The Effects of the Universal Health Insurance Mandate on Insurance Coverage and the Labor Market: Evidence from Massachusetts

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Abstract:

This paper reviews evidence of the effects of the universal health insurance mandate in Massachusetts. Using a different-in-different model, this study focuses on the co-evolution of insurance coverage and labor markets. I find that under the recent legislation, workers from firms of varying sizes demonstrate different patterns with regards to obtaining insurance coverage. While employer-sponsored health insurance is designed to be the primary source of coverage for Massachusetts residents under reform, two legal loopholes exist in the employer mandate. For mid-sized firms, the probability of part-time employees working without employer provided insurance has increased.

1. Introduction

Since the Patient Protection and Affordable Care Act was signed into law, there has been extensive speculation and debate surrounding the effect of the universal health insurance mandate on the labor market: how will employer health insurance offering respond to health reform? Will the Affordable Care Act, a universal health insurance mandate, be a job killer? The debate became more heated with the announcement by the Department of the Treasury that the
implementation of the employer penalty for not offering insurance will be delayed until 2015/2016.

In 2006, Massachusetts passed a comprehensive health reform legislation to expand health coverage to all residents. Massachusetts health reform has achieved near-universal insurance coverage, yet little is known about the effects of this legislation on the labor market. Similar to Massachusetts insurance reform, the federal Patient Protection and Affordable Care Act (PPACA) also features insurance exchanges, individual and employer mandates, and expanded Medicaid coverage. Due to the similarity between the Massachusetts health reform and the Affordable Care Act, much can be learned from Massachusetts's experience of implementing health insurance coverage expansions and employer provided insurance universal coverage law. This situation offers insight into how some businesses and their employees might react to requirements in federal law.

Several studies sought to investigate the effect of the universal health reform and its impact on the labor market outcomes like employment and wage (Buchmueller, 2013; Kolstad, 2012). However, they did not investigate the potential legal loopholes in part-time status, employer provided coverage and Medicaid; nor did they explore the question by firm size, even though studies have shown that different sized firms have distinct elasticity of demand of employer provided insurance (Gruber, 2004).

The primary purpose of this paper is to determine whether the Massachusetts healthcare reform has, in fact, improved health insurance coverage. If the reform indeed improved the coverage, which channels were utilized to accomplish this? Health care coverage includes employer-provided insurance, individually-purchased coverage, or Medicaid.
Empirical analysis examines employment status and wages in Massachusetts and other New England states using data from the March Current Population Survey (CPS) for 1999–2009. One found that under the recent legislation, workers from organizations of different sizes showed contrasting preference patterns with insurance coverage. For instance, although small companies are not mandated to abide by the federal healthcare legislation, workers from small firms usually had employer-provided insurance coverage. On the other hand, full-time employees of mid-sized businesses did not seem to gain that much access to employer-provided insurance, even though employer-sponsored health insurance was specifically designed to be the primary source of coverage for this population. One of the possible reasons for this discrepancy may result from the two legal loopholes that exist in the employer mandate. Some of the supporting evidences for this argument are based on the increased number of part-time employees in mid-sized firms and the increased employer-provided insurance coverage along with an increase in part-time status.

The discovery of such co-evolution of insurance coverage and labor markets is critical. First of all, less employer coverage may increase Federal outlays if more workers receive premium tax credits in the exchanges or enroll in Medicaid. Second, if the employers who drop coverage have relatively less healthy workers, this worsens the exchange risk pool, driving up average premiums. This paper is the first to examine the impact of the 2006 Massachusetts health care reform on the part-time status and insurance coverage.

2. Background and Previous Literature
   a. Massachusetts Health Care Reform
In 2006, Massachusetts enacted comprehensive health reform intended to provide universal health insurance coverage for state residents. This reform law expanded coverage through three key features: employers must provide coverage or face government imposed fines, individuals must obtain coverage or pay a penalty, and there must be expansions in publicly-subsidized coverage such as Medicaid.

Employer-sponsored health insurance is designed to be the primary source of coverage for Massachusetts residents under the reform (Raymond, 2007). State legislation Chapter 151F Employer-Sponsored Health Insurance Access requires that firms with 11 or more Full-Time Equivalents (FTEs) include an insurance plan that allows full-time employees to purchase health insurance using pre-tax wages (M.G.L. c. 151F). Employers must also contribute with at least 33% of the cost of insurance premium. In addition, if the employer fails to offer such a plan, and instead has its employees receive care through the state’s uncompensated care pool, the employer will be subjected to the Free Rider Surcharge penalty (M.G.L. c. 151F).

b. Legal Loopholes

The Massachusetts Health Care Reform has two legal loopholes that 151F employers could exploit to escape from their responsibility. First, the compliance cost for employers to avoid Free Rider Surcharge Penalty is minimal; that is, they only need to set up a plan without contributing to it (Kolstad, et al., 2012). This argument explains why not a single employer was liable for the Free Rider Surcharge for fiscal years ending 2008 and 2009.

The second loophole is the exclusion of part-time workers from the employer-sponsored plan. As defined by the Commonwealth Health Insurance Connector Authority, an employer
must abide by the 151F if the sum of the total payroll hours for all employees during the applicable determination period divided by 2,000 is greater than or equal to 11. A full-time employee has to work at least 35 hours per week, or at least the minimum number of weekly payroll hours required for any employee to be eligible for the Employer's Full-time Health Plan Benefits (956 CMR 4.00). Based on this fact, 151F employers could replace a full-time position with multiple part-time positions to evade the insurance sponsorship.

Despite the economic crisis, Massachusetts health care reform has been especially successful in expanding insurance coverage among the non-elderly population. However, due to loopholes in legislation, employer-sponsored health insurance might have contributed to a smaller proportion than originally intended.

c. *Employer-Sponsored Health Insurance and the Labor Market*

The perfect competitive theory suggests that when employers are required to offer health insurance coverage or pay fines based on employment, as it is required under the Massachusetts's 2006 reform, employers will reduce wages and/or other worker compensation over time to cover these new costs. If wages paid by organizations are close to minimum wage or if wages and benefits cannot be altered due to collective bargaining agreements or market pressures, employers may respond by demanding less labor that leads to a reduction in employment (Dubay, 2012). It is important to notice that despite the recession, insurance coverage has remained strong in Massachusetts under the health reform. Nonetheless, data on premium trends from the Division of Health Care Finance and Policy of the state suggest that employers have
achieved this by scaling back the scope of insurance coverage they provide and increasing cost-sharing for workers, which in turn shifts more of the direct costs of coverage onto workers.

Kolstad and colleagues (2012) asserted that health reform contributed to the change in wages associated with gaining employer-sponsored health insurance and the welfare impact of the labor market distortion. Taking as a schema the 2006 reform implemented in Massachusetts, Kolstand and colleagues (2012) found that jobs with employer-sponsored health insurance pay wages that are lower by an annual average of $6,058, indicating that the compensating differential is only slightly smaller in magnitude than the average cost to employers. Subsequently, because Massachusetts’s newly-insured employees valued employer-sponsored health insurance, they were willing to accept lower wages, and the deadweight loss of mandate-based health reform was less than 5% of what it would have been if the government had instead provided health insurance by levying a tax on wages.

3. Data and Descriptive Statistics

a. Sample Construction

The empirical analysis examines the employment and wages of employees in Massachusetts and other states using the Current Population Survey (CPS) data from 2000 to 2010, which collected information corresponding to 1999 to 2009. One limited the year to 2009 to avoid the potential confounding impact of the Affordable Care Act, which was signed into law on March 23, 2010. CPS is a nationally representative household survey of US civilians that focuses on labor-force information and is conducted by the Bureau of Labor Statistics. For this study, one relied on the Annual Social and Economic Supplement to the CPS, which provides
data on health insurance coverage, demographic characteristics, income, and firm size. One included adult civilians who worked either full-time or part-time from 1995 to 2012. The sample was limited to this age range (i.e., 21-63) because this group has strong labor force attachment. People who are self-employed with business income are also excluded because this analysis is focused on employees. Also, individuals whose hourly wage rates were less than $5 or greater than $100 were excluded from the data analysis.

In assessing how Massachusetts’s health reform initiative has affected labor market characteristics in the state, one compared the changes of insurance coverage before and after the health reform was implemented for both the treatment group (i.e., employees in Massachusetts) and the comparison group (i.e., employees in other states who did not implement health reform). One used a difference-in-differences framework, wherein the change for the comparison group (before and after implementation of the reform) is subtracted from the change for the treatment group, to control for other changes over time beyond health reform. In other words, the comparison group provides an estimate of what would have been the case for Massachusetts in the event that the reform initiative had not taken place. Because there is no perfect comparison group in the absence of random assignment, one explored some different comparison groups to assess the sensitivity of the findings to the choice of comparison groups. The comparison groups are other states in the New England census division that did not make major health insurance policy change during the analysis period.

The impact of Massachusetts’s employer coverage mandate on employment levels is evaluated by looking at data on weeks worked and full-time status during the calendar year preceding the March CPS income supplement. The wage measured is based on the average
hourly earnings. One computed hourly wage variable using annual earnings data. This measurement is more suitable for comparison than the original annual earning variable because a large number of part-time workers do not work as many weeks as the full time workers.

\[ a. \ \text{Descriptive Statistics} \]

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Massachusetts</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Demographic Characteristics</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>40.46</td>
</tr>
<tr>
<td>White</td>
<td>0.90</td>
</tr>
<tr>
<td>College</td>
<td>0.26</td>
</tr>
<tr>
<td>Full-time</td>
<td>0.88</td>
</tr>
<tr>
<td>Insurance Coverage</td>
<td></td>
</tr>
<tr>
<td>Any insurance</td>
<td>0.93</td>
</tr>
<tr>
<td>Employer Provided</td>
<td>0.86</td>
</tr>
<tr>
<td>Medicaid/ Public</td>
<td>0.04</td>
</tr>
<tr>
<td>Individually Purchased</td>
<td>0.04</td>
</tr>
<tr>
<td>Firm Size</td>
<td></td>
</tr>
<tr>
<td>Under 11</td>
<td>0.13</td>
</tr>
<tr>
<td>11 to 25</td>
<td>0.08</td>
</tr>
<tr>
<td>25 to 99</td>
<td>0.14</td>
</tr>
<tr>
<td>100+</td>
<td>0.64</td>
</tr>
<tr>
<td>Number of Observations</td>
<td>1149</td>
</tr>
</tbody>
</table>


Descriptive statistics organized by survey year and state are reported in Table 1. As shown in the table, Massachusetts and other New England states (Connecticut, Maine, New Hampshire, Rhode Island, and Vermont) have similar demographics and business size characteristics. The table also shows that four years after the Massachusetts health reform, insurance coverage increased by approximately 3 percentage points, as opposed to the rest of the New England states, which saw a 4 percentage points decline in coverage. In addition, in the four
years since Massachusetts enacted its law, there has been a marked increase in Medicaid and other public insurance coverage.

Fig. 1-4 Insurance Coverage in Massachusetts and other New England States from 1999 to 2009

Figures 1-4 document the evolution of insurance coverage in Massachusetts and other New England states from 1999 to 2009. In contrast to the overall decreasing trend of
employer-provided health insurance since 1999, the trend in Massachusetts started increasing in 2006. The trend stagnated in 2007 and started to decline after 2008, the year of the United States financial crisis. Compared to other New England states, there has been a sharp increase with Massachusetts’ Medicaid and other public insurance coverage since 2006. In both situations (i.e., Massachusetts and other New England states) the prevalence of individually purchased insurance plans has diminished since 2006. Meanwhile, overall insurance coverage increased drastically in Massachusetts, in contrast to the rest of the New England states, which saw a decline in health insurance coverage.

b. Empirical Framework

Because health policy reform only occurred in Massachusetts, it can be considered as a "natural experiment". Therefore, I use a difference-in-difference (DD) model to control for any underlying trends in usual hours worked or average hourly wages not related to health reform, compare hour and wage before and after the state implemented its health reform initiative, and subtract changes in hour and wage over the reform period for comparison groups in other states. I denote an individual by $i$, the state by $s$, and the calendar year by $t$.

The baseline regression takes the form of:

$$ y_{ist} = \beta_0 + \pi_t + \delta_s + T_{st}\beta + \epsilon_{st} $$

(1)

where an outcome $y_{ist}$ (for example, insurance coverage) is used as the dependent variable. The explanatory variables includes $\pi_t$, the year effect, $\delta_s$ is the state effect, and $T_{st}$, the treatment effect, an interaction term between the state Massachusetts and year after 2006.
The key coefficient of interest $\beta$ measures the change in probability of insurance coverage and labor market characteristics in Massachusetts after 2006.

To control for the fact that certain types of workers may be more or less likely to have a certain kind of insurance coverage and labor market characteristics, I exploit the rich demographic data in the March CPS dataset and add an extensive list of other cofactors, including age and marital status dummies, sex, five indicators for education (high school dropout, high school graduate school, some college, college graduate, graduate school), and three indicators for race (non-Hispanic whites, non-Hispanic African Americans, and Hispanics). $X_{ist}$ denotes this set of covariates and $\gamma$ signifies a vectors of parameters. I have checked the multicollinearity of the variables, and they are independent.

In the modified regression model shown below, the the effect of all covariates varies nonparametrically by individual, year and state:

$$y_{ist} = \beta_0 + \pi_t + \delta_s + T_{st}\beta + X_{ist}\gamma + \varepsilon_{ist}$$  \hspace{1cm} (2)

In order to accurately evaluate how labor force characteristics evolve in response to the reform, I further develop the model to (3) by controlling industry fixed effect in the regression. In this case $I_t$ is vector for the industry in which the establishment's production fits according to the NSAIC code, which vary from the one to four digit level. I regress log average hourly wages, part-time status, or a set of interaction terms between part-time status and insurance type on measures of establishment attributes using the following equation:

$$y_{ist} = \beta_0 + \pi_t + \delta_s + T_{st}\beta + I_{ist}\theta + X_{ist}\gamma + \varepsilon_{ist}$$  \hspace{1cm} (3)
Since the Massachusetts Health Care Reform provision varies depending on the size of employer and different firm sized firms has distinct elasticity of demand for health insurance (Gruber, 2000), I run the regression multiple times for different firm size groups and capture unobserved trends across states by clustering at the state level.

4. Empirical Analysis Results

a. Insurance Coverage

<table>
<thead>
<tr>
<th>Firm Size</th>
<th>N</th>
<th>Any Insurance</th>
<th>Employer Provided</th>
<th>Medicaid/Public</th>
<th>Individually Purchased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 11</td>
<td>13,164</td>
<td>0.094** (0.02)</td>
<td>0.117*** (0.02)</td>
<td>0.004 (0.01)</td>
<td>-0.013 (0.01)</td>
</tr>
<tr>
<td>10 to 24</td>
<td>8,332</td>
<td>0.062** (0.01)</td>
<td>0.018 (0.01)</td>
<td>0.034* (0.01)</td>
<td>0.023** (0.00)</td>
</tr>
<tr>
<td>25 to 99</td>
<td>12,642</td>
<td>0.048** (0.01)</td>
<td>0.027* (0.01)</td>
<td>0.028** (0.01)</td>
<td>0.016* (0.01)</td>
</tr>
<tr>
<td>More than 100</td>
<td>68,106</td>
<td>0.021** (0.00)</td>
<td>0.027* (0.00)</td>
<td>0.009 (0.01)</td>
<td>0.000 (0.00)</td>
</tr>
</tbody>
</table>

Panel B: Control Covariates

<table>
<thead>
<tr>
<th>Firm Size</th>
<th>N</th>
<th>Any Insurance</th>
<th>Employer Provided</th>
<th>Medicaid/Public</th>
<th>Individually Purchased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 11</td>
<td>13,164</td>
<td>0.061* (0.02)</td>
<td>0.075* (0.01)</td>
<td>0.018 (0.01)</td>
<td>-0.020* (0.01)</td>
</tr>
<tr>
<td>10 to 24</td>
<td>8,332</td>
<td>0.055** (0.01)</td>
<td>0.002 (0.01)</td>
<td>0.040* (0.01)</td>
<td>0.024** (0.01)</td>
</tr>
<tr>
<td>25 to 99</td>
<td>12,642</td>
<td>0.037** (0.01)</td>
<td>0.011 (0.01)</td>
<td>0.035** (0.01)</td>
<td>0.015 (0.01)</td>
</tr>
<tr>
<td>More than 100</td>
<td>68,106</td>
<td>0.018** (0.00)</td>
<td>0.011 (0.00)</td>
<td>0.01 (0.01)</td>
<td>0.001 (0.00)</td>
</tr>
</tbody>
</table>

Notes. Standard errors in parentheses. The sample consists of individuals from New England states in year 1999 to 2009. Data is from the Census Bureau's March 1999-2009 Current Population Survey Annual Social and Economic Supplements. The variables at the top of each column are different dependent variable and each row represents different sub group. Panel A reports treatment effects of equation (1) without controlling any covariates, and Panel B reports treatment effects from equation B, with additional demographic controls. Controlled covariates include age and marital status dummies; sex; five indicators for education and three indicators for race. Each estimate is from a separate regression. *Indicates statistical significance at the 10% level; **indicates significance at the 5% level; and ***indicates significance at the 1% level.

Table 2 reports the treatment effect of the difference-in-difference model theorized in equation (1) and (2). The dependent variables are categories of insurance coverage rates, including: any insurance, employer-provided health insurance, medicaid and other public insurance, and individually purchased health insurance. The upper section reports ordinary least squares (OLS) estimates of equation (1), which only controls states effect and year effects. The
lower section reports equation (2), which controls a set of demographic covariates. The coefficient of interest is in equation (1) and (2), which denotes the parameter of the treatment effect.

The point estimates of the treatment effects of both specifications indicate a consistent pattern of increase in insurance coverage for employees in Massachusetts after the health care reform became effective in 2006. Columns 2-4 show that employees of various company sizes benefit from a different type of insurance coverage. Small businesses (i.e., companies with less than 11 employees) have seen a small increasing trend for employer-provided health insurance coverage, even though they are exempt from the employer mandate of Massachusetts health reform. Although Massachusetts does offer a 15% rebate to lower-wage small businesses that adopt wellness programs, the cost for small entities continuously grew higher after Massachusetts health care reform. This outcome resulted from an adverse selection of merged small companies and individual plans; that is, firms with a relatively healthy workforce and fewer risks may subsidize individuals without insurance who might be more expensive to insure because of their healthcare needs.

With the increasing cost and without a mandate to provide insurance, it is intriguing that small businesses “generously” increased their insurance coverage. According to Jon Hurst, president of the Retailers Association of Massachusetts, small businesses may be motivated to provide health insurance by other factors. In many instances, the workers of small business are family members or friends whose employers may feel obligated to provide extra benefits. According to Hurst, “In small businesses you have family members, or long standing employees. The law required them to have coverage and you want to help them get it” (PwC’s Health Research
Hurst’s insights may shed light on the noticeable increase in small business employers offering coverage in Massachusetts, which rose from 45% to 59% between 2005 and 2011 (Blue Cross Blue Shield of Massachusetts Foundation, 2014). In contrast to the overall decreasing trend of employer provided health insurance in other New England states, the trend in Massachusetts is increasing. Notwithstanding the employer mandate, firms with 11-25 and 25-99 employees did not seem to have a statistically significant increase in employer provided health insurance. Instead, employees from medium-large firms (i.e., businesses with 25-99 employees) show a 3.5 percentage points increase in probability of having Medicaid; while employees from small companies increased in the probability of having individually purchased health insurance coverage by 2.4 percentage points.

b. Employment and Wage Effects

![Figure 5](image1.png) ![Figure 6](image2.png)

Fig. 5-6 Part-time Status and Hourly Wage Trends from 1999 to 2009
Figures 5 and 6 show the evolution of trends in part-time status and wages before and after Massachusetts implement its health care reform. As shown in Figure 5, part-time workers without insurance become more prevalent after 2006. Figure 6, in turn, shows that workers’ hourly wages in log scale decrease considerably in Massachusetts.

Table III shows estimates from equation (1), (2), and (3) measuring the probability of working part time, working part-time with employer provided insurance and working part-time without employer provided insurance. I also distinguish a model that includes demographic covariates (“Control Covariates”), additional industry control (“Control Covariates & Industry”) and ones without these controls (“No Control”). I show only the coefficient (and standard error) of interest, which is the treatment effect in the difference-in-difference model. Column 2 shows
that after the Massachusetts health reform in 2006, compared to other New England states, small firms’ employees had a 2.5% higher probability of working part-time and receiving employer provided health insurance, potentially because of the 15% rebate to lower-wage small businesses that adopt wellness programs. Column 3, on the other hand, shows that after the 2006 reform, employees at mid-sized firms have a higher probability of working part-time and without employer sponsored health insurance. For mid-sized firm workers, part-time status by itself did not increase statistically. However, the coefficient on part-time and do not receive employer provided health insurance has increased considerably. Gaining part-time status seems, though further investigation is desirable, to be a way to evade the employer mandate.

<table>
<thead>
<tr>
<th>Firm Size</th>
<th>N</th>
<th>Panel A: No Control</th>
<th>Panel B: Control Covariates</th>
<th>Panel C: Control Covariates &amp; Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Part Time</td>
<td>Part Time w/ Medicaid</td>
<td>Part Time w/o Medicaid</td>
</tr>
<tr>
<td>Less than 10</td>
<td>13,164</td>
<td>0.015 (0.02)</td>
<td>0.006 (0.01)</td>
<td>0.009 (0.02)</td>
</tr>
<tr>
<td>10 to 24</td>
<td>8,332</td>
<td>0.014 (0.02)</td>
<td>0.002 (0.01)</td>
<td>0.012 (0.02)</td>
</tr>
<tr>
<td>25 to 99</td>
<td>12,642</td>
<td>0.029 (0.02)</td>
<td>0.010 (0.00)</td>
<td>0.019 (0.01)</td>
</tr>
<tr>
<td>More than 100</td>
<td>58,106</td>
<td>-0.001 (0.01)</td>
<td>0.002 (0.00)</td>
<td>-0.002 (0.01)</td>
</tr>
</tbody>
</table>

Notes. Standard errors in parentheses. The sample consists of individuals from New England states in year 1999 to 2009. Data is from the Census Bureau's March 1999-2009 Current Population Survey Annual Social and Economic Supplements. The variables at the top of each column are different dependent variable and each row represents different sub group. Panel A reports treatment effects of equation (1) without controlling any covariates, and Panel B reports treatment effects from equation B, with additional demographic controls. Controlled covariates include age and marital status dummies; sex; five indicators for education and three indicators for race. Each estimate is from a separate regression. *Indicates statistical significance at the 10% level; **indicates significance at the 5% level; and ***indicates significance at the 1% level.
Similarly, in Table IV Column 3, while the part-time status dummy by itself did not increase significantly for mid-sized companies, the probability of part-time and medicaid coverage combined increased 1.4%, which might suggest a potential scenario where people give up their full-time job due to newly gained Medicaid eligibility. Essentially, it might have crowded out the private insurance.

6. Limitations

There is a potential problem with capturing unobserved effect at the state level. White’s (1984) work on covariance matrix estimation showed that the Cluster Robust Variance Estimator is consistent under three key assumptions: The number of clusters goes to infinity (i.e., A1), the within-cluster error correlations are the same for all clusters (i.e., A2), and each cluster contains an equal number of observations (i.e., A3). Considering the geographic proximity and historical roots, it is reasonable to deduce that within-cluster error correlations are similar among New England states. In the March CPS data, the six New England states included a similar number of observations.

Nevertheless, A1 was not fulfilled since there were only six New England states; in other words, the number of clusters is relatively small. When the number of groups is small, t-statistics obtained using OLS are not normally distributed and standard asymptotics based on the number of groups going to infinity provide a poor approximation to the finite sample distribution (Donald & Lang, 2007). Expanding the control group might be a straightforward solution. However, since other states’ trends do not fit Massachusetts as well as New England
states, one cannot guarantee that within-cluster error correlations are the same for all clusters (A2) and that each cluster contains an equal number of observations (A3).

Another solution is to eliminate small cluster number test over-rejection through statistical method. Cameron, Gelbach, and Miller (2008) found a very effective method known as the wild cluster bootstrap method, which holds the regressors fixed across bootstrap replication. As suggested by Webb (2013), the most reliable technique to construct standard errors with low group number is the 6-point distribution method. Although, MacKinnon and Webb (2014) demonstrated that when the number of treated groups is equal to or lower than 4, this method may also fail considerably. Since the treated group for my application is only Massachusetts, it is unlikely that the wild cluster bootstrap method will produce sound estimates.

7. Conclusion

There are distinct similarities between Massachusetts' health care legislation and the Patient Protection and Affordable Care Act (ACA). To understand the Affordable Care Act, one may study the effect of the universal health insurance mandate on the labor market. It is useful to examine all components of each policy, in addition to the arguments for and against each element and how these reforms fit together. I find that the Massachusetts reform had a substantial effect on part-time status with mid-sized firms’ employees, which potentially serves as a means for the employer to avoid the mandate and a way to gain access to Medicaid, a economical and more generous health plan for the individual.
Literature Cited


Buchmueller, Thomas, Colleen Carey, and Helen G. Levy. "Will employers drop health insurance coverage because of the Affordable Care Act?." *Health Affairs* 32.9 (2013): 1522-1530.


