermont	Expanded	1/1/2014	138%	138%
Virginia	Not Expanding	-	44%	0%
Washington	Expanded	1/1/2014	138%	138%
West Virginia	Expanded	1/1/2014	138%	138%
Wisconsin	Not Expanding	-	100%	100%
Wyoming	Not Expanding	-	57%	0%

Take-up Rate

- According to CBO (2015), 89% of the nonelderly population will be insured by the end of 2015.

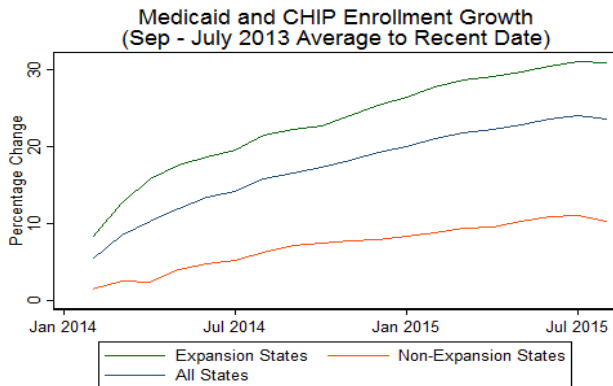


Figure: Medicaid and CHIP Enrollment Growth

Prior Research

- The labor market implications of the Medicaid expansion under Affordable Care Act are ambiguous in recent studies.
- Baicker et al. (2014) and Gooptu et al. (2014) find no evidence of reduced labor supply after a change in Medicaid coverage by contradicting to the job-lock effect found in Garthwaite et al. (2014).
- This paper distinguishes from previous studies not only on the extent of outcome variables, but also on the grounds of both internal and external validity.
- I investigate the causal relationship between the Medicaid expansion and labor market outcomes.

Merged Outgoing Rotations Group (MORG)

- I use the Current Population Survey (CPS) data due to its large set of variables on labor market outcomes \rightsquigarrow both MORG and ASEC supplement.
- The basic monthly data contains all of the relevant information on earnings, household demographics and labor force activity.
- Moreover, it is quickly released and hence helpful in determining immediate policy impacts.
- Sample period is from January 2013 to December 2015 \rightsquigarrow over 700,000 observations.
 - 2013 is used as a control and I have 2 years of variation after the enactment.
 - Drop individuals below 19 and above 64 years of age.
 - Robustness: Drop those below 26 years of age.

MORG (continued)

- Upward trend in the take-up rate \rightsquigarrow assume nonignorability for the treatment.
- This would lead to a “sharp” regression discontinuity (SRD) design in which the dichotomous treatment is a deterministic function of the covariate.
- The SRD design is shown to yield credible results as it was in a randomized experiment (Lee 2008; Lee and Lemieux 2009; Battistin and Rettore 2008).
- I also test for covariate smoothness by restricting the bandwidth.

Eligibility Simulation

- Weekly Earnings (MORG) vs. Household Income (ASEC)
- Predict household income using both MORG and ASEC supplement.
 - First stage \rightsquigarrow run a simple OLS.
 - Second stage \rightsquigarrow predict household income using the main sample (MORG).

$$y_{ist} = \gamma_0 + X_i' \gamma_1 + \xi_s + \delta_t + \epsilon_{ist} \quad (1)$$

- y is household income for individual i at time t (year) in state s .
- X includes control variables on education, age, age-squared, race, gender, and marital status.
- The state and year fixed effects are ξ_s and δ_t , respectively.
- The error term is ϵ .

Regression Discontinuity Design

$$y_{dimts} = \beta_0 + \beta_1 E_{dimts} + g(d) + [\beta_2 E_{dimts} * g(d)] + X'_{di} \beta_3 + \gamma_t + \xi_s + v_{dimts} \quad (2)$$

- y is a labor market outcome measure for individual i with a distance d from the state-specific FPL cutoff.
- E is a dummy variable for insurance eligibility .
- $g(d)$ is a function capturing the FPL profile relative to the cutoff.
- X includes individual characteristics such as race, gender, age, age-squared, educational attainment, country of birth, and union membership.
- State level characteristics include state unemployment rate and state dummies (ξ_s).
- γ_m denotes month dummies and I include month-state interaction terms to capture nonlinear trends.

Difference-in-Discontinuities

$$y_{dimts} = \beta_0 + \beta_1 E_{dimts} * post_{mt} + g(d) * post_{mt} + [\beta_2 E_{dimts} * g(d) * post_{mt}] + X'_{di} \beta_3 + \gamma_t + \xi_s + v_{dimts} \quad (3)$$

- $post$ is a dummy taking the value 1 after the enactment date.
- The control variables and the fixed effects are the same as above.
- The variable of interest is $E * post$.

RD Plots

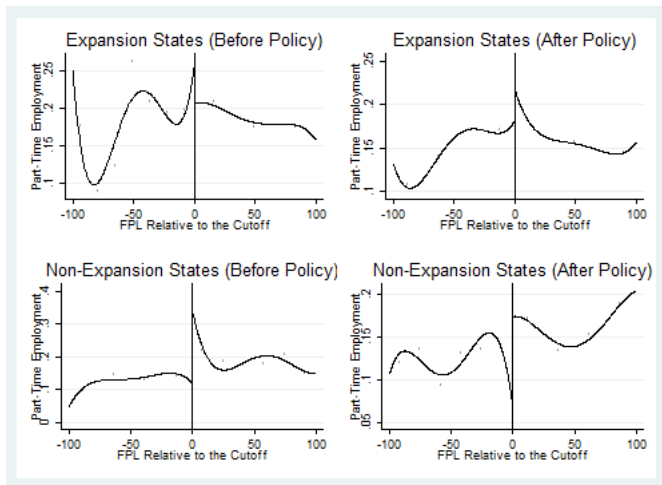


Figure: Part-Time Employment Before and After Policy

RD Plots

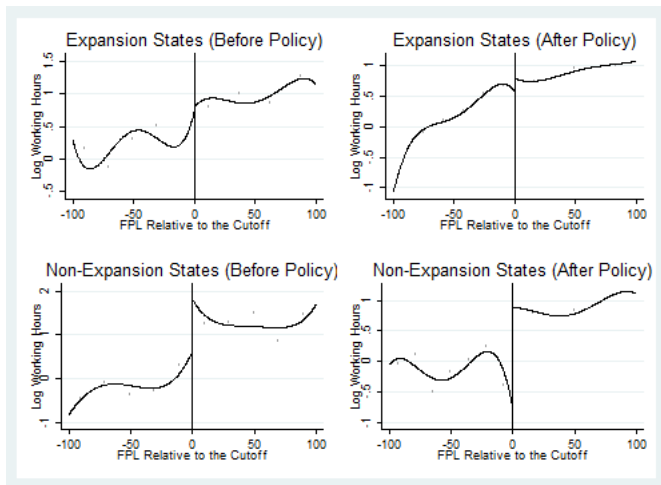


Figure: Log Working Hours Before and After Policy

RD Plots

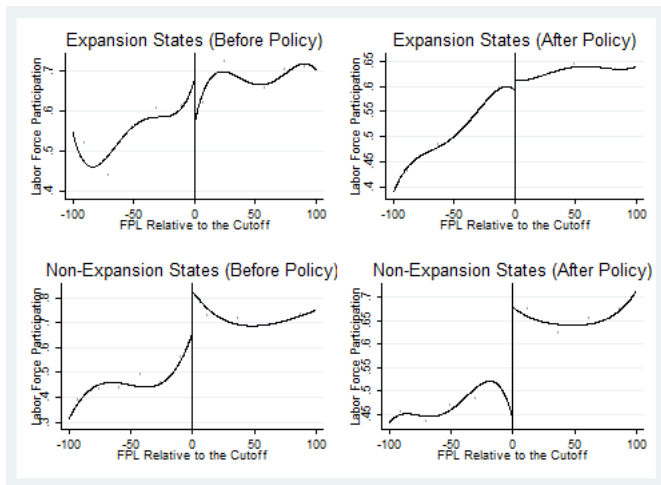


Figure: Labor Force Participation Before and After Policy

Weekly Earnings: RD Design

	(1)	(2)	(3)	(4)
<i>Panel A: Part-time employment</i>				
	Full Bandwidth			
Eligible	0.548 (0.007)	0.547 (0.008)	0.527 (0.008)	0.325 (0.019)
Eligible*d				-0.008 (0.001)
<i>N</i>	64,125	64,125	64,125	64,125
<i>R</i> ²	0.37	0.39	0.40	0.41
	Bandwidth: $d \pm 60$			
Eligible	0.196 (0.018)	0.204 (0.019)	0.199 (0.020)	0.106 (0.029)
Eligible*d				-0.004 (0.002)
<i>N</i>	16,998	16,998	16,998	16,998
<i>R</i> ²	0.28	0.28	0.31	0.32
	Bandwidth: $d \pm 30$			
Eligible	0.125 (0.024)	0.139 (0.026)	0.126 (0.026)	0.090 (0.042)
Eligible*d				-0.0002 (0.006)
<i>N</i>	8,061	8,061	8,061	8,061
<i>R</i> ²	0.13	0.14	0.20	0.23
Weights	N	Y	Y	Y
Covariates	N	N	Y	Y
Quadratic terms	Y	Y	Y	Y
Interactions	N	N	N	Y

Weekly Earnings: RD Design (continued)

	(1)	(2)	(3)	(4)
<i>Panel B: Log working hours</i>				
	Full Bandwidth			
Eligible	-0.478 (0.009)	-0.472 (0.010)	-0.450 (0.010)	-0.169 (0.014)
Eligible*d				0.003 (0.001)
N	64,125	64,125	64,125	64,125
R ²	0.33	0.34	0.36	0.44
	Bandwidth: $d \pm 60$			
Eligible	-0.067 (0.011)	-0.073 (0.011)	-0.067 (0.011)	-0.095 (0.017)
Eligible*d				-0.0001 (0.002)
N	16,998	16,998	16,998	16,998
R ²	0.20	0.20	0.23	0.24
	Bandwidth: $d \pm 30$			
Eligible	-0.086 (0.017)	-0.102 (0.015)	-0.093 (0.016)	-0.113 (0.031)
Eligible*d				-0.006 (0.005)
N	8,061	8,061	8,061	8,061
R ²	0.06	0.06	0.12	0.15
Weights	N	Y	Y	Y
Covariates	N	N	Y	Y
Quadratic terms	Y	Y	Y	Y
Interactions	N	N	N	Y

Household Income: Difference-in-Discontinuities

	(1)	(2)	(3)
<i>Panel A: Part-time employment</i>			
	Bandwidth: $d \pm 100$		
Eligible	0.122 (0.030)	0.037 (0.047)	0.135 (0.064)
$d * post$	-0.001 (0.0002)	-0.001 (0.0002)	-0.001 (0.0003)
Eligible* d	0.001 (0.001)	-0.003 (0.001)	0.001 (0.001)
Eligible* $post$			
0-1	0.016 (0.016)	0.030 (0.017)	0.034 (0.032)
1-1	-0.105 (0.034)	0.005 (0.056)	-0.087 (0.076)
Eligible* $d * post$		0.004 (0.001)	-0.0004 (0.001)
N	13,553	13,553	13,553
Trend Interaction	N	Y	Y
Covariates	N	N	Y

Household Income: Difference-in-Discontinuities (continued)

	(1)	(2)	(3)
<i>Panel A: Part-time employment</i>			
	Bandwidth: $d \pm 75$		
Eligible	0.093 (0.033)	0.050 (0.055)	0.104 (0.078)
$d * post$	-0.001 (0.001)	-0.001 (0.0005)	-0.001 (0.001)
Eligible* d	0.0004 (0.001)	-0.002 (0.002)	0.001 (0.002)
Eligible* $post$			
0-1	-0.010 (0.019)	0.010 (0.021)	0.010 (0.045)
1-1	-0.096 (0.033)	-0.033 (0.064)	-0.087 (0.100)
Eligible* $d * post$		0.003 (0.002)	-0.0002 (0.003)
N	9,123	9,123	9,123
Trend Interaction	N	Y	Y
Covariates	N	N	Y

Conclusion

- The labor market implications of the Medicaid expansion under Affordable Care Act are ambiguous in recent studies.
- I use the Current Population Survey to investigate the causal relationship between the Medicaid expansion and labor market outcomes using a data-driven approach.
- RD design with difference-in-differences.
- The initial model \rightsquigarrow the Medicaid expansion has had a positive significant effect on part-time employment whereas the effect is negative for working hours.
- Contradicted when simulated eligibility is used \rightsquigarrow it is not possible to support an early job-lock effect.