Online Appendix: The Effects of the Massachusetts Health Reform on Household Financial Distress

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A Alternative Specifications and Additional Tables

The results presented in Section 6.1 of the main text suggest that the expansion of insurance coverage following the Massachusetts health reform improved several measures of financial well-being, ranging from credit score to personal bankruptcy. In this appendix, we describe how these results are robust to several alternative specifications and ways of conducting inference. In these models, we present only our main parameter of interest (the coefficient on the term $MA \times Post \times Uninsured2005$); the full results are available upon request.

The results presented in the previous section use data from both a random 5 percent sample of credit reports and all individuals with the same mailing address as the primary sampled individual. This provides a large sample; however, it also will result in the oversampling of individuals living in group homes or with many roommates and the undersampling of individuals living alone. We therefore re-estimate our models using only the primary sample and dropping all individuals who are not in the initial random 5 percent sample. The first panel of Appendix Table 1 displays the results. We find similar results using the primary sample as we do using the full sample: a one percentage point increase in the pre-reform uninsurance rate is associated with an increase in credit scores of about 0.48 and a reduction in the amount past due of about \$24, in the percent of debt past due of about 0.10 percentage points, in total collections of about \$2, and in the probability of having a personal bankruptcy of about 0.03 percentage points. Because our model relies on within-Massachusetts variation to identify the effect of the health care reform on financial outcomes, we are able to include state by year fixed effects to account for differential trends occurring in any of the comparison states. In the second panel of Appendix Table 1 we present the results of models that include such state by year fixed effects. Our results are robust to the inclusion of these state-by-year trends and we continue to find strong effects of the reform on credit score, debt, delinquency, percent of debt past due, third party collections and bankruptcy rates.

The third panel of Appendix Table 1 displays results using all states in the Northeast Census Region (Maine, New Hampshire, Vermont, Connecticut, Rhode Island, New York, Pennsylvania, and New Jersey) as the comparison group. The estimates from this model confirm our results on the effect of the reform on amount past due and personal bankruptcy. The effects of the reform on the percent of debt past due and the credit score are not statistically significant in this specification, although the point estimates indicate that the reform improved credit scores and reduced the percent of debt that is past due.

In 2005, there was a major reform to the bankruptcy system that occurred at the national level, the Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA). This reform required credit counseling for bankruptcy filers and restricted filing of Chapter 7 bankruptcy to individuals with incomes below the state median. To the extent that the BAPCPA affected the high uninsurance rate groups similarly across New England, or affected groups within Massachusetts in the same way, it does not present a threat to our identification strategy. However, if the reform affected the financial outcomes of the high uninsurance rate groups in Massachusetts differentially, we may be ascribing some of the effects of the BAPCPA to the Massachusetts health care reform. One way we address is this by conducting placebo tests in other states to evaluate if similar changes were happening in areas of the country that did not experience health care reform. These results are presented in section 6.3. In addition, we also present an alternative specification in Table 1 which uses states with similar bankruptcy laws (in particular, similar home exemptions) as Massachusetts as the comparison group. These states should have been affected by the national bankruptcy law in a similar way. The estimates presented in panel 4 are similar to those we found using New England as the comparison group. We find significant improvements in credit score and reductions in debt, amount past due, percent of debt past due, and third party collections. We continue to find a negative effect of the reform on bankruptcy rates, although the results are not significant in this model. Overall, these results are consistent with those discussed in the previous section and suggest that Massachusetts residents experienced improvements in their financial situation relative to residents of other states who were similarly affected by the bankruptcy reform.

In the fifth panel of Table 1, we present results from a model that uses only variation in county of residence, but not in age group. In these models, individuals are mapped to the overall uninsurance rate of their county of residence in 2005. This uninsurance rate is then used as the measure of the potential effect of the reform. Because these models reduce the amount of variation in the potential effect of the reform by half, the standard errors tend to be larger. However, in these models we continue to find statistically significant effects of the reform on credit score and percent of debt past due, and marginally significant effects on personal bankruptcy. The point estimates on total amount past due and total debt suggest that the reform also reduced these measures.

In the sixth panel of Table 1, we present results using the county of residence in each year, rather than the county of residence in 2005, to define county-age groups. The advantage of using current county of residence is that we are able to match individuals to a county of residence even if they were not in the sample in 2005. The disadvantage is that this sample does not account for endogeneous moving across counties in response to the reform. Using this definition of county, we find similar effects of the reform on total debt, amount past due, percent of debt past due, amount of collections and personal bankruptcy. The effect of the reform on risk score is a similar magnitude using this definition; however, it is not statistically significant.

In our main results, we drop the elderly from the sample as they would have been covered by Medicare and thus would not have been affected by the health care reform. In the seventh panel fo Table 1, we show estimates of the model using data that do not drop the elderly. County-level insurance coverage data are not available for the elderly. Instead, we use the 2005 state-level coverage rate for this age group and apply it to all counties; that is, we add a 65+ age group in each county, but the variable *Uninsured*2005 is the same for this age group for all counties within the same state. Adding the elderly attenuates the results; this is likely because the *Uninsured*2005 variable does not actually capture the potential impact of the reform on the elderly in Massachusetts and therefore adds noise to our measure of the potential impact. However, even among these smaller results we continue to find statistically significant declines in the percent of debt past due and the total amount in collections, and marginally significant reductions in total debt.

Finally, in panel 8, we present results using a heteroskedastic error-in-variables model (Sullivan (2001)). This model accounts for the fact that the Uninsured2005 variable is measured with error. The Census SAHIE data reports the margin of error for each of these estimates. We use these estimates to rescale the Uninsured2005 variable by the relative reliability ratio, i.e., the ratio of the variation in Uninsured2005 that remains after accounting for the other covariates that is not a result of measurement error to the total variation in Uninsured2005. This produces a consistent estimator of our coefficients of interest and improves efficiency. Using this technique, we find very similar results as those presented in the main results section.

Overall, we find that alternative specifications and sample definitions do not meaningfully alter our results. Although the point estimates and standard errors vary slightly across these models, we continue to find that the reform had strong effects on several measures of financial well-being.

Table 2 presents results using different methods of inference. Our main results, and the results presented in Table 1, all rely on clustering at the county level. However, if the error terms are correlated across counties in the same state, it would be preferable to cluster at the state level. In the first panel of Table 2, we present results using robust standard errors clustered at the state level. However, because we have relatively few states, there is some concern that conducting inference using the asymptotic clustered standard errors may result in over-rejection of the null hypothesis (see, e.g., Bertrand et al. (2004)). For that reason, in panels 2 and 3 we estimate confidence intervals using two clustered bootstrap

methods that have been shown to perform well even when the total number of clusters is small (Cameron et al. (2008)). The second panel employs a clustered percentile-t bootstrap and the third panel employs a clustered wild bootstrap. Confidence intervals constructed with these bootstrap methods are reported under the coefficient. In the final panel, we report standard errors that account for possible correlation of the errors across counties that are geographically proximate, even if they are in different states, using the standard error adjustment for spatial correlation in Conley (1999). We measure distance between counties using the centroid of the county as the county's location. We use a cutoff of 100 kilometers, although the results are similar using larger (150 kilometers) and smaller (50 kilometers) cutoff values. To implement the estimation the standard errors, we use the Stata code provided with the article Hsiang (2010).

Our inference remains largely unchanged when we use either the state clustered standard errors, the clustered wild bootstrap, or spatially correlated standard errors. The confidence intervals constructed using a percentile-t bootstrap are slightly more conservative, although we continue to find statistically significant effects of the Massachusetts reform on total debt, the percent of debt past due, and personal bankruptcy. Taken together, Tables 1 and 2 suggest that our results are robust to numerous alternative specifications and methods of conducting inference.

In addition to reporting these alternative specifications, we also report the outcomes of several placebo tests in Tables 4 and 5. These results are discussed in detail in Section 6.2 in the main text.

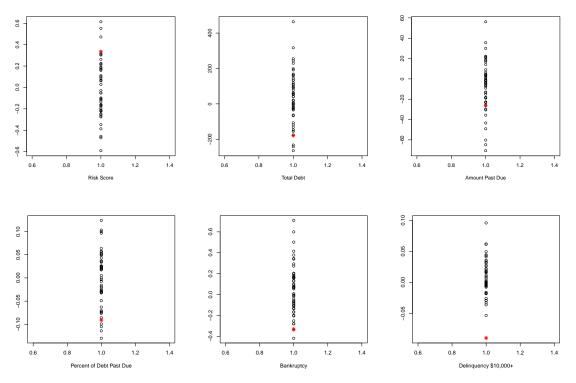
Finally, we also conduct placebo tests using other states that did not enact a health care reform. In Section 6.2 in the main text, we describe how the test statistic in Massachusetts compares to the test statistic obtained in these states. In Figure 1 below, we do a similar analysis but use the coefficient rather than the test statistic. In this figure, the star indicates the coefficient from the "true effect" estimated using Massachusetts and the black circles are the placebo coefficients. We find that the rank (from 1 to 50) of the Massachusetts coefficients are: risk score, 47; total debt, 4; amount past due, 9; fraction past due, 5; bankruptcy, 3; \$10000+ past due, 1. This strongly confirms our results for having a large delinquency and

bankruptcy, and is suggestive for the other effects.

References

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Figure 1: Percentage Non-elderly Uninsured in Massachusetts and the rest of New England (First Panel) and Percent Uninsured in Massachusetts by Age Group (Second Panel), 1999-2012



The red star indicates the coefficient from the "true effect" estimated using Massachusetts. The black circles are the placebo coefficients. The rank (from 1 to 50) of the Massachusetts coefficient are: risk score, 47; total debt, 4; amount past due, 9; fraction past due, 5; bankruptcy, 3; \$10000+ past due, 1.

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$0.848 \ (0.395)^{**}$				3.41 (2.407)	$-0.640 \ (0.332)^{*}$
0.905	0.766	0.585	0.809	0.477	0.646
	938	938	938	938	038
ing age group year observations and	Veen	000	000	000	200
ITY OF RESIDENCE IN EAC		***(100 0/ 14 10			
(0.240)	-110.1 (88.09)	-31.37 (0.094)	-0.033 (0.022)	-2.044 (1.240)	-0.228 (0.089)
0.993	0.947	0.921	0.863	0.906	0.823
tions 1876	1876	1876	1876	1876	1876
$MA \times Post \times Uninsured2005$ 0.119 (0.120) -1	$-102.7 \ (57.3)^{*}$	-8.19 (7.95)	$-0.0386 \ (0.018)^{**}$	$-1.66 (0.60)^{***}$	-0.175(0.157)
\mathbb{R}^2 : 0.948 0.1	0.890	0.930	0.900	0.813	0.934
County-age group-year observations 2814 28	2814	2814	2814	2814	2814
Heteroskedastic errors-in-variables model					
$MA \times Post \times Uninsured2005$ 0.345 (0.154)** -1	$-192.45 (82.33)^{**}$	$-27.94 \ (8.19)^{***}$	$-0.093 (0.023)^{***}$	$-1.88 (0.92)^{**}$	$-0.358 \ (0.065)^{***}$
0.995	0.952	0.911	0.921	0.892	0.780
County-age group-year observations 1876 18	1876	1876	1876	1876	1876
Under 65 Entire Sample Period					
$MA \times Post \times Uninsured2005$ 0.406 (0.162)** -1	$-174.0 (79.74)^{**}$	$-25.61 \ (8.343)^{***}$	$-0.090 (0.024)^{***}$	$-1.695 \ (0.899)^{*}$	$-0.337 \ (0.069)^{***}$
R^2 : 0.994 0.	0.949	0.910	0.911	0.884	0.777
County-age group-year observations 1876 18	1876	1876	1876	1876	1876
MA mean: 700.8 \$2	400 ADE 80	\$\$28.54	0.06	\$60.02	0.01

Table 1: The Effect of the MA Reform on Financial Outcomes: Alternative Specifications

Dependent Variable:	Risk Score	Total Debt	Amount Past Due	Percent of Debt Past Due	Total Collections	Bankruptcy last 24 mos (per 1000)
Standard errors clustered by state $MA \times Post \times Uninsured2005$ 0.	ate $0.336 \ (0.155)^*$	$-179.6 (52.10)^{**}$	-26.15 (7.750)**	-0.091 $(0.035)^{***}$ -1.716 $(0.650)^{**}$ -0.337 $(0.055)^{***}$	$-1.716 \ (0.650)^{**}$	-0.337 (0.055)***
95 percent confidence intervals from state		clustered percentile-t bootstrap	otstrap			
$MA \times Post \times Uninsured2005$	0.336	-179.6^{***}	-26.15	-0.091***	-1.716	-0.337***
	[-0.005, 1.078]	[-383.92, -99.92]	[-50.18, 117.42]	[-0.112, -0.072]	[-3.47, 0.57]	[-0.644, -0.031]
P-values from clustered wild bootstrap	otstrap					
$MA \times Post \times Uninsured2005$	0.336^{**}	-179.6	-26.15^{***}	-0.091***	-1.716^{*}	-0.337**
	p=0.020	p=0.120	p < 0.001	p < 0.001	p=0.058	p=0.020
Spatially correlated standard errors	rors					
$MA \times Post \times Uninsured2005$	$0.336 \ (0.09)^{***}$	$0.336 (0.09)^{***}$ -179.6 $(57.71)^{***}$ -26.15 $(9.31)^{***}$	$-26.15 (9.31)^{***}$	$-0.091 (0.020)^{***}$ $-1.716 (0.50)^{*}$	$-1.716 (0.50)^{*}$	$-0.337 (0.139)^{**}$
County-age group-year observations 1876	1876	1876	1876	1876	1876	1876
MA mean:	700.8	\$22,406.80	\$828.54	0.06	\$60.02	0.01
Each column displays the results from a separate regression. The dependent variable is listed in the first row. All models include county-age group fixed	a separate regression.	. The dependent varia	ble is listed in the first	t row. All models inclu	ude county-age group	fixed
effects, year fixed effects, and the county-level unemployment rate. Sixty-seven counties, 2 age groups and 14 years result in 1876 county x age group x year observations.	ty-level unemploymen	it rate. Sixty-seven co	unties, 2 age groups a	nd 14 years result in 1	876 county x age gro	ip x year observations.
Significance Levels: $* = 10\%$, $** = 5\%$, $*** = 1\%$.	$_{6}, *** = 1\%.$					

Table 2: The Effect of the MA Reform on Financial Outcomes: Alternative Methods of Inference

	\$0 Past Due	\$1-\$5000 Past Due	\$5001-\$10000 Past Due	Over \$10000 Past Due
Standard errors clustered by state	ite			
$MA \times Post \times Uninsured2005$	$0.0821 \ (0.067)$	$0.0396\ (0.079)$	$-0.0321 (0.006)^{***}$	$-0.0896\ (0.0236)^{**}$
95 percent confidence intervals from state clustered percentile-t bootstrap	rom state cluste	red percentile-t boot	strap	
$MA \times Post \times Uninsured2005$	0.0821	0.0396	-0.0321^{**}	-0.0896
	[-0.108, 0.350]	[-0.332, 0.198]	[-0.038, -0.002]	[-0.151, 0.040]
P-values from clustered wild bo	ld bootstrap			
$MA \times Post \times Uninsured2005$	0.0821	0.0396	-0.0321^{**}	-0.0896***
	p=0.134	p=0.909	p < 0.001	p<0.001
Spatially correlated standard errors	rors			
$MA \times Post \times Uninsured2005$	$0.0821 \ (0.0398)^{**}$	$0.0396\ (0.048)$	$-0.0321 (0.010)^{***}$	$-0.0896\ (0.021)^{***}$
County-age group-year observations	1876	1876	1876	1876
MA mean:	79.88	16.45	1.814	1.861
	\$0 Collections	\$1-\$1000 Collections	\$1001-\$2000 Collections	Over \$2000 Collections
Standard errors clustered by state	ite			
	$0.0446\ (0.034)$	$0.00788 \ (0.0152)$	-0.0303(0.0139)	$-0.0221 (0.006)^{**}$
95 percent confidence intervals from state clustered percentile-t bootstrap	rom state cluste	red percentile-t boot	strap	
$MA \times Post \times Uninsured2005$	0.0446	0.00788	-0.0303	-0.0221
	[-0.230, 0.098]	[-0.007, 0.067]	[-0.058, 0.073]	[-0.059, 0.020]
P-values from clustered wild bootstrap	otstrap			
$MA \times Post \times Uninsured2005$	0.0446	0.00788	-0.0303	-0.0221^{**}
	p=0.424	p=0.613	p=0.248	p=0.020
Spatially correlated standard errors	rors			
$MA \times Post \times Uninsured2005$	0.0446(0.028)	$0.00788 \ (0.022)$	$-0.0303 (0.011)^{***}$	$-0.0221 (0.006)^{***}$
County-age group-year observations	1876	1876	1876	1876
MA mean:	94.26	4.393	0.713	0.630

Table 3: The Effect of the MA Reform on the Distribution of Delinquencies and Collections: Alternative Methods of Inferer

county-age group fixed effects, year fixed effects, and the county-level unemployment rate. Sixty-seven counties, 2 age

groups and 14 years result in 1876 county x age group x year observations. Significance Levels: * = 10%, ** = 5%, *** = 1%.

Dependent Variable:	Poverty	y Rate	Business E	susiness Bankruptcies	Unemploy	Jnemployment Rate	Mediá	vledian Income
	log	level	log	$level^{\dagger}$	log	level	log	level
$\mathrm{MA} imes \mathrm{Post} imes \mathrm{PercUninsured2005}$	-0.002(0.006)	$0.081 \ (0.106)$	$0.013\ (0.051)$	0.001 (0.005)	-0.019(0.014)	-0.16(0.113)	-0.001(0.004)	-359.812 (504.73)
$MA \times Implement \times PercUninswred2005 0.014 (0.013)$	0.014(0.013)	0.212(0.131)	0.064(0.050)	$0.008 (0.005)^{*}$	$-0.014 (0.007)^{**}$	$-0.075(0.031)^{**}$	-0.007 (0.006)	-698.69(472.15)
$Post \times PercUninsured2005$	0.0003(0.004)	0.046(0.058)	-0.017(0.037)	-0.001(0.004)	-0.0001 (0.098)	0.007 (0.091)	0.003(0.003)	$248.47 \ (425.5)$
$Implement \times PercUninsured2005$	-0.01(0.01)	-0.067(0.089)	-0.011(0.048)	-0.005(0.005)		0.004 (0.026)	0.006(0.004)	456.86(458.62)
MA imes Post	-0.044(0.09)	-1.63(1.34)	-0.599(0.737)	-0.061(0.072)	0.13 (0.20)	1.37(1.55)	0.046(0.063)	$7354.56\ (6416.72)$
MA imes Implement	-0.21(0.18)	$-2.96(1.69)^{*}$	-1.291(0.67)	$-0.126(0.063)^{**}$	0.157(0.098)	$0.895 (0.444)^{**}$	$0.114 (0.07)^{*}$	$10461.73 (5869.24)^{*}$
_R ²	0.97	0.96	0.88	0.57	0.64	0.69	0.98	0.98
County-year observations	938	938	700	938	938	938	938	938

Table 4: Placebo Test: Concurrent economic improvement

All models include county-level fixed effects. The source for the variables poverty rate and median income is the Small Area Income and Poverty Estimates produced by the Census (http://www.census.gov/did/www/saipe/index.html); the source of the business bankruptcy variable is the Department of Justice US PACER database (http://www.pacer.gov/); the source of the unemployment rate is the Local Area Unemployment Statistics of the Bureau of Labor Statistics (http://www.bls.gov). The model with log of business bankruptcies as the dependent variables excludes any counties that have 0 business bankruptcies in any year. Sixty-seven counties and 14 years result in 983 county x year observations. Significance Levels: * = 10%, ** = 5%, *** = 1%. Robust standard errors reported in parentheses are clustered by county.

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		Past Due		last 24 mos
44.06 (335.5) -1 -60.00 (154.8) 1 237.8 (313.0) 19 149.0 (142.8) 4 -387.4 (4204) 11 $1159 (2035)$ -6 0.876 0 0.876 0 0.876 0 0.876 0 0.876 0 0.876 0 0.876 0 0.876 0 0.876 0 0.876 0 $0.729 (199.7)$ -4 $132.5 (226.0)$ 11 $1601 (1831)$ 60 0.878 0 0.878 0 0.878 0 0.878 0 0.878 0 0.878 0 0.878 0 0.878 0 0.888 0 0.888 0 0.888 0 0.878 0 0.888 0	$\begin{array}{c} \textbf{-11.58} (\textbf{17.09}) \\ 1.782 (6.251) \\ 19.35 (15.79) \\ 4.718 (5.043) \\ 191.6 (226.2) \\ 6.602 (88.67) \\ 0.758 \\ \hline 0.758 \\ \hline 0.758 \\ \hline 0.776 \\ 11.78 (19.26) \\ 3.689 (7.996) \\ 97.47 (190.4) \\ 60.42 (106.2) \\ 0.749 \\ \hline 0.749 \\ 97.47 (190.4) \\ 60.42 (106.2) \\ \hline 0.749 \\ 97.8 \\ \hline 0.749 \\ 0.749 \\ \hline 0.749 \\ 0.749 \\ \hline 0.749$	-0.0245 (0.067) -0.025 (0.047) 0.0005 (0.068) 0.062 (0.044) 0.379 (0.949) 0.306 (0.662) 0.306 (0.662) 0.554 -0.002 (0.062) 0.032 (0.053) 0.032 (0.053) 0.032 (0.058) -0.007 (0.042) 0.002 (0.058) -0.007 (0.042) 0.002 (0.058) -0.007 (0.042) 0.002 (0.058) -0.007 (0.042) 0.002 (0.058) -0.007 (0.042) 0.002 (0.058) -0.007 (0.042) 0.002 (0.058) -0.007 (0.042) 0.000 (0.058) -0.007 (0.042) 0.000 (0.058) -0.007 (0.042) 0.000 (0.058) -0.007 (0.058)	$\begin{array}{c} \textbf{0.202} \ \textbf{(0.823)} \\ -0.101 \ \textbf{(0.879)} \\ -0.342 \ \textbf{(0.727)} \\ 0.448 \ \textbf{(0.820)} \\ 0.763 \ \textbf{(11.01)} \\ -2.077 \ \textbf{(12.36)} \\ 0.520 \\ \hline \textbf{(12.36)} \\ 0.574 \\ \hline \textbf{(12.36)} \\ \hline \textbf{(12.36)} \\ 0.574 \\ \hline \textbf{(12.36)} \hline \hline \textbf{(12.36)} \\ \hline \textbf{(12.36)} \hline \hline \textbf{(12.36)} \\ \hline \textbf{(12.36)} \hline \hline (1$	$\begin{array}{c} \textbf{-0.386 (0.229)}^{*}\\ \textbf{-0.016 (0.015)}\\ 0.025 (0.021)\\ 0.012 (0.012)\\ 0.643 (0.305)^{**}\\ 0.238 (0.214)\\ 0.574 \\ \textbf{-0.128 (0.269)}\\ 0.011 (0.026)\\ 0.011 (0.026)\\ 0.011 (0.020)\\ 0.016 (0.020)\\ 0.017 \\ 0.017 \\ 0.017 \\ 0.016 \\ 0.020 \\ 0.017 \\ 0.017 \\ 0.024 \\ 0.026 \\ 0.017 \\ 0.026 \\ 0.017 \\ 0.026 \\ 0.017 \\ 0.026 \\ 0.017 \\ 0.026 \\ 0.017 \\ 0.026 \\ 0.020 \\ 0.017 \\ 0.026 \\ 0.020 \\ 0.017 \\ 0.026 \\ 0.020 \\ 0.017 \\ 0.026 \\ 0.020 \\ 0.017 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.017 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.017 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.026 \\ 0.020 \\ 0.000$
$\begin{array}{c c} 0 & 0 \\ 0 & (1) \\ 0 & (2) \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $	$\begin{array}{c} 154.8 \\ 13.0 \\ 1.3.0 \\ 1.3.0 \\ 1.3.0 \\ 1.3.0 \\ 1.3.0 \\ 1.3.5 \\ -6 \\ 1.35 \\ -6 \\ 1.35 \\ -6 \\ 0 \\ 0 \\ 0 \\ 0 \\ 1.0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\$	$\begin{array}{llllllllllllllllllllllllllllllllllll$	330.0 -11.00 (1.007) 154.8 1.782 (6.251) -0.025 (0.047) 13.0 19.35 (15.79) 0.0005 (0.068) 42.8 4.718 (5.043) 0.062 (0.044) 42.8 4.718 (5.043) 0.062 (0.049) 42.8 4.718 (5.043) 0.062 (0.049) 42.8 4.718 (5.043) 0.062 (0.049) 4204 191.6 (226.2) 0.379 (0.949) 355 -6.602 (88.67) 0.306 (0.662) 0.758 0.554 0.554 0.758 0.554 0.306 (0.662) 97.7 -4.812 (11.41) 0.032 (0.053) 92.7 -4.812 (11.41) 0.032 (0.053) 92.1 97.47 (190.4) 0.002 (0.053) 97.47 (190.4) 0.002 (0.055) 97.47 (190.4) 0.002 (0.965) 831) 60.42 (106.2) -0.007 (0.965) 97.47 (190.4) 0.002 (0.965) 0.524) 97.47 (190.4) 0.002 (0.965) 0.524) 97.47 (190.4) 0.002 (0.965)	-11.58 (17.09) -0.025 (0.047) 1.782 (6.251) -0.025 (0.047) 1.782 (6.251) -0.025 (0.047) 1.782 (6.251) 0.005 (0.068) 4.718 (5.043) 0.062 (0.044) 191.6 (226.2) 0.379 (0.949) -6.602 (88.67) 0.306 (0.662) -6.602 (88.67) 0.306 (0.662) -6.602 (88.67) 0.306 (0.662) -6.602 (88.67) 0.306 (0.662) -6.602 (88.67) 0.306 (0.662) -6.602 (88.67) 0.306 (0.662) -6.602 (88.67) 0.306 (0.662) -4.812 (11.41) 0.032 (0.053) 11.78 (19.50) 0.0077 (0.042) 3.689 (7.996) -0.007 (0.042) 97.47 (190.4) 0.002 (0.965) 0.749 0.0819 97.47 (190.4) 0.002 (0.965) 938 938 0.749 0.719 0.749 0.819 0.749 0.925 (0.524) 0.749 0.902 (0.955 0.749 0.902 (0.955 0.749 0.925 (0.524)

and 14 years result in 938 county x year observations. Significance Levels: * = 10%, ** = 5%, *** = 1%. Robust standard errors are clustered by county.

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