The Effects of the Massachusetts Health Reform on Financial Well Being

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Introduction

People who lack health insurance are exposed to potentially catastrophic financial risks should they become sick.

- ▶ Insurance improves welfare by protecting the insured from shocks to consumption.
- ▶ This project explores how health care policies impact the financial well-being of those affected.

Introduction

We evaluate the effect of health insurance coverage on financial outcomes using the near-universal expansion of health insurance coverage in Massachusetts in 2006.

- ▶ Individual mandate for insurance and subsidies to low-income families.
- ▶ Large effect on coverage.
- ▶ Use variation in pre-reform insurance rates by county and age to identify the effect of this reform on financial outcomes, "difference-in-difference-in-difference."

Introduction

We find evidence that the reform improved credit scores and reduced the amount past due, fraction of debt past due, and personal bankruptcies. Our evidence suggests the reform may have also reduced the total amount of debt and collections.

- ▶ Most of the reduction in delinquencies is coming from a reduction in large delinquencies ($5,000-$10,000 and $10,000+).
- ▶ These effects are most pronounced for individuals who had lower credit scores at the time the reform took place.
- ▶ These results do not appear to be driven by improvements in other measures of economic performance.

Background

Other papers that have explored the role of insurance coverage on financial outcomes:

► Finkelstein and McKnight(2005) - Medicare reduces out of pocket spending, Gross and Notowidigdo (2011) - Medicaid reduces bankruptcy.

► Oregon Medicaid Experiment (2012): Those who gained Medicaid coverage were less likely to have bill sent to collection, but no effect on bankruptcy, liens, judgements (credit report data), less likely to report financial strain due to medical bills (survey data).

Background

We think the Massachusetts reform is a particularly useful policy experiment to study:

▶ Goal was universal coverage within the state.

▶ Almost 70 percent of those gaining coverage through the Affordable Care Act will have incomes above FPL (CBO 2012).

▶ Financial effects of insurance may be very different for the non-poor.

The Massachusetts Reform

In 2006 Massachusetts mandated that all residents have health insurance meeting certain coverage standards.

- ▶ The reform requires state residents purchase insurance; failure to comply with the mandate results in the loss of the personal income tax exemption ($219 for an individual) and, beginning in 2008, monthly penalties.
- ▶ Means-tested subsidies were extended to families under 300% of the FPL to purchase insurance (Commonwealth Care).
- ▶ The state expanded the Medicaid/CHIP program ("MassHealth").
- ▶ Insurance companies must cover dependents for two years after losing dependent status or until age 26.
- ▶ Employers face additional requirements.

The Massachusetts Reform

Figure : Percentage Uninsured in Massachusetts and the United States, 1999-2011
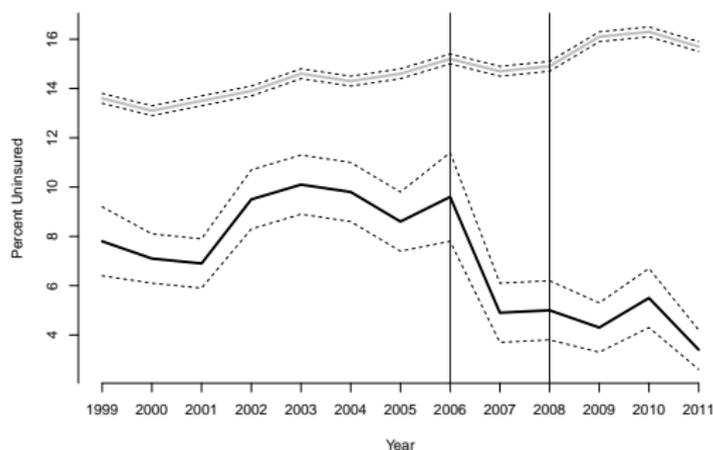
Black line = Massachusetts, Grey line = USA

The Massachusetts Reform

Figure : Percentage Uninsured By Age Group in Massachusetts, 1999-2011
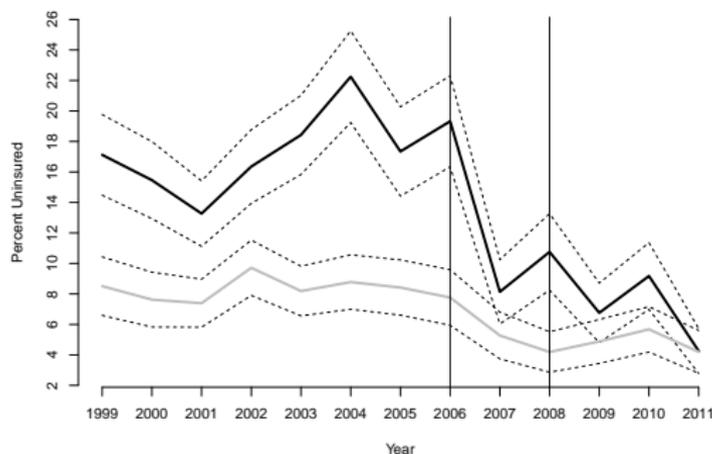
Black line = Age 18-39, Grey line = Age 40-64

The Massachusetts Reform

The potential effect of the reform varied based on pre-reform conditions.

- ▶ We use data from the Small Area Health Insurance Estimates (SAHIE) produced by the Census bureau to measure this effect.
- ▶ County-level estimates broken down into two groups: age 18 to 39 and age 40 to 64.

The Massachusetts Reform

Figure : Histogram of Percent Uninsured by County/Age Group in Massachusetts, 2005

2005 Uninsurance Rate by County/Age Group
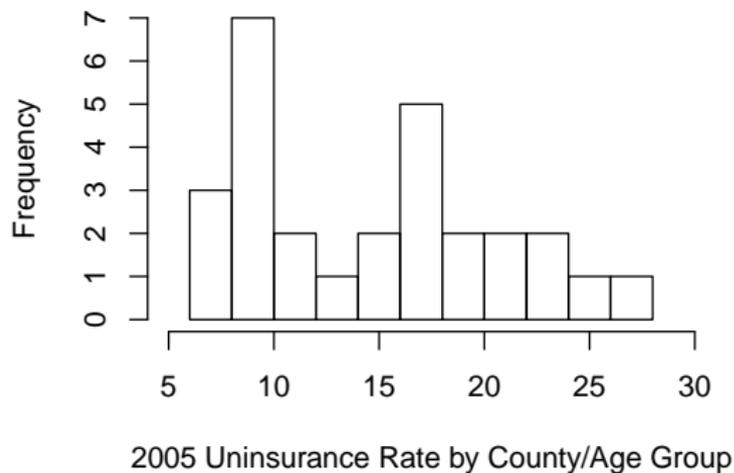
The Massachusetts Reform

How might have this reform affected the financial situation of
households?

- ▶ Uninsured households face the risk of having an unexpected,
  necessary medical expense.
- ▶ Free insurance expansion may have resulted in income effects.

Evidence from the Massachusetts Health Reform Survey (Long,
Stockley, and Dahlen 2012) suggests the reform did have such
effects.

- ▶ Reported out of pocket medical expenses fell.
- ▶ Fewer reported not getting medical care because of costs or
  having problems paying medical bills.

Data

We are using longitudinal data from the Federal Reserve Bank of New York Consumer Credit Panel/Equifax ("Equifax").

- ▶ Primary 5 percent sample of the adult population with credit reports and credit reports of all household members with the same mailing address.
    - ▶ We use 5% sample from Massachusetts and 1% sample from other states.
- ▶ Primary sample and household sample ≈ 20 percent of all adults with credit reports.
- ▶ Individuals observed quarterly from 1999 to 2012.
- ▶ Little demographic information (year of birth and zipcode of residence) and no information on insurance coverage.

Data

Table : Descriptive Statistics of Financial Outcomes

	Massachusetts	Other New England States
Risk Score	700.8 (38.4)	693 (31.3)
Total Balance for all Open Accounts	$22,406.80 ($6,940.19)	$23,172.35 ($7478.58)
Amount Past Due	$828.54 ($501.88)	$841.77 ($521.89)
Bankruptcy last 24 mos	0.01 (0.01)	0.01 (0.02)
Fraction of Debt Not Current	0.06 (0.04)	0.05 (0.04)
Total collections	$331.88 ($174.8)	$342.12 ($397.6)
# of individuals:	510204	173253

Results

Our strategy: look at counties and age groups that had less coverage before the reform and compare them to similar counties in other New England states. County-age groups with a higher "stock" of uninsured residents had a greater potential to be affected by the reform.

$$Y_{ijt} = \beta_c + \beta_1 Uninsured2005_j + \beta_2 Uninsured2005_j \times MA_j +$$
$$\beta_3 Implementation_t + \beta_4 Post_t +$$
$$\beta_5 MA_j \times Implementation_t + \beta_6 MA_j \times Post_t +$$
$$\beta_7 Implementation_t \times Uninsured2005_j + \beta_8 Post_t \times Uninsured2005_j +$$
$$\beta_9 MA_j \times Uninsured2005_j \times Implementation_t +$$
$$\beta_{10} MA_j \times Uninsured2005_j \times Post_t + \epsilon_{ijt}.$$

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$$\beta_{10} MA_j \times Uninsured2005_j \times Post_t + \epsilon_{ijt}.$$

Results: Amount Past Due (30 days+)
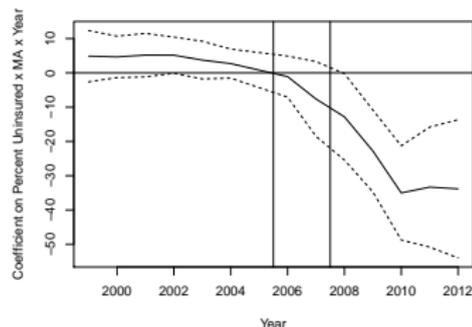
"Triple difference" Estimate	
MA*Post*Uninsured2005	-26.29 (8.409)***
R^2	0.721
MA Mean	$828.54

Significance Levels: * = 10%, ** = 5%, *** = 1%.

Standard errors are clustered by county.

Results: Total Balance on all Active Accounts
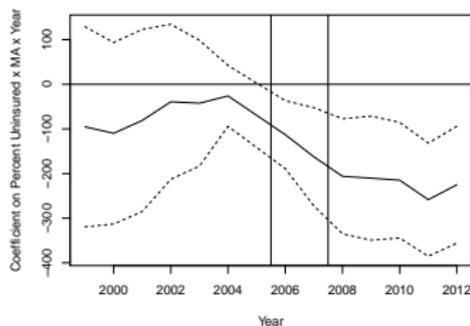
"Triple difference" Estimate	
MA*Post*Uninsured2005	-126.4 (87.66)
R^2	0.752
MA Mean	$22,406.80
Significance Levels: * = 10%, ** = 5%, *** = 1%.	
Standard errors are clustered by county.	

Results: Fraction of Balance Past Due
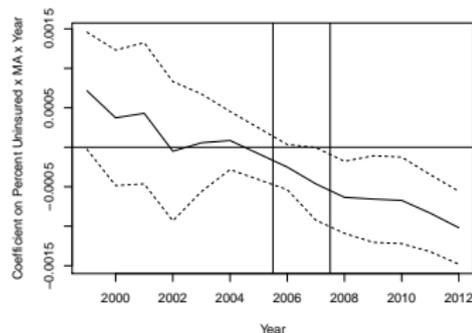
"Triple difference" Estimate	
MA*Post*Uninsured2005	-0.0009 (0.0003) ***
R^2	0.794
MA Mean	0.06

Significance Levels: * = 10%, ** = 5%, *** = 1%.

Standard errors are clustered by county.

Results: Risk Score
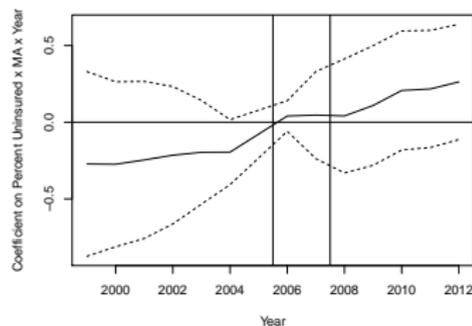
"Triple difference" Estimate

MA*Post*Uninsured2005	0.362 (0.148)**
R^2	0.902
MA Mean	700.8

Significance Levels: * = 10%, ** = 5%, *** = 1%.

Standard errors are clustered by county.

Results: Number of 3rd Party Collections
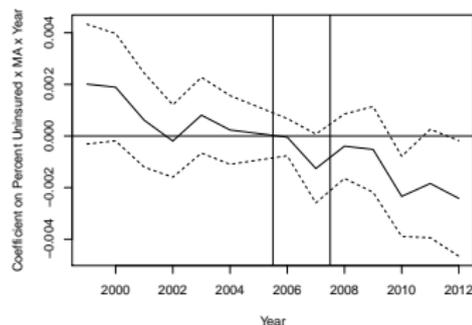
"Triple difference" Estimate	
MA*Post*Uninsured2005	-1.804 (2.382)
R^2	0.555
MA Mean	$331.88

Significance Levels: * = 10%, ** = 5%, *** = 1%.

Standard errors are clustered by county.

Results: Bankruptcy in the last 24 Months
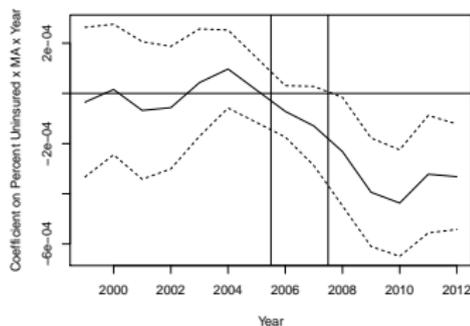
"Triple difference" Estimate

MA*Post*Uninsured2005	-0.0003 (6.99e-05)***
R^2	0.601
MA Mean	0.01

Significance Levels: * = 10%, ** = 5%, *** = 1%.

Standard errors are clustered by county.

Results

The reform increased coverage by about 7 percentage points.
These estimates indicate the reform

- Increased average credit score by (7×0.36) 2.5 points, about 0.4% relative to the average in Massachusetts
- Reduced the total amount past due by $(7 \times \$26)$ \$182, about 22%,
- Reduced the fraction of debt past due by (7×0.0009) 0.6 percentage points, or 10%
- Reduced the two-year bankruptcy rate by (7×0.0003) 0.0021, or 20%.

Results

How did the reform affect the distribution of delinquencies? We
divide amount past due into four categories:

- ▶ $0 Past Due
- ▶ $1 - $5000 Past Due
- ▶ $5001 - $10000 Past Due
- ▶ $10000 + Past Due

Results: $0 Past Due
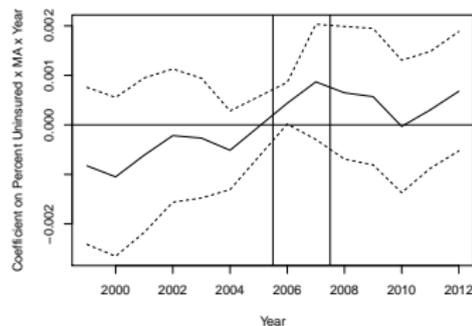
"Triple difference" Estimate	
MA*Post*Uninsured2005	0.0008 (0.0006)
R^2	0.863
MA Mean	0.80

Significance Levels: * = 10%, ** = 5%, *** = 1%.

Standard errors are clustered by county.

Results: \$1-\$5000 Past Due
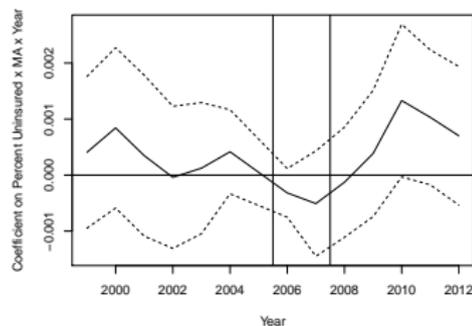
**"Triple difference" Estimate**

MA*Post*Uninsured2005	0.0005 (0.0005)
R^2	0.864
MA Mean	0.15

Significance Levels: * = 10%, ** = 5%, *** = 1%.

Standard errors are clustered by county.

Results: $5001-$10000 Past Due
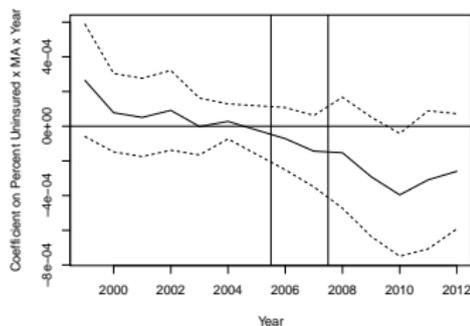
"Triple difference" Estimate

MA*Post*Uninsured2005	-0.0003 (0.0001)**
R^2	0.747
MA Mean	0.02

Significance Levels: * = 10%, ** = 5%, *** = 1%.

Standard errors are clustered by county.

Results: $10000+ Past Due
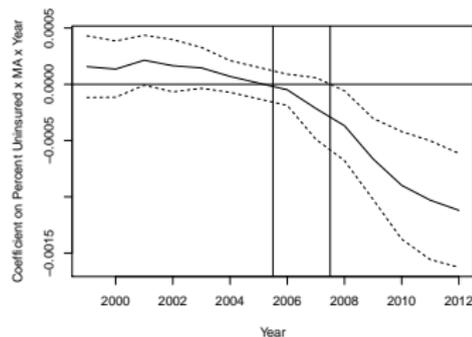
"Triple difference" Estimate

MA*Post*Uninsured2005	-0.0009 (0.0002)***
R^2	0.839
MA Mean	0.03

Significance Levels: * = 10%, ** = 5%, *** = 1%.

Standard errors are clustered by county.

Results

Effects by credit score:

► We divide the sample based on the credit score of an individual in 2005, the year before the reform occurred.

► We create two groups: high credit score (above the median credit score in MA in 2005) and low credit score (below the median).

► High credit score individuals may be able to borrow to smooth over a negative shock relative to low credit score individuals.

► Credit score may also proxy for relevant characteristics like wealth or educational attainment.

Results

Table : Effect of the Reform on High v. Low Credit Score Individuals

	Low Credit Score	High Credit Score
Effect of the reform on:		
Amount Past Due	-57.35 (14.09)***	-5.762 (7.873)
Total Balance	-34.33 (74.72)	-240.5 (121.2)*
Fraction of debt Past Due	-0.002 (0.0004)***	-0.0009 (0.0004)**
Amount in Collection	-0.0001 (1.20)	-24.54 (10.18)**
Risk Score	0.567 (0.161)***	0.584 (0.251)**
Bankruptcy last 24 mos	-0.0008 (0.0002)***	-0.0002 (0.0001)**

Significance Levels: * = 10%, ** = 5%, *** = 1%. Standard errors are clustered by county.

Results

Do these improvements in financial outcomes just reflect unrelated economic conditions in some counties in Massachusetts?

► Results are robust to MA-specific trends or shocks, and trends or shocks associated with the 2005 uninsurance rate.

► However, our results could be driven by shocks to high uninsurance counties in MA that just happened to be coincident with the reform.

We examine measures of economic performance that we think should be less affected by the reform to evaluate whether there is a relative improvement in are more affected Massachusetts counties over this period.

Results

Table : Concurrent economic improvement

Dependent Variable:	log(Unemployment Rate)	log(Business Bankruptcies)
$MA \times Post \times PercUninsured2005$	-0.017(0.016)	0.0008 (0.005)
R^2	0.493	0.847

Significance Levels: * = 10%, ** = 5%, *** = 1%. Standard errors are clustered by county.

Over 65 Results

Conclusion

We find that the Massachusetts reform had an effect on financial well-being:

- ► Decreased the amount past due and the probability of large delinquencies ($5001-$10,000 and $10,000+).
- ► Decreased the fraction of total debt past due.
- ► Increased credit scores.
- ► Decreased personal bankruptcy rates.
- ► Point estimates indicate a decrease in total debt and in the amount of 3rd party collections.

Results: Over 65

Table : Effect among Over 65 group (placebo test)

Dependent Variable:	Risk score	Total Debt	Amount Past Due	Bankruptcy
$MA \times Post \times PercUninsured2005$	-0.448 (0.578)	505.9 (376.3)	4.716 (22.44)	-0.000213 (0.000262)
R^2	0.274	0.613	0.516	0.204

Significance Levels: * = 10%, ** = 5%, *** = 1%. Standard errors are clustered by county.

Table : Effect among Over 65 group (placebo test)

Dependent Variable:	Fraction of debt past due	Collections
$MA \times Post \times PercUninsured2005$	0.0003 (0.0008)	13.99 (19.78)
R^2	0.274	0.613

Significance Levels: * = 10%, ** = 5%, *** = 1%. Standard errors are clustered by county.