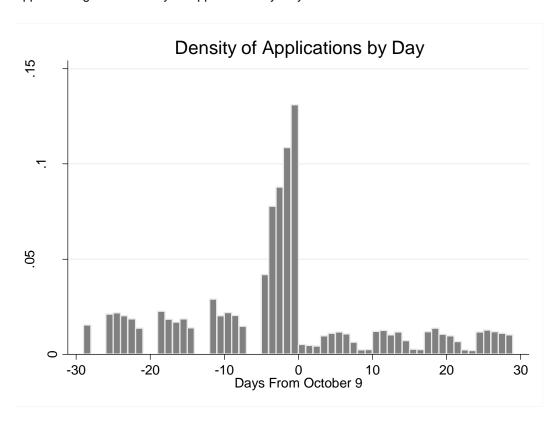
## Appendix For Online Publication

## The Effect of Public Insurance Coverage for Childless Adults on Labor Supply

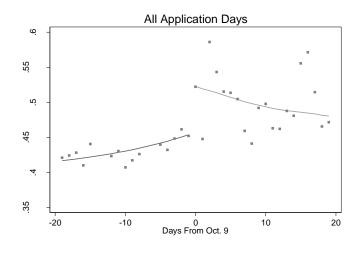
Laura Dague, Texas A&M University

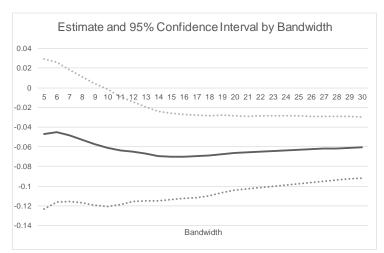
Thomas DeLeire, Georgetown University and NBER

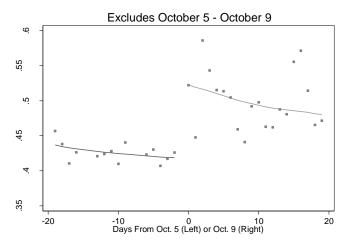
Lindsey Leininger, Mathematica Policy Research

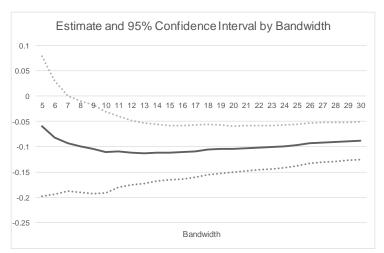


Appendix Figure 2. Alternate Regression Discontinuity Specifications, Employment

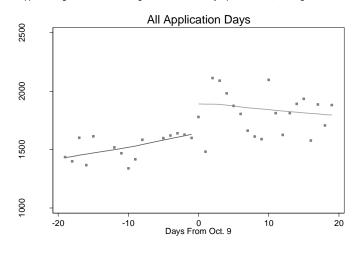


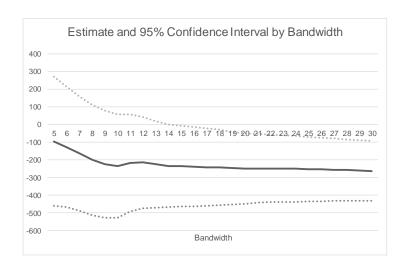


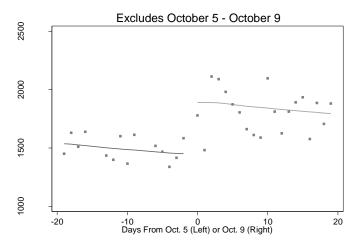


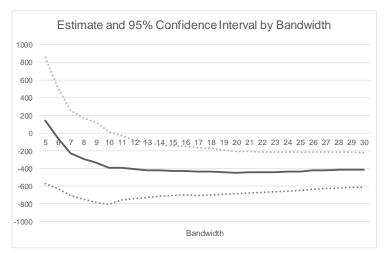


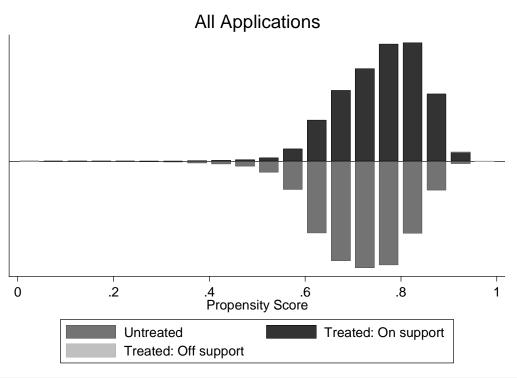
Appendix Figure 3. Alternate Regression Discontinuity Specifications, Earnings

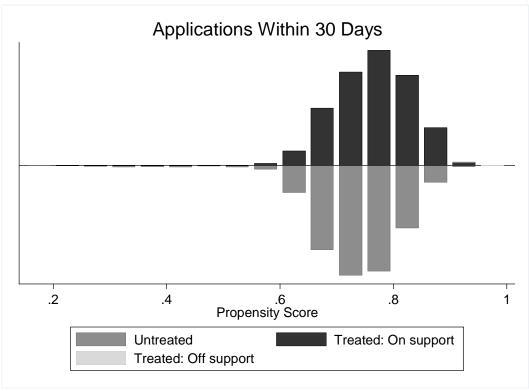












Appendix Table 1. Alternate Treatments of Post-Announcement Period

	All Da	ates .	Excludes O	ct 5 - Oct 9
	No Covariates	Covariates	No Covariates	Covariates
Average Employment	-0.066***	-0.037**	-0.105***	-0.076***
Rate, Q42009-Q42011	(0.019)	(0.017)	(0.024)	(0.020)
Ever Employed, 2010	-0.075***	-0.040*	-0.094***	-0.06**
	(0.022)	(0.022)	(0.029)	(0.027)
Average Earnings,	-248.4**	-148	-445.8***	-367.3***
Q42009-Q42011	(101.8)	(97.47)	(123)	(114.5)
First-Differenced	-0.080***	-0.056***	-0.106***	-0.083***
<b>Employment Rate</b>	(0.018)	(0.019)	(0.023)	(0.023)
	11278	11278	6084	6084

Notes: Table displays regression discontinuity estimates of effect of getting the Core Plan, with robust standard error in parantheses. The first two columns include allI data post-announcement of the waitlist; the second two columns exclude only the five days between announcement and waitlist implementation. Results calculated at a bandwidth of 20 days. Bandwidths defined as distance from excluded interval. \* indicates significance at 10% level, \*\* 5%, \*\*\*1%. Covariates include age, sex, day of week of application, and earnings and employment in the second quarter of 2009.

Appendix Table 2. Covariate	16313					
			<u>Bandwid</u>	<u>th (Days)</u>		
	5	10	15	20	25	30
Excludes Oct. 5 - Oct. 14						
Age (Months)	23.85	34.32	24.46*	23.05**	22.82**	24.11***
<b>3</b> ( ,	(43.16)	(21.54)	(14.22)	(11.64)	(9.78)	(8.55)
	(10.10)	(21.01)	()	(11.01)	(0.70)	(0.00)
Comple	0.057	0.027	0.026	0.020	0.000	0.021
Female	0.057	0.037	0.036	0.038	0.029	0.021
	(0.137)	(0.068)	(0.045)	(0.037)	(0.031)	(0.027)
Employment Q2 2009	0.061	0.045	0.028	0.015	0.002	-0.008
	(0.136)	(0.068)	(0.045)	(0.037)	(0.031)	(0.027)
	,	,	,	,	,	,
Earnings Q2 2009	-561.5	-185.3	-82.67	-49.87	-75.51	-106
Lanings QZ 2009						
	(749.3)	(361.5)	(241.4)	(201.1)	(168)	(145.9)
Accomodation and Food	0.048	0.02	0.01	0.008	-0.001	-0.005
Service	(0.058)	(0.029)	(0.019)	(0.015)	(0.013)	(0.011)
	-0.04	-0.028	-0.016	-0.008	-0.002	-0.002
Retail Trade	(0.057)					
	(0.057)	(0.030)	(0.019)	(0.012)	(0.013)	(0.011)
Administrative & Support &	-0.029	0.011	0.005	0.006	0.006	0.007
Waste Management &	(0.041)	(0.020)	(0.013)	(0.011)	(0.009)	(0.008)
Remediation						
	-0.012	0.014	0.013	0.007	0.005	0.003
Manufacturing	(0.060)	(0.029)	(0.019)	(0.016)	(0.013)	(0.012)
	(0.000)	(0.029)	(0.019)	(0.010)	(0.013)	(0.012)
Health Care and Social	0.028	0.008	0.011	0.009	0.008	0.006
Assistance	(0.047)	(0.021)	(0.015)	(0.012)	(0.010)	(0.009)
All dates						
Age (Months)	41.57***	54.84***	59.33***	54.48***	51.83***	49.55***
/ igo (inolicio)	(15.59)	(11.98)	(8.777)	(7.65)	(6.942)	(6.309)
	(13.39)	(11.90)	(0.777)	(7.00)	(0.942)	(0.509)
	0.000		0.044	0.0474	0.040**	0 0 4744
Female	0.009	0.026	0.044	0.047*	0.049**	0.047**
	(0.049)	(0.038)	(0.028)	(0.025)	(0.022)	(0.020)
Employment Q2 2009	-0.061	-0.051	-0.038	-0.029	-0.023	-0.021
. ,	(0.049)	(0.039)	(0.028)	(0.025)	(0.022)	(0.020)
	(0.0.0)	(0.000)	(0.020)	(0.020)	(0.022)	(0.020)
Fornings O2 2000	-161.5	-107	-42.9	-30.28	-0.447	2.446
Earnings Q2 2009						
	(220.7)	(175.7)	(135.8)	(120.5)	(111.1)	(101.7)
Excludes Oct. 5 - Oct. 9						
Age (Months)	40.34	55.01***	49.48***	48.18***	46.33***	43.06***
<b>3</b> ( ,	(28.3)	(16.31)	(10.93)	(9.336)	(8.366)	(7.56)
	(=5.5)	(10.01)	(10100)	(0.000)	(0.000)	()
Famala	0.047	0.040	0.025	0.020	0 044*	0.042*
Female	-0.017	0.018	0.035	0.038	0.044*	0.043*
	(0.088)	(0.052)	(0.035)	(0.030)	(0.027)	(0.024)
Employment Q2 2009	-0.067	-0.059	-0.046	-0.041	-0.039	-0.036
- <del>-</del>	(0.088)	(0.052)	(0.035)	(0.030)	(0.027)	(0.024)
	()	(/	()	(/	()	()
Earnings O2 2000	173.1	-17 22	-74 76	-43.3	-10.92	-26.31
Earnings Q2 2009		-17.32	-74.76		-19.82	
	(457.3)	(266.5)	(176.1)	(148.2)	(134.2)	(122.8)

Notes: Table displays regression discontinuity estimates of effect of getting the Core Plan on pre-treatment covariates, with robust standard error in parentheses. Industry outcome defined as average quarterly probability across pre-period. \* indicates significance at 10% level, \*\* 5%, \*\*\*1%

Appendix Table 3. Differences in Core Plan Applicants' Self-Reports of Health, by Week of Application

Week beginning	7-Sep	z-test	21-Sep	z-test	28-Sep	z-test	5-Oct
Number of Applicants	72	7	72	9	79	)4	3587
At least one chronic condition	42.09%	-0.77	39.78%	0.39	43.58%	-1.58	40.54%
Uses tobacco	36.86%	-0.19	34.29%	1.15	39.42%	-1.55	36.49%
Drug/alcohol problem	3.58%	-0.98	3.16%	-0.38	3.90%	-1.48	2.90%

Notes: Table shows the percentage of Core plan recipients who self-reported one or more chronic condition (asthma, cancer, COPD, depression, diabetes, heart problems, high blood pressure, or stroke), reported they used tobacco, or reported a drug or alcohol problem by the week in which they applied. In addition, the table shows the results (critical values) from a z-test of the difference between each weeks' applicants and those for the week of October 5th.

Appendix Table 4. Placebo Tests for Alternate Cutoff Days

						<u>Cu</u>	<u>ıtoff</u>					
	t-14	t-12	t-10	t-8	t-6	t-4	t+4	t+6	t+8	t+10	t+12	t+14
Excludes Oct. 5 - Oct. 14												
Average Employment,	0.004	-0.006	0.011	0.031*	0.022	0.01	-0.025	0.006	0.004	0.015	0.034	-0.013
Q42009-Q42011	(0.017)	(0.017)	(-0.017)	(-0.017)	(-0.018)	(-0.016)	(-0.023)	(0.022)	(0.022)	(0.022)	(0.021)	(0.021)
Average Earnings,	157.4	60.61	117.5	163.9*	83.88	41.94	-272.7*	152.1	71.55	159.9	162.3	86.99
Q42009-Q42011	(109.4)	(101.8)	(96.5)	(96.17)	(101.3)	(90.84)	(140.9)	(147.7)	(139.5)	(136.2)	(128.9)	(130.4)
Observations	6971	6698	6362	6564	6484	6170	5492	5698	5422	5199	5078	5007
All dates												
Average Employment,	0.019	0.025	0.027*	0.017	0.014	0.01	-0.054***	0.016	0.037*	0.038*	0.032	0.014
Q42009-Q42011	(0.016)	(0.017)	(0.015)	(0.014)	(0.014)	(0.012)	(0.017)	(0.020)	(0.022)	(0.023)	(0.021)	(0.021)
Average Earnings,	72.88	79.71	102.9	-17.28	18.95	49.18	-298.9***	0.414	43.4	27.95	265.5*	119
Q42009-Q42011	(93.09)	(100.7)	(86.08)	(80.51)	(79.97)	(71.9)	(99.44)	(119)	(140.8)	(141)	(143.5)	(134.3)
Observations	12146	11968	11493	11621	11635	11187	10501	10649	10566	10118	9832	10129
Excludes Oct. 5 - Oct. 9												
Average Employment,	0.006	-0.002	0.016	0.037**	0.024	0.008	-0.016	0.047**	0.052**	0.047**	0.029	0.003
Q42009-Q42011	(0.017)	(0.017)	(0.017)	(0.017)	(0.018)	(0.016)	(0.022)	(0.022)	(0.023)	(0.023)	(0.022)	(0.021)
Average Earnings,	158.4	66.05	125.5	188.5**	96.56	57.83	-95.18	173.7	147.5	111	271.3*	74.27
Q42009-Q42011	(109.1)	(101.5)	(96.45)	(95.68)	(101.5)	(91.24)	(128.7)	(130.1)	(144.4)	(142.5)	(145.5)	(137.5)
Observations	6972	6631	6226	6570	6460	6054	5340	5683	5431	5078	5089	4982

Notes: Table displays regression discontinuity estimates of effect of getting the Core Plan, treating placebo dates as the true cutoff date, with robust standard error in parentheses. \* indicates significance at 10% level, \*\* 5%, \*\*\*1%. All estimates at bandwidth of 20 days.

Variable		All App	licants		Applied	Within 3	0 Days c	of Oct 9
Included in Propensity Score	Core	Waitlist		t	Core	Waitlist	-	t
Employed Q12005	0.50	0.49	0.5	0.65	0.49	0.49	0.0	0.01
Employed Q22005	0.53	0.53	0.1	0.10	0.53	0.53	-0.2	-0.13
Employed Q32005	0.54	0.54	0.0	-0.05	0.54	0.54	-0.3	-0.23
Employed Q42005	0.54	0.54	0.3	0.39	0.54	0.54	0.1	0.06
Employed Q12006	0.52	0.52	0.2	0.26	0.52	0.52	0.0	0.02
Employed Q22006	0.55	0.55	0.2	0.23	0.56	0.56	-0.5	-0.36
Employed Q32006	0.56	0.56	-0.2	-0.25	0.57	0.57	-0.7	-0.49
Employed Q42006	0.56	0.56	-0.2	-0.28	0.56	0.56	-0.7	-0.51
Employed Q12007	0.53	0.53	-0.1	-0.15	0.54	0.54	-0.7	-0.50
Employed Q22007	0.56	0.56	-0.2	-0.32	0.56	0.57	-1.1	-0.78
Employed Q32007	0.56	0.57	-0.6	-0.80	0.57	0.57	-1.2	-0.84
Employed Q42007	0.55	0.55	-0.3	-0.45	0.55	0.56	-1.1	-0.80
Employed Q12008	0.53	0.53	-0.5	-0.73	0.54	0.54	-1.3	-0.95
Employed Q22008	0.55	0.55	-0.9	-1.34	0.55	0.56	-1.6	-1.18
Employed Q32008	0.54	0.55	-1.0	-1.40	0.55	0.56	-1.7	-1.25
Employed Q42008	0.52	0.52	-0.6	-0.91	0.53	0.53	-1.6	-1.13
Employed Q12009	0.45	0.46	-0.7	-0.97	0.46	0.47	-1.5	-1.08
Employed Q22009	0.43	0.44	-0.7	-1.02	0.45	0.45	-1.4	-1.00
Earnings Q12005	1.93	1.96	-0.9	-1.37	1.98	1.98	0.1	0.09
Earnings Q22005	2.14	2.17	-1.1	-1.58	2.21	2.21	-0.1	-0.07
Earnings Q32005	2.30	2.34	-1.0	-1.55	2.39	2.39	-0.2	-0.12
Earnings Q42005	2.23	2.26	-0.9	-1.32	2.32	2.31	0.2	0.14
Earnings Q12006	2.08	2.12	-1.3	-1.91	2.17	2.18	-0.3	-0.22
Earnings Q22006	2.22	2.25	-1.1	-1.62	2.34	2.35	-0.4	-0.27
Earnings Q32006	2.27	2.32	-1.4	-2.15	2.39	2.41	-0.7	-0.53
Earnings Q42006	2.27	2.31	-1.3	-1.91	2.39	2.42	-0.7	-0.53
Earnings Q12007	2.08	2.12	-1.3	-2.02	2.20	2.23	-1.0	-0.75
Earnings Q22007	2.21	2.26	-1.4	-2.14	2.34	2.39	-1.5	-1.07
Earnings Q32007	2.24	2.29	-1.7	-2.59	2.39	2.44	-1.4	-0.99
Earnings Q42007	2.22	2.28	-1.7	-2.63	2.35	2.40	-1.4	-1.05
Earnings Q12008	1.99	2.05	-1.9	-2.86	2.14	2.18	-1.4	-1.05
Earnings Q22008	2.07	2.13	-2.0	-3.07	2.24	2.28	-1.4	-1.04
Earnings Q32008	2.03	2.09	-2.0	-3.10	2.20	2.27	-2.1	-1.56
Earnings Q42008	1.86	1.92	-2.1	-3.34	2.00	2.07	-1.9	-1.50
Earnings Q12009	1.38	1.43	-1.8	-2.92	1.53	1.57	-1.5	-1.15
Earnings Q22009	1.25	1.31	-2.5	-4.05	1.45	1.49	-1.5	-1.12
Age	43.61	43.26	2.6	3.77	42.14	41.67	3.6	2.55
Female	0.50	0.49	1.0	1.44	0.47	0.46	0.8	0.57
Not Included in Propensity Score								
% Accomodation and Food Service, Q1 2005 - Q2 2009	0.09	0.09	0.2	0.33	0.10	0.09	0.5	0.36
% Retail Trade, Q1 2005 - Q2 2009	0.08	0.09	-0.7	-1.01	0.08	0.09	-1.5	-1.11
% Admin. & Support, Q1 2005 - Q2 2009	0.07	0.07	-2.1	-3.01	0.07	0.07	-3.4	-2.40
% Manufacturing, Q1 2005 - Q2 2009	0.08	0.08	-3.2	-4.60	0.08	0.09	-1.8	-1.27
% Health Care & Social Assistance, Q1 2005 - Q2 2009	0.06	0.05	2.7	3.78	0.05	0.05	-0.9	-0.67
Average employment, Q4 2009-Q4 2011	0.43	0.47	-9.30	-13.42	0.44	0.48	-9.1	-6.50
Average earnings, Q4 2009-Q4 2011	1.52	1.63	-5.00	-7.56	1.57	1.71	-6.30	-4.70
Number of Observations		14,170			10,333	3,367		
Notes: Table shows means of selected variables for the Cor	A and M	/aitlist ard	nine a	standardi			h chowe	tho

Notes: Table shows means of selected variables for the Core and Waitlist groups, a standardized bias test which shows the difference in means as a percentage of the square root of the average of the sample variances in both groups, and results of a two-sample t-test of differences in the means. Regressions also include 70 county of residence indicators; none has a statistically significant difference between waitlist and core or standardized bias greater than 10. Earnings in thousands of dollars. Note that average employment and earnings from Q42009-Q42011 are outcomes and are not expected to balance between the treatment and control groups.

Appendix Table 6. Propensity Score Estimation Results

All Applicants			Applied Within	30 Days of Oct 9
Variable	Estimate	Standard Error	Estimate	Standard Error
Employed Q12005	0.043	0.021	-0.043	0.043
Employed Q22005	-0.014	0.024	0.074	0.048
Employed Q32005	0.014	0.024	-0.079	0.048
Employed Q42005	0.015	0.024	0.014	0.047
Employed Q12006	0.057	0.023	0.090	0.048
Employed Q22006	-0.003	0.024	-0.020	0.049
Employed Q32006	0.074	0.023	0.090	0.048
Employed Q42006	0.013	0.023	-0.010	0.047
Employed Q12007	-0.012	0.023	0.041	0.046
Employed Q22007	0.013	0.023	0.041	0.047
Employed Q32007	0.027	0.023	0.039	0.046
Employed Q42007	0.015	0.023	-0.056	0.046
Employed Q12008	-0.022	0.023	-0.028	0.045
Employed Q22008	0.021	0.023	-0.013	0.046
Employed Q32008	0.031	0.022	-0.014	0.045
Employed Q42008	0.013	0.022	0.044	0.044
Employed Q12009	0.038	0.022	0.003	0.044
Employed Q22009	-0.001	0.020	-0.038	0.039
Earnings Q12005	0.008	0.004	0.008	0.009
Earnings Q22005	-0.009	0.005	0.002	0.010
Earnings Q32005	-0.002	0.005	0.001	0.009
Earnings Q42005	-0.002	0.004	-0.009	0.008
Earnings Q12006	-0.001	0.005	0.008	0.010
Earnings Q22006	0.003	0.005	0.002	0.010
Earnings Q32006	-0.008	0.004	-0.012	0.009
Earnings Q42006	-0.005	0.004	-0.001	0.008
Earnings Q12007	0.006	0.004	-0.004	0.008
Earnings Q22007	-0.003	0.004	-0.013	0.008
Earnings Q32007	-0.006	0.004	0.007	0.008
Earnings Q42007	-0.003	0.004	0.001	0.008
Earnings Q12008	0.000	0.004	-0.002	0.008
Earnings Q22008	0.000	0.004	0.008	0.008
Earnings Q32008	-0.013	0.004	-0.012	0.008
Earnings Q42008	-0.008	0.004	-0.007	0.008
Earnings Q12009	-0.003	0.005	-0.007	0.009
Earnings Q22009	-0.042	0.004	0.000	0.007
Age	0.001	0.000	0.0009	0.0001
Female	0.112	0.012	0.0288	0.0245
Constant	-0.159	0.075	-0.165	0.144

Notes: Regression also includes dummy variables for county of residence. Earnings in thousands of dollars. "All Applicants" includes the entire Core recipient group and an equal time interval post-waitlist implementation of the waitlist group.

If some Core Plan participants are leaving wage and salary work for self-employment as a result of receiving public insurance, we would classify them as unemployed in our data. This would bias our results toward finding negative labor supply effects when none exist. As discussed above, results from the literature on the empirical relationship between health insurance portability and self-employment are mixed; in addition, because there are positive income effects in addition to potential for a reduction of job lock, the theoretical prediction is ambiguous. We could be understating the true employment effect if positive income effects are resulting in exit from self-employment. We therefore test for changes in self-employment.

In order to assess the potential for our results to be explained by transitions to self-employment, which would not be recorded in our administrative data, we use the American Community Survey (ACS) from 2005 to 2012. We chose the ACS for its relatively large state sample sizes. The ACS includes a question asking participants whether they were employed by a government, private company, nonprofit organization, or were self-employed. We classify all respondents who indicated they were self-employed (whether at an incorporated or unincorporated business) as self-employed.

We create a sample of low-income families without dependent children by limiting family size to two or fewer people, restricting to households where the youngest child is 18 or older, and FPL 400% or lower. We also limit to the ages eligible for the Core plan, older than 18 and younger than 65. We did not condition on Medicaid status, both because of the well-known issue of the Medicaid undercount<sup>2</sup> and because the ACS did not begin asking about health insurance coverage until the 2007 survey year. Note that the timing of the Core plan meant that for part of 2009, individuals were eligible for the insurance; for this reason we also include specifications that leave out the 2009 survey year. There are between 8,000 and 12,000 observations in Wisconsin for each year in the sample.

We then compare those with incomes up to 200% of the federal poverty level to those with incomes from 200-400% of the federal poverty level in Wisconsin and nationally, before and after the Wisconsin program implementation (a triple-differences estimation strategy). This allows us to include nonparametric controls for state-specific shocks in each time period. For the DD, the assumption is that the self-employment of higher and lower income groups would have evolved similarly in the absence of the Core plan. For the DDD, the identification assumption is that there was no unobserved shock that differentially affected only childless adults below 200% FPL in Wisconsin during this time.

<sup>&</sup>lt;sup>1</sup> We obtained the ACS data from IPUMS-USA, University of Minnesota, www.ipums.org (Ruggles et al. 2010)

<sup>&</sup>lt;sup>2</sup> State Health Access Data Assistance Center. (2013). Accuracy of Medicaid reporting in the ACS: Preliminary results from linked data. *Working paper, Minneapolis, MN: University of Minnesota*. Available at: https://www.census.gov/hhes/www/hlthins/publications/ACSUndercount\_WorkingPaper\_0.pdf. Accessed 1/23/2015.

Results of this estimation are presented in Table 5. Within Wisconsin, the relative change in self-employment between treatment and control groups before and after the Core plan implementation was actually negative (a decline of -1.48%). When compared to all other states, the share of low-income self-employed Wisconsin residents was higher than in the national sample, but declined by a greater amount over time. The unadjusted triple difference estimate is a decline of .93%, and further adjustments that exclude 2009 or include a full set of state and year fixed effects and their interactions result in very similar estimates. We interpret these results as supportive of the hypothesis that changes in self-employment are not biasing our results in the direction of finding a decline in labor supply when one does not exist.

Appendix Table 7. Summary of ACS Self-Employment Results

	Control Group	Treatment Group	Difference Across
	(Income 200-400%)	(Income 0-200%)	Groups
Panel A. Wisconsin	(111001116 200-40070)	(111001116 0-20070)	Gloups
Pre-Policy Mean	9.46%	9.81%	0.35%
Post-Policy Mean		7.95%	-1.13%
Difference over time	-0.37%	-1.85%***	1.1070
Dilloronos ovor timo	0.01 /0	Difference in	-1.48%***
		Differences:	(.004)
Panel B. Control States (Rest of U.S.)			(1001)
Pre-Policy Mean	8.50%	7.98%	-0.53%***
Post-Policy Mean		7.07%	-1.08%***
Difference over time		-0.91%***	
		Difference in	-0.55%***
		Differences:	(.002)
Triple Difference Estimates	93%**	71%*	95%***
Triple Difference Estimates	(.0039)	(.0041)	(.0007)
Full set of state/year fixed effects and interactions	(.0000)	(.0041)	(.0007) X
Age and Income controls			Χ
Excludes 2009		Χ	
Clustered Standard Errors (State)			X

Notes: Table contains unweighted percent self-employed and estimated differences in the probability of being self-employed obtained from authors' calculations using the 2005-2012 American Community Survey. Details of sample construction included in text. \* indicates significance at 10% level, \*\* 5%, \*\*\*1%.