The Employment Impact of Employer Insurance Mandate: Evidence from the Massachusetts Reform

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Abstract

This paper exploits the Massachusetts health care reform to study the impact of the employer health insurance mandate on employment by small business. Using a triple-difference method with the County Business Patterns (CBP) data from 2000 to 2011, I compare the number of employees in establishment size classes above and below 10, the threshold employment of the mandate. The specification includes two-way interacted fixed effects (state by year, size by year, state by size) as well as industry fixed effects. Preliminary results suggest that employment in the 11-50 size group fell by about 2 percent and the number of establishments in the same size group decreased by about 2.5 percent.

Introduction

The mandated benefit requirement for employers who hire more than 50 full time equivalent employees (30 hours or more a week[1]) in the Affordable Care Act (ACA) has recently raised debate about its potential effects about wages, hours of work, and numbers of employees in small businesses. Considering the potential negative impacts, the US government delayed the requirements of the small business health exchanges as well as the employer penalty from 2014 to 2015 (Lowry and Gravelle 2013). Most studies in this area have focused on wages and working hours (Gruber 1994b; Summers 1989; Currie and Madrian 1999) and the potential employment consequences of employer mandate have received much less attention. Some scholars recently examined the potential negative employment effects of the employer mandate, especially for low income workers (Baicker and Levy 2008; Burkhauser and Simon 2008). Considering that one third of uninsured workers earn wages close to minimum wages cannot adjust their wages to receive insurance, Baicker and Levy states that the evaluation of the employer mandate policy should consider the unemployment risk.

On the other hand, scholars who examined the employer insurance mandate in states did not find the negative employment effects of the employer mandate (Buchmueller 1999; Kolstad and Kowalski 2012; Thurston 1997). These studies used household surveys to estimate the effects on employment. Although household surveys provide detailed demographic information, establishment surveys provide more accurate measure of employment. In addition, these studies often include large business in their analysis, but large businesses may not respond to the employer mandate since most large businesses already provide health insurance. By focusing on small business with establishment survey, this paper tries to provide new evidence on the effect of the employer mandate on employment.

[1] Full-time Equivalent (FTE) Employee Calculator is available on the following link: https://www.healthcare.gov/shop-calculators-fte/

Small firms face different conditions in providing health insurance to their employees, compared to large business. They have higher administrative costs in the insurance market (Kapur 2004; Kapur et al. 2008; Li et al. 2013) and benefit less from scale economies and risk-pooling, compared to larger companies (Monheit and Vistnes 1994; Li et al. 2013). As a result, the proportion of small businesses that provide health insurance to their employees is much smaller than that of middle and large businesses before ACA. According to the Medical Expenditure Panel Survey (MEPS), the percentage of private-sector employees in establishments with less than 50 employees that provide health insurance was 42.2 percent, whereas that in establishments with more than or equal to 50 employees that provide health insurance was 95.6 percent in the U.S. in 2005[2]. The percentage of private-sector employees in companies with 25-99 employees (small and medium size) that provide health insurance is 81.6 percent[3]. This low coverage rate shows that small businesses are more likely to be affected by the mandated benefits. At the same time, small, young firms have been argued to be a major source of net job creation, so there may be concern that the employer insurance mandate could affect the level of employment in small business (as well as some medium size business).

This paper examines the impact of the employer mandate on employment in small businesses by using the firm size threshold of mandated health insurance requirements in Massachusetts together with differences across industries and states in a triple-difference identification strategy. The Massachusetts program requires firms with more than 10 full time equivalent (FTE) employees to either provide health insurance to their employees or pay $295 penalty per person. By using data from the County Business Patterns (CBP) from 2000 to 2011, I compare the level of employment in establishment sizes below 10 (1-4 and 5-9)

[2] The percent of establishments that provide health insurance is available at http://meps.ahrq.gov/mepsweb/data_stats/summ_tables/insr/state/series_2/2006/tiia2.htm
[3] The percent of establishments that provide health insurance is available at http://meps.ahrq.gov/mepsweb/data_stats/summ_tables/insr/state/series_2/2006/tiia2.htm

with the level of employment in establishment sizes over 10 (10-19 and 20-49) to estimate how much employment have been reduced due to the employer mandate. The specification includes two-way interacted fixed effects (state by year, size by year, state by size) as well as industry fixed effects.

The mandating health insurance on employers has a negative impact on employment in small business in Massachusetts. The results suggest that employment in the 11-50 establishment size group fell by about 2 percent. The results are robust to using different size groups for treatment and controls and different sets of states including New England, Northeast, and all U.S as control groups.

Massachusetts Health Care Reform Act and Affordable Care Act

Massachusetts passed the Massachusetts Health Care and Insurance Reform Law in October 2006 and the mandate requirements for individuals started in July 2007. The requirement for firms with more than 10 full time equivalent (FTE) employees to provide either health insurance or pay $295 penalty per employee was finalized in October 2007.

The Massachusetts health reform provides a useful context to analyze the impact of mandated health benefits. Since the ACA was designed based on the Massachusetts healthcare reform, these two health care reforms have quite similar structures. But there are some differences. The ACA would require firms with more than 50 FTE employees (30 hours or more per week) to provide health insurance to their employees. If employers do not provide health insurance, they are required to pay $2,000 in penalties per employee per year. But the first 30 FTE employees are exempted from this penalty (Lowry and Gravelle 2013).

On the other hand, the Massachusetts Healthcare Reform requires that employers with more than 10 FTE employees (35 hours or more per week) provide health insurance to their employees. The insurance coverage should include options that exempted from taxes and

employers have to contribute more than 33 percent of insurance premium. Or employers should pay $295 per employee a year as the "fair share" contribution (Gabel et al. 2008). Since the size standard for the requirement in Massachusetts Healthcare Reform is smaller than the ACA, this includes more small businesses. However, the penalty is much smaller than that in the ACA, and it is possible that most small businesses decide to pay penalties instead of bearing insurance premium. Consequently, ACA may have a greater impact on small business employment.

About 12 percent of all Massachusetts employers have more than 10 FTE employees (Massachusetts DHCFP 2011). Approximately 4.6 percent of all Massachusetts employers did not meet the standard so that they are required to pay fair share contribution in 2010 (Massachusetts DHCFP 2011). This means that about 40 percent of Massachusetts employers subject to the employer mandate choose to pay fair share instead of providing health insurance. Considering that about 97 percent of establishments with more than 50 employees provide health insurance[4], it is fair to assume that in the case of Massachusetts Health Reform, most small businesses subject to the employer mandate would choose to pay penalties.

The standard economic model of mandated benefits predicts that if employees value benefits they receive, they accept lower wages and bear costs of benefits (Summers 1989). In this case, there is no or less dis-employment effects of the employer mandate. But if employers choose penalties instead of providing health insurance, the employer mandate increases labor costs and employees receive no benefits. Because of this, it is expected that the penalties can reduce the level of employment.

Data

[4] The percent of establishments that provide health insurance is available at http://meps.ahrq.gov/mepsweb/data_stats/summ_tables/insr/state/series_2/2006/tiia2.htm

This study uses the County Business Pattern (CBP) data from 2000 to 2011. The CBP contains annual economic data by county (or by state). It provides the number of establishments, the number of employees in March, and the amount of payrolls. These economic data are divided by state, by county, by industry, and by establishment size group. The size group includes establishments with 1-4, 5-9, 10-19, 20-49, 50-99, 100-249, 250-499, 500-999, and more than 1000 employees. Larger firms are unlikely to be directly affected because they already provide health insurance. Since larger firms have administrative advantages to provide health insurance, it is inappropriate to use larger firms as control groups. Size groups more than 50 employees are excluded from the main analysis. But the size group 50-99 is used to examine potential effects of the employer mandate in ACA.

Considering heterogeneous characteristics in different industries, I also restrict a sample to construction, manufacturing, wholesale trade, retail trade, and transportation/warehousing. Since Massachusetts Health Reform increase demand for healthcare and health related sectors (for example, information industry), labor demand in these sectors may increase regardless of the employer mandate. About 40 percent of employees are covered by restricted industries.

At the county level, the CBP data provide only the number of establishments by size group, not employments and payroll. Because the employer mandate requirement is by size (over 10) and at the state level (Massachusetts), the CBP at the state level provides appropriate variation to evaluate the effects. As a result, I apply the state level data for estimating the impact with firm size thresholds.

Nonetheless, there are some challenges in using the CBP data. First, the size category 10-19 includes establishments with 10 employees. The establishments with exactly 10 employees are included in treatment group instead of control group in the analysis. This implies the results may underestimate the impact. Second, the state level data may suffer

from higher level of aggregation in that both observable and unobservable endogenous factors at the firm or establishment level could not be addressed. In addition, since there are no other controlling variables by establishment size group within specific industry, it is impossible to control time varying observed and unobserved factors within each industry specific size group. The identifying assumption is that the mandated health insurance requirement is not endogenous to these factors and that the triple-difference estimates without other controlling variables would be similar to those with controlling variables.

Of course, for a more accurate measure of the impact of the mandated health insurance on small business, firm level data is required. With firm level data, it would be possible to control firm level characteristics as well as unobserved heterogeneity. However, confidentiality issues make it difficult to access firm level data in the United States. Although it is possible to get similar information with establishment size group from Current Population Survey (CPS) or Medical Expenditure Panel Survey (MEPS), the size categories in these data sets are larger than those in the CBP. These more size groups provide opportunities to compare narrower bandwidths between 5-9 and 10-19 as well as carry out robustness checks with different controlling groups.

Treatment/Control Group: Figure 1 provides 5 trend lines for employment in different size groups in Massachusetts. The two lines at the bottom show the trends of control groups with size 1-4 and 5-9. Compared to these two lines, the lines for treatment groups with size 10-19 and 20-49 show very similar trends before 2007 and then dropped rapidly from 2007 to 2011. Based on these trends, I conclude that common trends assumption for treatment and control groups are not violated. The trend line for the size group 50-99 shows a little decreasing trend before 2007. Although the size group 50-99 is not included in the main analysis, I checked sensitivity of estimates by including this group. This exercise is quite useful in figuring out the potential impact of mandated benefit in ACA.

Experimental/Non-experimental States: Massachusetts is the only state (except for Hawaii) that applied a employer insurance mandate requirement. Massachusetts is considered an experimental state and remaining states are considered potential control states. This study constructs three sets of controlling states in Table 2. The primary set of control states is the states in the Northeast region. These states include CT, DE, MD, ME, NH, NJ, NY, PA, RI, and VT. Other sets of control states are the New England states and the 48 contiguous sates excluding Alaska, District of Colombia, and Hawaii. Figure 2 provides the average employment of small business with less than 50 employees in Massachusetts and the various control groups of control states. Considering periods before 2007, all three trends are not much different. Regardless, Massachusetts and Northeast states show very similar trends. On the other hand, the gap between Massachusetts and contiguous states seemed to decrease before 2007. And the New England shows a flat trend before 2007.

Pre/Post Periods: The Massachusetts Health Care and Insurance Reform Law was enacted in 2006, but the actual implementation for employer mandate was completed in the middle of 2007. However, since the CBP provides annual data, it is impossible to exactly set the implementation of the reform in the analysis. The post period is defined from 2008 to 2011 including the transition period. Since CBP data is March employment and 2007 is a transition period, the estimates may capture an anticipatory effect that employers reduce employees or cut working hours to avoid requirements. I compare estimates with and without 2007 in the data analysis. Before the reform period in 2006, there was a dot-com bubble in 2000 and 2001. This exogenous shock might influence the size growth of treatment and control group differently. However, as shown in Figure 1 and 2, the levels of employment in 2000 and 2001 is not significantly different from other periods before 2007. Therefore, the study defines pre-periods from 2000 to 2006.

Method

In Massachusetts Health Reform, only those small businesses with more than 10 FTE employees are required to provide health insurance. Small businesses with less than or equal to 10 FTE employees are not affected by mandated health insurance. This situation provides two potential comparisons: (1) between Massachusetts and other control states as well as (2) between firms with more than 10 employees and firms with less than 10 employees. I combine both by constructing the triple-difference estimate of the effect of intervention as in Gruber (1994a).

$$\begin{aligned} Log(EMPLOYMENT) = \theta + \beta_1 POST + \beta_2 MA + \beta_3 SIZE \\ + \beta_4 (MA * POST) + \beta_5 (POST * SIZE) + \beta_6 (MA * SIZE) \\ + \beta_7 (MA * POST * SIZE) + u \end{aligned}$$

where $Log(EMPLOYMENT)$ is the logarithmically transformed employment by each category of size group (g) in each industry (i) in each state (s) in year (t); $POST$ is a dummy variable for post time periods from 2007 to 2011; MA is the binary variable equal to 1 if an observation is in Massachusetts; $SIZE$ is the dummy variable equal to 1 if an observation is in the comparison size group of 10-19 or 20-49, in alternative specifications; θ is a constant term; and u is the error term. The coefficient for the triple interaction term β_7 is the estimate for the policy impact.

The employer mandate could not only reduce employment but also change the distribution of business sizes. When small businesses hire one more employee at the threshold, they pay a lump sum cost because they need to provide health insurance or pay penalties for all employees. This situation may incentivize small businesses to stay under the threshold. To find the distributional changes in business sizes, I do similar exercise to

examine the effects of the employer mandate on the number of establishments within size categories.

The number of establishments is count data, but the number in each observation is quite large and does not include zero values. I therefore apply the least square estimation strategy to the triple-difference model with the logarithmically transformed number of establishment.

$$\begin{aligned} Log(ESTABLISHMENT) = \lambda + \delta_1 POST + \delta_2 MA + \delta_3 SIZE \\ + \delta_4 (MA * POST) + \delta_5 (POST * SIZE) + \delta_6 (MA * SIZE) \\ + \delta_7 (MA * POST * SIZE) + \nu \end{aligned}$$

where $Log(ESTABLISHMENT)$ is the logarithmically transformed number of establishments by each category of size group in each industry in each state in year *t*; λ is a constant term; and ν is the error term. All the other variables are the same as in the triple-difference model for employment. In this estimation, δ_7 is the estimate for the effect of the employer mandate on the number of establishments.

Considering that the number of establishments is a count variable, I also consider a negative binomial regression model (NB) as a robustness check.

$$\Pr(y_i|x_i) = \frac{\Gamma(y_i + \alpha^{-1})}{y_i!\,\Gamma(\alpha^{-1})} \left(\frac{\alpha^{-1}}{\alpha^{-1} + \mu_i}\right)^{\alpha^{-1}} \left(\frac{\mu_i}{\alpha^{-1} + \mu_i}\right)^{y}$$

$$\begin{aligned} \mu_{it} = \exp[\pi_{it} + \eta_1 POST_t + \eta_2 MA_i + \eta_3 SIZE_i \\ + \eta_4 (MA_i * POST_t) + \eta_5 (POST_t * SIZE_i) + \eta_6 (MA_i * SIZE_i) \\ + \eta_7 (MA_i * POST_t * SIZE_i) + \varepsilon_{it}] \end{aligned}$$

where $\exp(\varepsilon_{it})$ is assumed to follow a gamma distribution with dispersion parameter α. As in the linear model, the coefficient of the triple interaction term η_7 is the effect of policy. By comparing δ_7 and η_7, I can check whether the impact estimates are stable for different model specifications.

One of the potential challenges in estimates for both the number of establishments and employment is that some employers may reduce employees to avoid requirements. In this case, these employers move into size 5-9, which creates upper bias in the estimates. In order to check this issue, I separately estimate the effects between size 10-19 and 20-49 and compare these estimates. Since establishments in size 20-49 are less likely to move into size 5-9, if these two estimates are similar, I assume that employers do not move into size 5-9 to avoid requirements.

In addition to these basic specifications for the analysis of employment and establishment, I apply state, size, and year fixed effects. Considering the fact that firm size and growth could vary by industry, I also use industry fixed effects. Finally, in order to control state-specific and size-specific shocks over this period as well as time-invariant characteristics of the size group in each state, I use state by year, size by year, sate by size fixed effects. This approach allows me to control additional variations from different sizes and states across time. The clustered standard error at the state level. I also applied the clustered standard error at the state size level.

The identifying assumption of the triple-difference model is that in addition to the state policy, there are no contemporaneous shocks that affect the outcome of interest (Gruber 1994a). Yet, the Great Recession in the post-period may differently affect experimental and non-experimental states. Long and Stockley (2010) showed that Massachusetts experienced recession from fall 2008 with the Current Population Survey (CPS) March. Concerning that the estimates may capture the effects from the Great Recession, some studies used only 2007

and 2008 to estimate the impact of Massachusetts Healthcare Reform (Long, Yemane, and Stockley 2010; Long, Stockley, and Yemane 2009). But Heim and Lurie (2014) showed their estimates do not suffer from Great Recession by including post periods from 2007 to 2010. They assume that the Great Recession negatively affected all states in a similar way. Following recent research, this paper also includes longer post periods from 2008 to 2011 in the post period. However, since it is possible that the Great Recession could differently affect small business across states, I check the sensitivity of my estimates by using models with and without post periods from 2009 to 2011.

Results

Cross Tabulation: A cross tabulation of average employment with clustered standard errors and the number of observations is presented in Table 2. The upper panel compares the average employment of treatment size groups (10-49 employees). The bottom of Panel A is the difference between Massachusetts and Northeast states in pre and post periods. The last column of Panel A is the time difference of the average employment in Massachusetts and the Northeast states. The right bottom of Panel A provides the difference-in-difference estimate for treated size groups (DD_{TS}). The results show that the mean employment of Massachusetts has decreased by an average of 2348 employees per year during the post period, while that of the Northeast states has fallen by an average of 1354 employees per year. Differencing these two averages, the DD_{TS} implies that the mean employment of Massachusetts has decreased by an average of 893 employees per year due to mandated health benefits. This reduction is statistically significant.

Panel B provides some evidence that the decrease in the average employment in Massachusetts may be due to the mandated health benefits by comparing the control groups (1-9 employees) in between Massachusetts and Northeast states. The right bottom of Panel B

provides the difference-in-difference estimate for controlled size groups (DD_{CS}). DD_{CS} means that the mean employment in Massachusetts fell by an average of 250 per year. However, the magnitude of DD_{CS} is about four times less than that of DD_{TS} and is statistically insignificant.

By subtracting DD_{CS} from DD_{TS}, the triple-difference estimate (DDD) is calculated in Panel C. The DDD estimate is -643.20 and statistically significant. This means that the estimated effect of the mandated health benefit in Massachusetts is a reduction of an average employment by 643 employees per year during post period. These triple-difference estimates control for size group specific shocks, but they assume no heterogeneous shocks from the Great Depression.

Triple Difference: I estimate the triple-difference regression model with different specifications. The triple-difference estimates (β_7 in the method section) for the average employment are provided in Table 7. The first column shows DDD estimates used in Table 6. Considering the fact that each observation represents the number of employees in each size group in each industry in each state, it is quite difficult to interpret the results. Therefore, the logarithmically transformed number of employees is used in the remaining regression models. In the second column, the DDD estimate of -0.0456 means that the mandated health benefit reduced about 4.5 percent of employees in small businesses. When the year and state fixed effects are added to this model, the DDD estimate falls to -0.0278. When the additional fixed effects including size and industry are added to the model, the magnitude of the DDD estimate drops to -0.0177. Finally, when state-specific shocks, size-specific shocks, and time-invariant characteristics of the size group in each state are controlled, the DDD estimate became -0.0189 which is very close to that in column 4. This implies that the effect of the employer insurance mandate is around 2 percent reduction in employment over post periods.

For the number of establishments, I also estimate the triple-difference with linear regression and negative binomial regression models in Table 3. Both the number of establishments and logarithmically transformed number of establishments are used in the linear regression model. In the first column, the DDD estimate of -32.30 shows the potential negative impact from the mandated health benefit, but it is not statistically significant. When the logarithmically transformed variable is used in the regression model, the DDD estimate of -0.0194 becomes significant. With a negative binomial specification, the DDD estimate of -0.0231 is very close to that in the linear regression model. When the additional fixed effects are added, the estimate becomes -0.0238 in the fourth column and -0.0256 in the fifth column. These estimates imply that the mandated health benefit reduces the average number of establishments in the treated size category by about 2 percent during this period.

Robustness Check: In order to further evaluate the robustness of the DDD estimates, the study estimates the regression model with narrower size groups as well as various combinations of comparisons. These results are provided in Table 5. In the first column, the DDD estimate of -0.0293 from using size group 5-9 and 10-19 is larger than the estimate from using 1-9 and 10-49. When the size group 1-4 is used as a control group in the column three and four, the magnitudes of DDD estimates decrease and the significance disappears. This result shows some possibility that using size groups farther from the threshold may reflect different characteristics in sub-populations. underestimate the magnitude of DDD estimates for employment, since some companies close to the threshold (10 employees) may have some incentives to reduce employees in order to avoid the mandated requirement. In this case, I would expect to see a greater reduction in size group 10-19 than in 20-49 assuming two treatment size groups have similar characteristics. The column 2 shows that the DDD estimate using size group 20-49 is almost the same as that using size group 10-19.

I also applied the same analysis to the DDD estimates for the number of establishments in Table 6. In this analysis, both linear and negative binomial regressions are used to evaluate the stability of estimates in different model specifications. In this case, the DDD estimates using size group 10-19 is smaller than that using size group 20-49 as treatment group. Since the estimate is smaller in size group 10-19, this lower estimate does not result from avoiding mandated benefits. Rather, it seems that some number of establishments close to size 20 moved from size 20-49 to 10-19.

Finally, I also conduct placebo tests to check whether the effect is due to the mandated health benefit or other shocks in previous years. I generate different post dummy variables for 2004 and 2005 pre periods. Then, I estimate the same regression models used in the study. The DDD estimates from this placebo test were statistically insignificant.

Conclusion

This paper uses a unique natural experimental setting created by the Massachusetts Health Care and Insurance Reform of Law 2006 to empirically analyze the impact of employer mandate on employment by small business with less than 10 employees. I found a negative impact of the mandated health insurance on employment by small businesses, and the impacts vary from about 2 percent to 3 percent depending on various specifications. These estimates are consistent and robust.

It should be noted that the penalty for small businesses deciding not to provide health insurance is not that large in the case of Massachusetts. The "fair-share" contribution is $295 per employee per year. A small firm with 20 employees could pay about $6,000 per year to avoid bearing a much higher insurance premium. Such a small cost could be much more readily offset with adjustments to employees' wages or working hours than the large insurance cost. In this case, the firm may bear no cost, and employment may be unaffected.

This possibility is consistent with previous research on mandated benefits that found no significant impact on employments when the wages were adjusted for (Gruber 1994b).

Despite this possibility, I find a negative impact from the mandated health benefits. One potential explanation is that wages or working hours may not adjust (Baicker and Levy 2008). Perhaps minimum wages, which are more common in small businesses, are binding for many of the treated firms. In this case, firms are more likely to reduce employment. Future studies could fruitfully examine the different dimensions of adjustment to mandated benefits.

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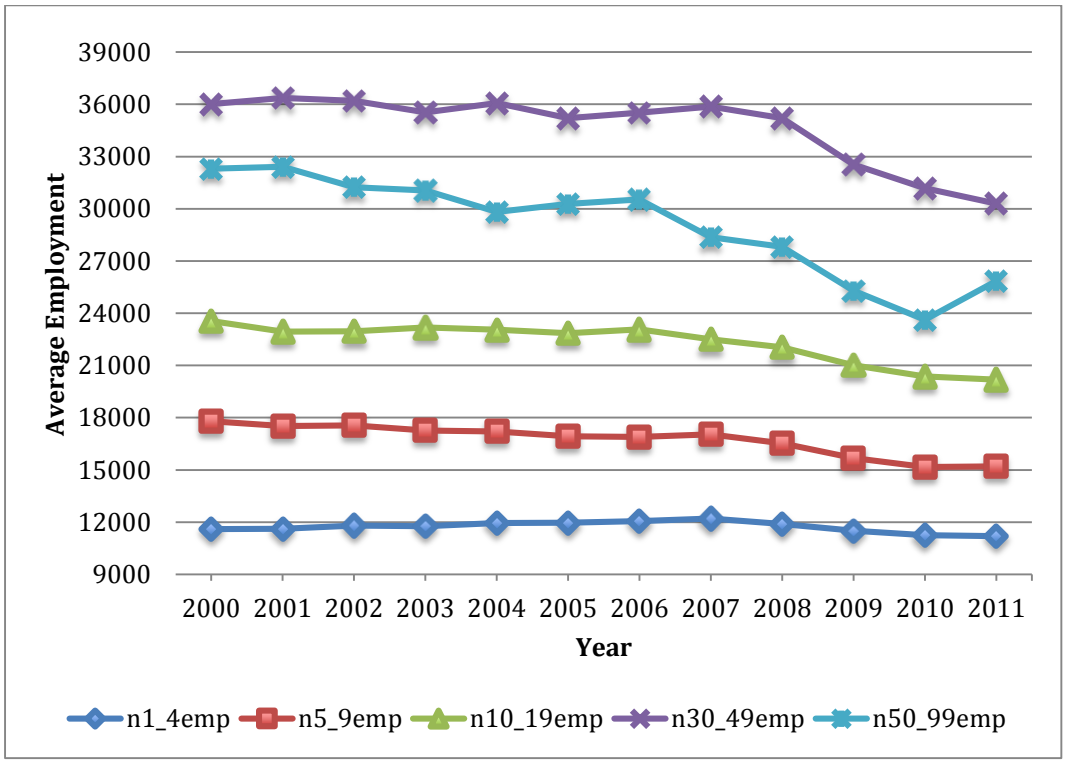
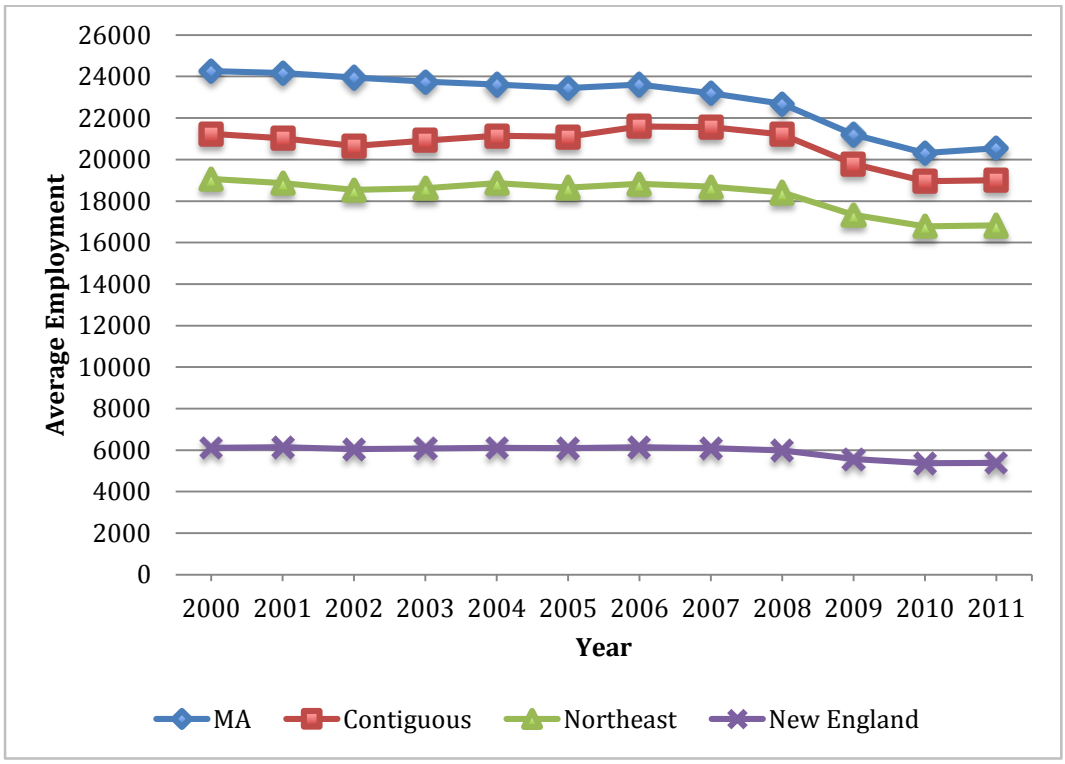
[Figure 1] The Average Employment in Small Business in MA



Note: The figure was calculated based on data from the County Business Pattern dataset

[Figure 2] The Average Employment in Small Business (<50 employees) in MA and US



Note: The figure was calculated based on data from the County Business Pattern dataset

[Table 1] Set of Control States

Control States	Description
Contiguous States	48 states excluding non-contiguous states such as Alaska, District of Colombia, and Hawaii
Northeast States (Primary)	CT, DE, MD, ME, NH, NJ, NY, PA, RI, VT (Notes: DC is excluded)
New England States	CT, ME, NH, RI, VT

[Table 2] Effect of Mandated Health Benefit: Triple-Difference of Average Employment

	Before	After	Difference over Time
Panel A			
Treatment Group (11~50)			
Experimental State (MA)	29467.73	27119.82	-2347.91
	(6402.114)	(5898.94)	(478.23)
	[70]	[50]	[120]
Nonexperimental State (Northeast)	23646.61	22192.57	-1454.04
	(7907.003)	(7478.35)	(458.65)
	[700]	[500]	[1200]
Difference between States	5821.116	4927.25	DD_{TS} = -893.87
	(7869.21)	(7447.65)	(456.68)*
	[770]	[550]	[1320]
Panel B			
Control Group (1~10)			
Experimental State (MA)	14568.04	13765.84	-802.20
	(2754.47)	(2159.4)	(585.94)
	[70]	[50]	[120]
Nonexperimental State (Northeast)	11969.37	11417.83	-551.55
	(4136.18)	(4007.70)	(179.16)
	[700]	[500]	[1200]
Difference between States	2598.67	2348.01	DD_{CS} = -250.65
	(4116.41)	(3991.25)	(178.39)
	[770]	[550]	[1320]
Panel C			
DDD Estimate			DDD = -643.20
			(323.52)*
			[2640]

Note: Clustered standard errors at the state level are in parentheses. The number of observations is in brackets.
*** p<0.01, ** p<0.05, * p<0.1

[Table 3] Triple-difference Estimates for the Average Number of Employees in Small Business

VARIABLES	(1) Number of Employees	(2) Log of Employees	(3) Log of Employees	(4) Log of Employees	(5) Log of Employees
DDD	-643.2*	-0.0456**	-0.0278**	-0.0177**	-0.0189**
	(323.5)	(0.0163)	(0.0121)	(0.00781)	(0.00810)
Size(>10)	11,677**	0.701***	0.721***	0.645***	
	(3,813)	(0.0370)	(0.0355)	(0.0384)	
MA	2,599	0.701*	1.390***	1.408***	
	(4,119)	(0.354)	(0.0204)	(0.0180)	
Post	-551.5**	-0.0891***	-0.119***	-0.106***	
	(178.4)	(0.0182)	(0.0176)	(0.0127)	
Size(>10)*Post	-902.5**	0.0141	-0.00363	-0.0137	
	(323.5)	(0.0163)	(0.0121)	(0.00781)	
MA*Post	-250.7	0.0320	0.0133	0.00150	
	(178.4)	(0.0182)	(0.0144)	(0.00867)	
Size(>10)*MA	3,222	0.0847**	0.0645*	0.0522	
	(3,813)	(0.0370)	(0.0355)	(0.0340)	
Constant	11,969**	8.588***	7.907***	8.038***	7.986***
	(4,119)	(0.354)	(0.0215)	(0.0401)	(0.0441)
Observations	2,640	2,622	2,622	2,622	2,622
R-squared	0.056	0.098	0.693	0.956	0.958
Year FE	NO	NO	YES	YES	
State FE	NO	NO	YES	YES	
Size FE	NO	NO	NO	YES	
Industry FE	NO	NO	NO	YES	YES
Year#Size FE					YES
State#Year FE					YES
Size#State FE					YES

Note: Clustered standard errors at the state level are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

[Table 4] Triple-difference Estimates for the Average Number of Establishments in Small Business (<50 employees)

VARIABLES	(1) Number of Establishments	(2) Log of Establishments	(3) Establishments (NB Reg)	(4) Establishments (NB Reg)	(5) Establishments (NB Reg)
DDD	-32.30	-0.0194***	-0.0231*	-0.0238***	-0.0256***
	(41.08)	(0.00600)	(0.0121)	(0.00656)	(0.00617)
Size(>10)	-2,807**	-1.053***	-1.225***	-1.762***	
	(1,034)	(0.0350)	(0.0699)	(0.0554)	
MA	650.4	0.724*	0.152	1.977***	
	(1,412)	(0.356)	(0.355)	(0.0148)	
Post	-128.6**	-0.0577***	-0.0329**	-0.108***	
	(50.07)	(0.00634)	(0.0147)	(0.0105)	
Size(>10)*Post	61.54	-0.0130*	-0.0263**	-0.0221***	
	(41.08)	(0.00600)	(0.0121)	(0.00659)	
MA*Post	-12.32	0.000146	0.00195	0.000119	
	(50.07)	(0.00634)	(0.0147)	(0.00673)	
Size(>10)*MA	-371.7	0.0611	0.0625	0.0760**	
	(1,034)	(0.0350)	(0.0699)	(0.0347)	
Constant	3,975**	7.331***	8.288***	7.036***	7.053***
	(1,412)	(0.356)	(0.355)	(0.0384)	(0.0316)
Observations	2,640	2,640	2,640	2,640	2,640
R-squared	0.084	0.157			
Pseudo R-squared			0.014	0.194	0.197
Year FE	NO	NO	NO	YES	
State FE	NO	NO	NO	YES	
Size FE	NO	NO	NO	YES	
Industry FE	NO	NO	NO	YES	YES
Year#Size FE					YES
State#Year FE					YES
Size#State FE					YES

Note: Clustered standard errors at the state level are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

[Table 5] Triple-difference Estimates for the Average Number of Employees in Small Business (<50 employees) with Different Size Group Comparisons

	(1)	(2)	(3)	(4)
VARIABLES	5-9 & 10-19	5-9 & 20-49	1-4 & 10-19	1-4 & 20-49
DDD Estimates	-0.0293**	-0.0278***	-0.00973	-0.00438
	(0.0112)	(0.00684)	(0.0136)	(0.0120)
Observations	1,303	1,304	1,318	1,319
Industry FE	YES	YES	YES	YES
Year#Size FE	YES	YES	YES	YES
State#Year FE	YES	YES	YES	YES
Size#State FE	YES	YES	YES	YES

Note: Clustered standard errors at the state level are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

[Table 6] Triple-difference Estimates for the Average Number of Establishments in Small Business (<50 employees) with Different Size Group Comparisons

	(1)	(2)	(3)	(4)
VARIABLES	5-9 & 10-19	5-9 & 20-49	1-4 & 10-19	1-4 & 20-49
DDD Estimates	-0.0127**	-0.0214**	-0.0175	-0.0261**
(Linear Regression)	(0.00554)	(0.00806)	(0.0131)	(0.00974)
DDD Estimates	-0.0115*	-0.0257***	-0.0214*	-0.0383***
(NB Regression)	(0.00623)	(0.00709)	(0.0114)	(0.00909)
Observations	1,320	1,320	1,320	1,320
Industry FE	YES	YES	YES	YES
Year#Size FE	YES	YES	YES	YES
State#Year FE	YES	YES	YES	YES
Size#State FE	YES	YES	YES	YES

Note: Clustered standard errors at the state level are in parentheses. *** p<0.01, ** p<0.05, * p<0.1