# The Effect of Extending Unemployment Insurance Benefits on Northeast State Unemployment Rates

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**Abstract**

This paper investigates the effect of changes in the length of unemployment benefits on the unemployment rates of 10 northeast US states. This study includes the most likely variables that would influence the unemployment rate during the time span preceding and following the recent recession. The study observes various contributing factors to unemployment including median income, state GDP, demographics, education, and the construction, manufacturing, and financial services rate for each state. Using state-level data from government sources and a fixed effects empirical model, results suggest that unemployment benefit extensions result in a small but statistically significant increase in the unemployment rate in the Northeast region. This increase in unemployment is found to be smaller in this region than the rest of the country.

JEL Classification: J6

Keywords: Unemployment, unemployment insurance benefits, northeast

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## 1.0 INTRODUCTION

Post 2008 recession, the US Federal Government enacted emergency unemployment benefit extensions, which increased the maximum duration of unemployment benefits to 99 weeks, in addition to a variety of states increasing funding for unemployment insurance. This was done partially with the intention of alleviating some of the hardship caused by the detrimental impact of the recession on the US labor market. With the unemployment rate reaching as high as 10% at its peak, policy makers were scrambling to encourage Americans to continue looking for work while supporting the unemployed and their dependents. Politicians from all sides of the political spectrum as well as prominent economists have questioned the effectiveness of these policies (CBPP). This study attempts to analyze the effect of such policies on the unemployment rate in the Northeast, a highly dynamic region with a typically lower regional unemployment rate than the rest of the country.

Past publications have indicated that increased funding and length of unemployment benefits results in an increase in both unemployment duration and the unemployment rate. This effect is accented during times of economic turbulence. Comparing nationwide results with the Northeast in particular will provide some insight as to the labor market dynamism in the region.

The study will analyze various variables with the aim of isolating the independent variable of focus, maximum number of weeks of unemployment insurance per state. Other variables include: state industry rates in the financial, construction, and manufacturing sectors respectively, percentage of state population with a high school diploma or higher, median income, state GDP, and demographic variables.

This paper was guided by three research objectives that differ from other studies. No other study to date has examined data only on the Northeast US states; other studies have focused on nationwide data only. Furthermore, this study will look at an additional variable; level of education, a possible determinant of unemployment. Thirdly, previous studies contained a significant amount of omitted observations due to data availability issues, resulting in incomplete data. This study contains a full set of data with no omitted observations, widely boosting the credibility of results.

This paper expects to find a weaker positive correlation between increases in the duration of unemployment benefits and unemployment than the nationwide average as the Northeast

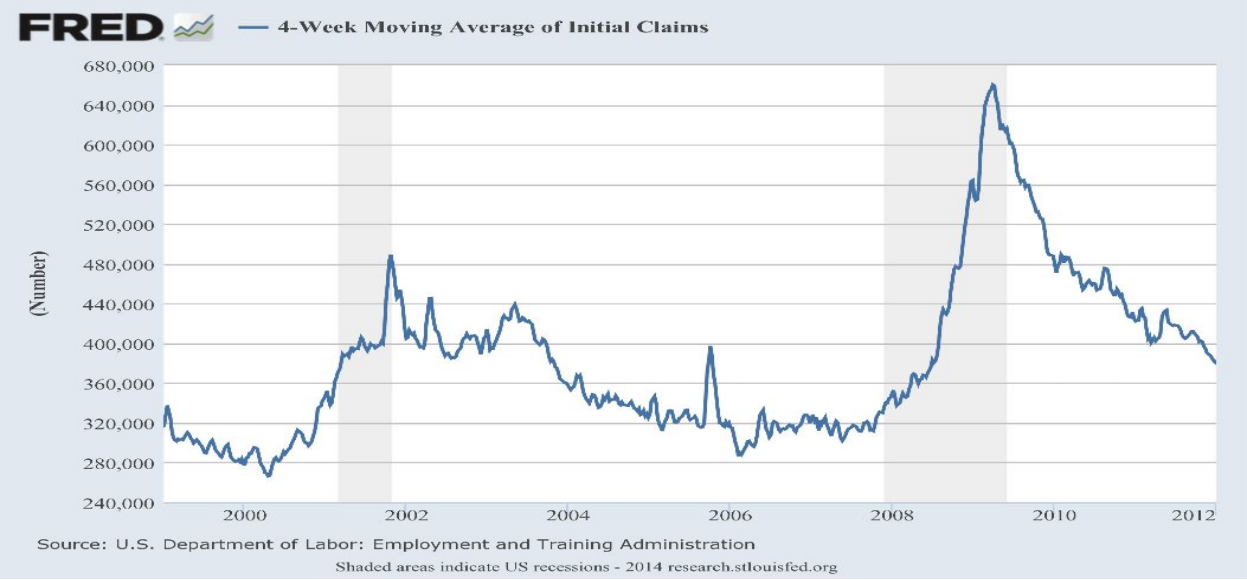
region has proven to have a more robust labor market, with more job openings and lower unemployment than the rest of the country. Data will be analyzed on a quarterly basis from 2006-2012, in order to capture the recent recession and its full effects. The effect of UB extensions is of high interest, but in particular, the question that needs to be answered is whether this has a positive impact on the economy. Information yielded from this study could provide useful information to both local and national policy makers regarding funding for unemployment benefits.

This paper will begin by delving into current trends surrounding this topic before providing some literature review on the issue. The data and sources used for the study will then be outlined. This will be followed by empirical methodology and the basic empirical model to describe how results will be synthesized. The results section will interpret and discuss the outcome of the regression. Finally, conclusions will be drawn from this information.

## 2.0 TREND

*Figure 1* shows that claims rose sharply during both the 2001 and 2008 recessions due job losses. Since the peak of the most recent recession, claims have been steadily falling, indicating an improvement in the unemployment situation.

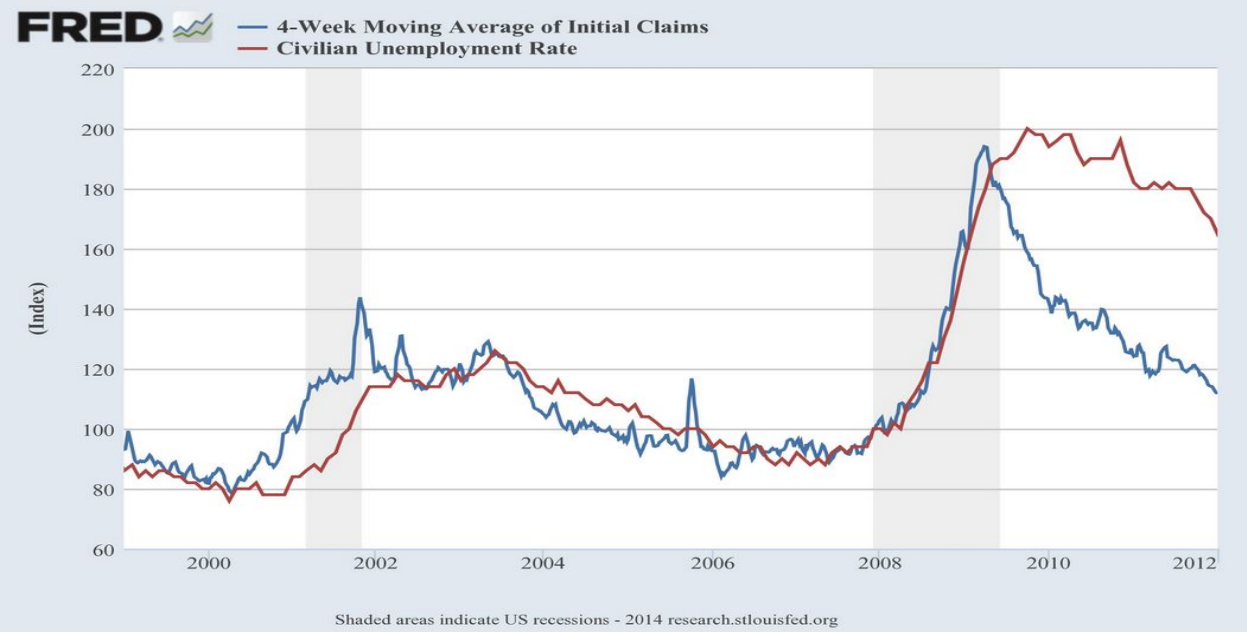
**Figure 1: Initial Jobless Claims**




Source: US Department of Labor: Employment and Training Administration

*Figure 2* shows the 4-week moving average of initial claims with the civilian unemployment rate, both indexed to 100 for the chosen period. The unemployment rate follows closely the claims rate. After the Great Recession though, the unemployment rate remains much higher than does the claims rate, despite the fact that they are both declining.

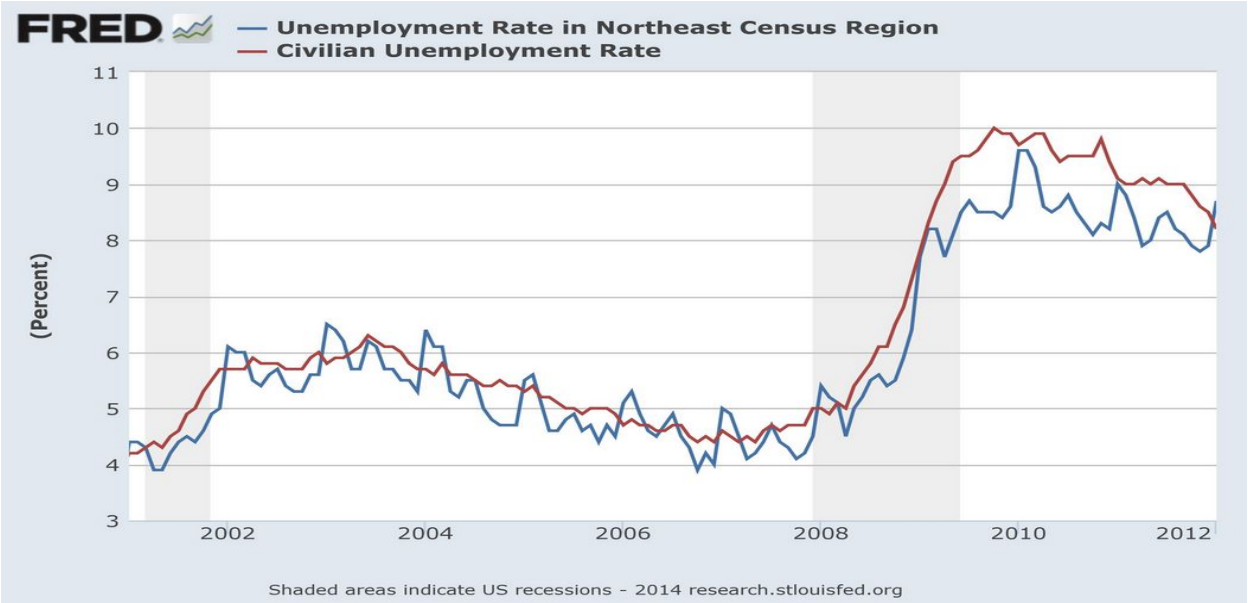
**Figure 2: Jobless Claims and Unemployment**




Source: US Department of Labor

*Figure 3* compares the unemployment rate in the Northeast with the US unemployment rate. The US-wide measure is consistently higher than the Northeast, indicating lower unemployment due to greater job opportunities in this region. This could have important implications on the effect of UI duration on unemployment. This makes the Northeast region of particular interest for this research.

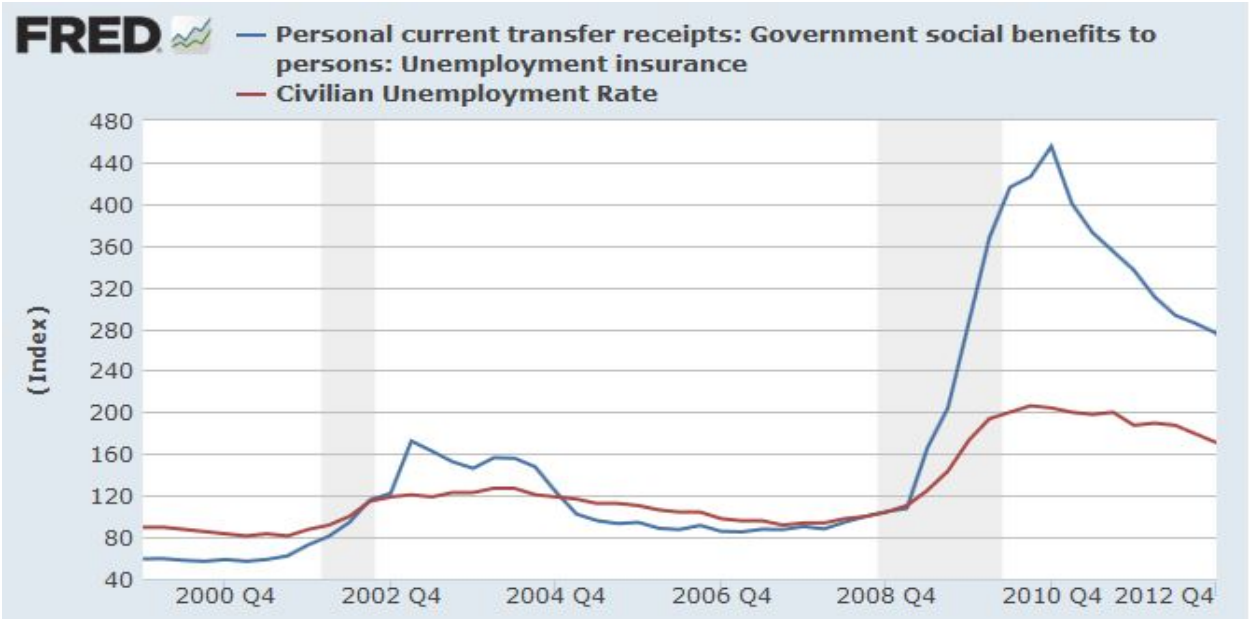
**Figure 3: Northeast Regional Unemployment and the US-wide Civilian Unemployment rate**




Source: US Department of Labor

*Figure 4* demonstrates the higher level of government spending on unemployment insurance benefits during times of higher unemployment. As unemployment drops, so does spending on UI, though not as sharply. This data is indexed on a scale of 100.

**Figure 4: Government Spending on Unemployment Insurance and Unemployment**




Source: Bureau of Labor Statistics and Bureau of Economic Analysis

## 3.0 LITERATURE REVIEW

The topic of unemployment benefit extensions and its effects on the unemployment rate has been the focus of many publications, though none have focused on only the Northeast region. Most recently, Absar et al. (2013) conducted a study of the effects of unemployment benefit extensions on state unemployment rates across all 50 states. Looking at data before and after the most recent economic crisis, results found that a ten week extension in unemployment benefits resulted in a 26 basis point increase in the unemployment rate in a given year. The model incorporated a number of variables such as demographics, governor political affiliation, and median income to isolate the variable of focus. The claims made by Absar et al. (2013) are backed up by Lalive et al. (2011), which found that increasing unemployment benefits is correlated with a significant increase in the unemployment rate. Lalive et al. (2011) investigated the policy effects of increased unemployment benefits in Austria. It was concluded that job seekers become more selective as a result of longer UI, which resulted in higher and longer unemployment. Increased job selectivity however, can provide a role in decreasing skills mismatch, as workers need not take any job available, but rather have flexibility in choosing a job that matches their skillset.

Research into this topic dates back several decades to when Moffitt (1985) concluded that a 10% increase in unemployment benefits results in a 0.5 week extension in unemployment duration and a one week extension of benefits increased the duration of unemployment by 0.15 weeks. While this study focused primarily on the effects on unemployment duration, it still provides an indication of the positive effect between increased unemployment benefits and the unemployment rate.

Bennmarker et al. (2005) also conducted a very interesting study on Swedish government policies regarding unemployment benefits and job findings. The Swedish government introduced reforms to their unemployment benefits system in 2001 and 2002. These changes comprised of supplementary compensation during the first 20 weeks of unemployment to encourage job search efforts. Surprisingly, the reforms were found to have significantly different results among men and women. They were found to increase the expected duration of unemployment for men while decreasing the expected duration for women. Job finding among men unemployed for more than

20 weeks decreased, despite the overall effect on the duration of unemployment not being statistically different than zero.

Longer unemployment benefits reduce job search efforts and extend the duration of unemployment. In addition, job seekers are much more particular about taking job opportunities as a result of extended unemployment benefits (Ham and Rea, 1987; Beranek and Kamerschen, 2011). This is particularly true post 2008 recession, when extended unemployment benefits from states and the federal government also resulted in decreased job search efforts by millions of Americans (Absar et al., 2013). Literature review strongly suggests what the results of this study will be, so comparing the results of these publications with the Northeast region in particular will provide information on the Northeast labor market and how government policies affect it.

Farber and Valletta (2013) explored the variation in unemployment benefit extensions amongst states on individual exit from unemployment and unemployment duration for the most recent recession and the much milder economic downturn of the early 2000s. In both periods, there was a small, though statistically significant reduction in the number of individuals leaving the labor force and a small increase in the duration of expected unemployment. The study concluded that extended unemployment insurance increased the overall unemployment rate by about 40 basis points and increased the expected duration of unemployment by 7 percent during the most recent recession. Furthermore, it was concluded that the effect on unemployment results primarily due to a reduction in exits from the labor force. These results are consistent with Absar et al. (2013).

Building upon this, Meyer (1990) found that increased unemployment benefits significantly reduce an individual's likelihood of leaving unemployment. However, this unemployment exit probability rises sharply when benefits are about to expire.

This study will look at a number of variables that are also determinants of unemployment. It is important to look at state demographics, as this can be an important determinant of joblessness. Hill (2013) concluded that minorities experienced greater unemployment than did whites during the recent recession. On a separate note, the recession also affected certain industries more than others. Manufacturing, finance, and construction sectors in most states were particularly hard hit during the recent recession (Hadi, 2011). Another important determinant of unemployment is level of education. Riddell and Song (2011) found

that education significantly increases the re-employment chances of those who are unemployed. Therefore, states with a more educated population should typically experience lower unemployment, all other factors held constant.

There is weak evidence to support that increased UI helps the unemployed find jobs. Rather, evidence suggests that job seekers are disincentivized to find work as a result of UI. Based on the studies above, the hypothesis that will be tested in this paper will be that extending UI is positively associated with unemployment.

## 4.0 DATA AND EMPIRICAL METHODOLOGY

### 4.1 Data

The study uses quarterly data from 2006 to the first quarter of 2012 for 10 Northeast states; Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia. Use of quarterly data was found to be necessary in order to effectively capture the policy effect. Panel data was the format of this study. Data was collected from a variety of government sources.

*Dependent Variable: State Unemployment Rate*

The dependent variable was the unemployment rate for the particular state by quarter. This was obtained from the Bureau of Labor statistics.

*Independent Variable: Maximum Number of Weeks of UI*

The independent variable for this study was the maximum number of weeks available for each state by quarter. This data was collected from the Center on Budget and Policy Priorities. The maximum number of weeks available is contingent upon that state's unemployment rate in the previous quarter.

*CONTROLS*

*Industry:* The construction, financial service, and manufacturing sectors were especially hard hit during the recession. Therefore, states with a higher percentage of workers employed in these sectors are assumed to have suffered more during the recent recession. To calculate these percentages, the number of workers employed in each respective industry is divided by the total amount of workers employed in that state. This data was acquired from the US Census Bureau's American Fact Finder.

*Educational Attainment:* It has often been implied that education has an effect on unemployment. Those with higher educational attainment are more likely to find jobs and more likely to receive better compensation. The percentage of each state population aged 25 years and older who are high school graduates or higher is used as the measure for educational attainment. This information is published annually on American Fact Finder.

*Race:* Literature review suggests that states with a higher percentage of minorities typically have higher unemployment rates. Furthermore, reports show that African Americans experienced higher unemployment during the recent recession than non-Hispanic Whites. This study measures the percentage of African Americans on an annual basis for each state. This data is also published on American Fact Finder data sets.

*State GDP:* Growth in GDP is an important indicator of how well an economy is doing. It is also directly linked to unemployment, as higher GDP is linked to higher payrolls within the private sector. This study measures state GDP as a share of national GDP. Data was acquired from the Bureau of Economic Analysis via Federal Reserve Economic Data (FRED).

*Median Income:* This is an important variable as prospects for a higher income greatly incentivize individuals to look for and find work. In addition, income is a factor used to determine edibility for unemployment insurance. This data is measured as individual median income for workers as a nominal value for each state on an annual basis. This data was acquired from American Fact Finder.

**Descriptive Statistics of Dependent and Independent Variables**

| ***Variable*** | ***Mean*** | ***Median*** | ***Maximum*** | ***Minimum*** | ***Std. Dev.*** | ***Observations*** |
|---|---|---|---|---|---|---|
| Unemployment | 8.504% | 6.200% | 11.90% | 2.90% | 0.331846 | 250 |
| Weeks | 54.048 | 49 | 99 | 26 | 28.06414 | 250 |
| Construction Rate | 6.586% | 6.40% | 8.80% | 4.50% | 0.009814 | 250 |
| Financial Services Rate | 7.303% | 6.90% | 9.90% | 4.60% | 0.013726 | 250 |
| Manufacturing Rate | 10.393% | 10.45% | 13.70% | 6.70% | 0.019446 | 250 |
| Educational Attainment | 87.428% | 87.80% | 91.80% | 82.40% | 0.022577 | 250 |
| African American | 8.342% | 6.80% | 19.60% | 0.60% | 0.06232 | 250 |
| White | 82.746% | 82.40% | 96.30% | 65.20% | 0.097024 | 250 |
| State GDP | 2.238% | 1.98% | 7.60% | 0.17% | 0.021563 | 250 |
| Median Income ($) | 32666.8 | 32854 | 40242 | 25703 | 3847.797 | 250 |

**4.2 Methodology**

In this study we estimate the regressions with panel least squares (PLS) fixed effects to account for the effect of weeks of lagged UI on the unemployment rate. This study uses a model adapted from Absar et al. (2013). The model helps to closely analyze the impacts of UI extensions on state unemployment rates.

*BASIC EMPIRICAL MODEL*

$$\log UNEMP_{syq} = \beta_0 + \beta_1 UI\_WEEKS_{syq-1} + \beta_2 CONS_{syq} + \beta_3 FIN_{syq} + \beta_4 MANU_{syq} + \beta_5 EDUCATION_{syq} + \beta_6 AFRI_{syq} + \beta_7 GDP\_RATE_{syq} + \beta_8 MED\_INC_{syq} + \varepsilon$$

*Model Overview*

In addition to determining how strongly UI benefit weeks are positively associated with the unemployment rate in the Northeast, the regression captures the effects of each control variable on the dependent variable.

logUNEMP represents the state unemployment rate. This is used as the dependent variable and the log of the data is taken in order to control for its large variability. UI_WEEKS, the independent variable of focus, represents the maximum number of lagged UI weeks available in that state. The higher the amount of weeks, the higher the unemployment rate should be.

CONS is the abbreviated form of construction rate, FIN stands for financial service rate, and MANU represents the manufacturing rate. Literature review suggests that during the recession, higher construction, financial service, and manufacturing rates are positively associated with higher unemployment as these industries were hard hit by the economic turbulence.

EDUCATION represents the percentage of individuals 25 years and older who are high school graduates or higher. A higher level of education is negatively associated with the unemployment rate.

AFRI is the percentage of African Americans in the particular state. A higher percent of African Americans is positively associated with higher unemployment.

GDP_RATE represents the total state GDP as a percentage of national GDP. As this rate drops, unemployment should rise as a result of slower economic performance.

MED_INC represents individual median income for workers. As median income rises, unemployment should drop as an increase in income is an indication of stronger economic performance.

Ɛ represents the error term for the model.

## 5.0 EMPIRICAL RESULTS

*Original model with all variables:*

**Regression Results**

| *Variable* | *Coefficient* | *Std. Error* | *t-Statistic* | *Prob.* |
|---|---|---|---|---|
| UI_WEEKS | 0.006756 | 0.001617 | 4.179135 | 0.0000*** |
| CONS | -0.119321 | 0.067834 | -1.759 | 0.0799* |
| FIN | 0.126324 | 0.105962 | 1.192158 | 0.2344 |
| MANU | -0.021001 | 0.076283 | -0.27531 | 0.7833 |
| EDUCATION | 0.015872 | 0.053642 | 0.295888 | 0.7676 |
| AFRI | -0.005429 | 0.038432 | -0.14126 | 0.8878 |
| GDP_RATE | 0.004309 | 0.530684 | 0.00812 | 0.9935 |
| MED_INC | 6.91E-05 | 2.00E-05 | 3.461804 | 0.0006*** |
| C | -2.073796 | 5.066541 | -0.40931 | 0.6827 |

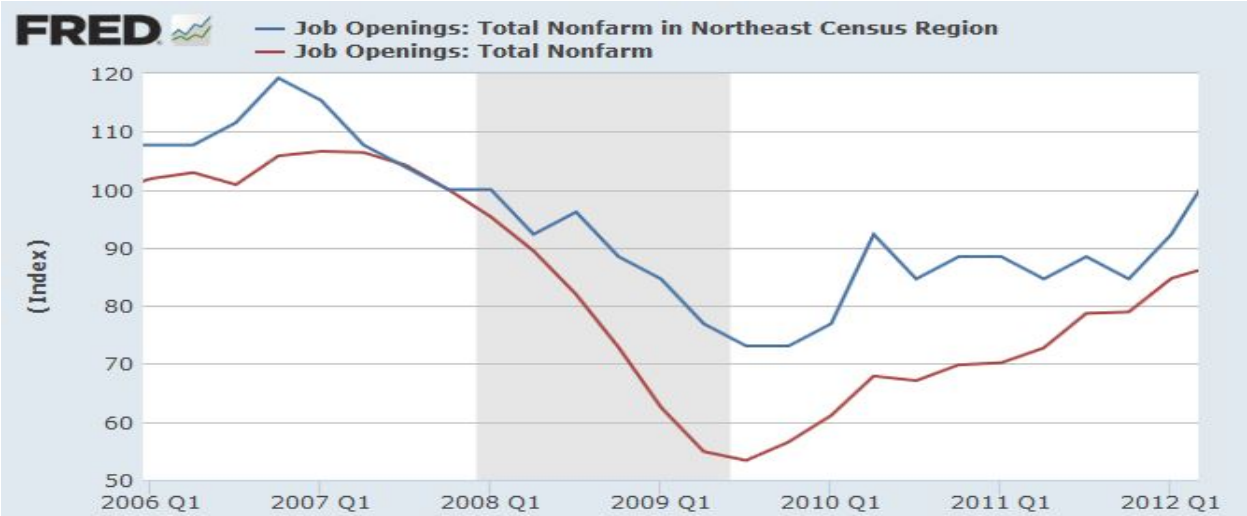
Note: ***, **, and * denotes significance at 1%, 5%, and 10%

| | | | |
|---|---|---|---|
| ***R-squared*** | 0.555016 | ***Mean dependent var*** | 1.818860 |
| ***Adjusted R-squared*** | 0.522410 | ***S.D. dependent var*** | 0.441929 |
| ***S.E. of regression*** | 0.305408 | | |

This study used a panel least squares fixed effects method to conduct regression. Results suggested that only 3 variables were significant, including the independent variable. Findings were consistent with Farber and Valletta (2013), which found that an increase in the duration of UI benefits has a small but statistically significant positive association with unemployment. This is due to the fact that workers receiving unemployment insurance must remain in the labor force and must prove in most states that they are actively searching for work. This naturally increases the unemployment rate. A 10-week increase in UI benefits was found to increase unemployment by 0.068 percentage points, with the coefficient showing statistical significance at the 1 percent level. This indicates a much smaller effect of UI benefit extensions on unemployment in the Northeast than in Absar et al. (2013), which conducted a study on all 50 US states.

These results suggest stark differences in the labor situation within the Northeast region and the US as a whole during and after the recession. A consistently higher level of job openings in the Northeast region is a possible reason for the smaller effect on unemployment from increased UI benefits. *Figure 1* suggests that before, during, and after the recent recession, the Northeast has always enjoyed a higher level of job openings.

**Figure 1: Job Openings in the Northeast as compared to the National Average**




Source: US Department of Labor: Bureau of Labor Statistics

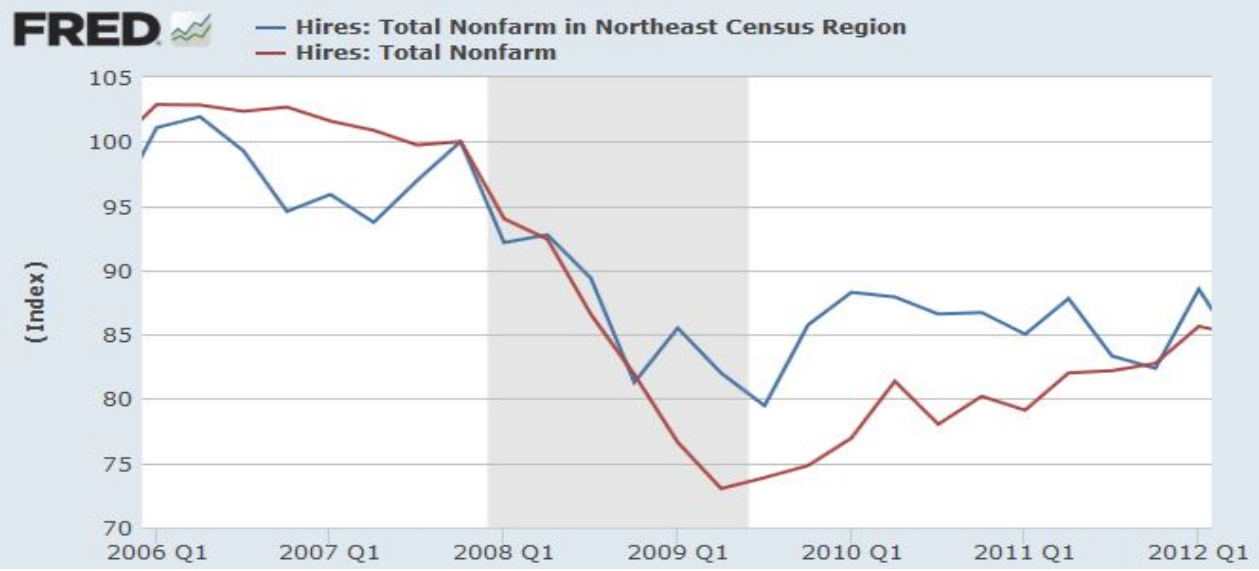
As a result of a greater number of job openings in the Northeast, the number of hires in the Northeast is also higher than the national average, as is demonstrated in *Figure 2*. This is a testament to the more robust and dynamic labor market of the Northeast. Cities such as Boston, Pittsburg, Philadelphia, and New York are major metropolitan areas of great regional importance. Reports showed that these cities were more resistant to the economic downturn and recovered faster, demonstrating faster than average job growth post-recession (Dougherty, 2012).

Other reports have indicated that the Northeast, in particular New England, was partially shielded from some of the housing excesses that occurred on a much larger scale in other regions. Fewer foreclosures and a shallower drop in housing prices helped the region recover faster post-recession (PR Newswire, 2011). As a result, the construction sector didn't suffer as much as the rest of the country, a possible reason as to why the construction rate had a negative association with unemployment. A 1 percent increase in the construction rate was found to decrease unemployment by 0.12 percentage points, with significance at the 10 percent level. This

demonstrates the spillover of increased construction on unemployment within the Northeast and shows that states that had higher construction rates within the region were not more affected by the recession.

The Northeast region is well known for its high-tech professional service sectors, which also helped it rebound faster from the recession (PR Newswire, 2011). This could be a reason why the financial service rate variable was not statistically significant. A higher financial service rate didn't seem to imply that this region's unemployment rate suffered more than states with lower financial service rates.

**Figure 2: Total Hires in the Northeast region as compared to the National Average**




Source: US Department of Labor: Bureau of Labor Statistics

The lone demographic variable did not show statistical significance. This may be due to the fact that a majority of the states in the study had relatively low percentages of African Americans. In addition, the study only measured the percentage of African Americans in each state, while excluding other important minority groups. It is also quite possible that minorities, in particular African Americans in the Northeast, did not suffer as much from the recession than their counterparts in other parts of the country due to the labor market dynamism of the region.

State GDP as a share of national GDP was not found to be statistically significant. Data for state GDP was only available on an annual basis for this particular time period. There was

very little fluctuation in the data from year to year for all the states. This made it difficult to capture the effect of changes in this rate on unemployment.

Education was also not found to be statistically significant. This may be due to several factors. Accessibility to higher education is higher relative to the rest of the country in the Northeast, with the region boasting such a high concentration of colleges and universities. Education levels across the different Northeast states were all relatively high and fluctuated very slightly, making it difficult to analyze its effect on unemployment. In addition, data for this variable was only available on an annual basis, decreasing variability in the data.

Median income was found to be statistically significant at the 1 percent level however, the effect was very small. Higher median income was found to have a slight increase on unemployment. This is due to the fact that a higher median income encourages individuals to enter the labor force and look for work, increasing the unemployment rate. These findings are again consistent with Absar at al. (2013).

The results provide much insight on the labor market in the Northeast and the region's faster than average post-recession economic recovery. Results indicate that this region outperforms the rest of the country economically in many areas. Unemployment benefit extensions did have an impact on unemployment, yet the region's economic resilience drowned out much of this effect.

## 6.0 CONCLUSION

Unemployment Insurance benefit extensions during the recent recession did have serious policy implications for the country as a whole. The extensions that were signed into law were unprecedented and were a testament to government efforts to alleviate the burden of unemployment.

This paper has reinforced the fact that the Northeast region performs more strongly than the rest of the country, with a more dynamic labor market and faster economic recovery. While UI benefit extensions did have a slight increase on unemployment in the region, the effect was found to be significantly lower than the rest of the country. A 10-week extension in UI benefits was found to increase unemployment by just under 7 basis points for the 10 Northeast states in particular, as compared to 26 basis points for all 50 states. This is largely in part due to the

higher than average number of job openings and hires in the Northeast as compared to the rest of the country. The Northeast has abundant job opportunities and is home to several important cities. New York City and Boston in particular, are global centers of commerce. As a result, they were more resilient to economic downturn and recovered much faster than the rest of the country. While there were some limitations to the data, the results were found in line with findings from previous studies.

When policy makers attempt to implement UI benefit extensions in the future, it is important they be aware of the vast differences between the labor markets of different regions. They should also be aware that UI decreases job search efforts and that perhaps more stringent requirements for receiving benefits should be in place. Increased unemployment as a result of UI benefit extensions results in labor market inefficiencies.

## Appendix A: Variables and Expected Signs

| *Acronym* | *Variable Description* | *What it Captures (Source in Parenthesis)* | *Expected Sign* |
|---|---|---|---|
| UI_WEEKS | Maximum number of weeks of UI available | Longer UI duration results in higher unemployment (CBPP) | + |
| CONS | Construction rate, percentage of workers employed in construction industry | States with higher percentages of workers employed in the construction sector experienced higher unemployment during the recent recession (American Fact Finder) | + |
| FIN | Financial Service rate, percentage of workers employed in financial service industry | States with higher percentages of workers employed in the financial services sector experienced higher unemployment during the recent recession (American Fact Finder) | + |
| MANU | Manufacturing rate, percentage of workers employed in manufacturing industry | States with higher percentages of workers employed in the manufacturing sector experienced higher unemployment during the recent recession (American Fact Finder) | + |
| EDUCATION | Percent of population age 25 and older with high school diploma or higher | States with higher educational attainment rates should experience lower rates of unemployment (American Fact Finder) | – |
| Afri | Percent of state population that is African American | Higher percentage of African Americans associated with higher state unemployment (American Fact Finder) | + |
| GDP_RATE | State GDP as share of US national GDP | Decrease in percentage of state GDP as share of US GDP is associated with higher unemployment (FRED) | – |
| MED_INC | Median individual income per worker | Higher median income increases individual's incentive to look for work and stay in labor force, leading to higher unemployment (American Fact Finder) | + |

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# The Effect of Extending Unemployment Insurance Benefits on Northeast State Unemployment Rates

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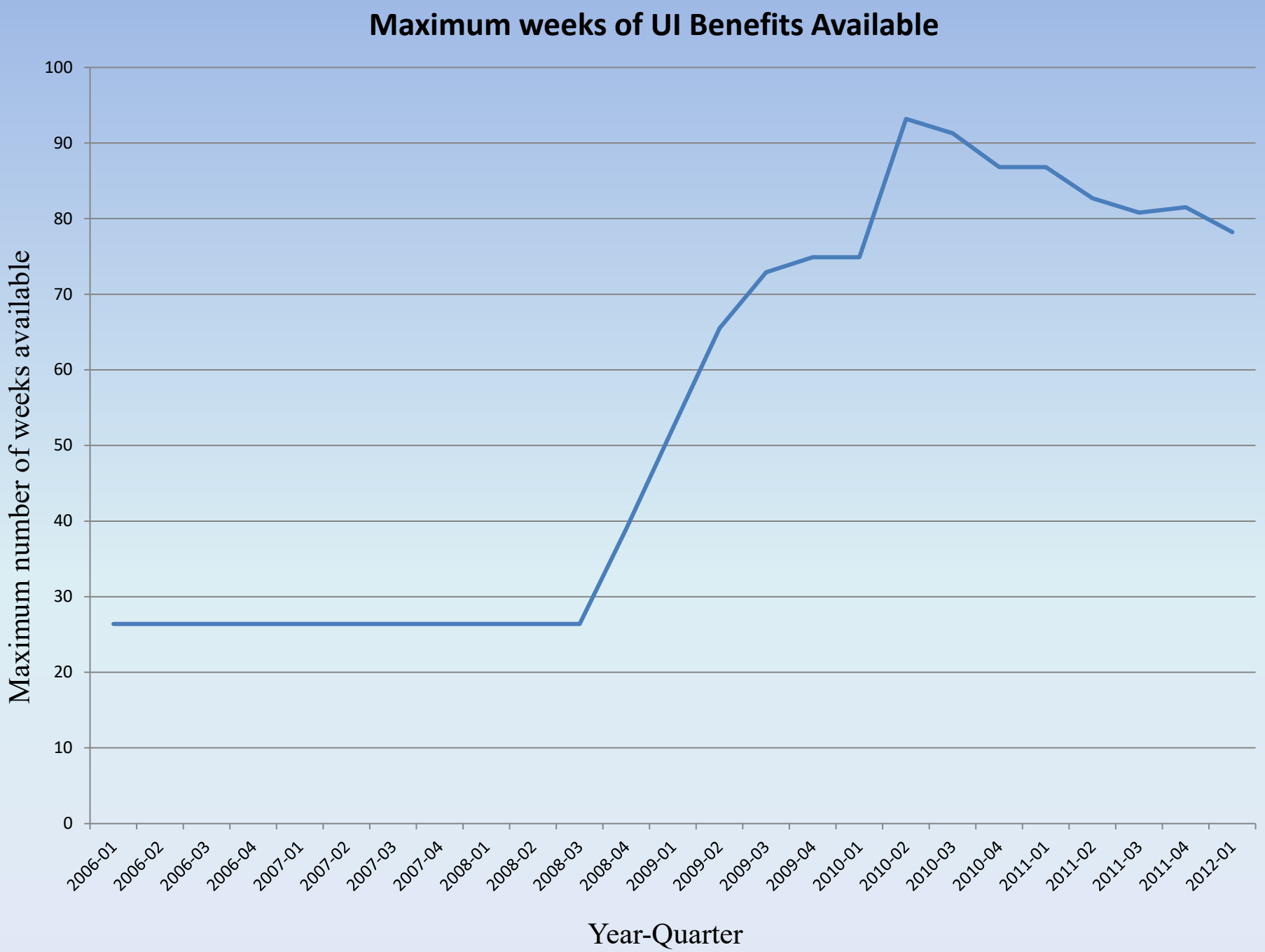
# Introduction

- 2009 - Federal Government passes emergency unemployment benefits
- Alleviate burden of unemployment
- Discouraged unemployed to go back to work
- Increased UI benefits lengthen unemployment
- Northeast region more dynamic and recovered faster from recession


Maximum weeks of UI Benefits Available
Maximum number of weeks available
100
90
80
70
60
50
40
30
20
10
0
2006-01
2006-02
2006-03
2006-04
2007-01
2007-02
2007-03
2007-04
2008-01
2008-02
2008-03
2008-04
2009-01
2009-02
2009-03
2009-04
2010-01
2010-02
2010-03
2010-04
2011-01
2011-02
2011-03
2011-04
2012-01
Year-Quarter

# Introduction

- Utilize state level data to examine effect of increased UI benefits on unemployment
- Panel least squares method used for regression analysis
- Measure Northeast labor market response to increased UI as compared to nationwide results during recent recession
- Can have policy implications in evaluating the Northeast labor market as it responds to changes in welfare

# Literature Review

- Absar et al. (2013) concluded that a 10-week extension in UI benefits results in a 0.26% increase in unemployment rate in a given year
- Also confirmed by Farber & Valletta (2013) and Lalive et al. (2011)
- Increased UI decreases job search efforts and increases job selectivity (Ham and Rea, 1987; Beranek and Kamerschen, 2011)
- Meyer (1990) – Increased UI benefits reduce an individual's likelihood of leaving unemployment

# Data

- Quarterly panel data for 10 Northeast states

  -RI, ME, MA, NY, NJ, PA, NH, VT, VA, CT
- 2006-2012
  - Captures full effect of recession

- 9 variables
- Sources:
  - BLS, American Fact Finder, CBPP

# Descriptive Statistics

| Variable | Mean | Median | Maximum | Minimum | Std. Dev. | Observations |
|---|---|---|---|---|---|---|
| State Unemployment Rate | 8.504% | 6.200% | 11.90% | 2.90% | 0.331846 | 250 |
| UI Weeks | 54.048 | 49 | 99 | 26 | 28.06414 | 250 |
| Construction Rate | 6.586% | 6.40% | 8.80% | 4.50% | 0.009814 | 250 |
| Financial Services Rate | 7.303% | 6.90% | 9.90% | 4.60% | 0.013726 | 250 |
| Manufacturing Rate | 10.393% | 10.45% | 13.70% | 6.70% | 0.019446 | 250 |
| Educational Attainment | 87.428% | 87.80% | 91.80% | 82.40% | 0.022577 | 250 |
| African American | 8.342% | 6.80% | 19.60% | 0.60% | 0.06232 | 250 |
| White | 82.746% | 82.40% | 96.30% | 65.20% | 0.097024 | 250 |
| State GDP | 2.238% | 1.98% | 7.60% | 0.17% | 0.021563 | 250 |
| Median Income ($) | 32666.8 | 32854 | 40242 | 25703 | 3847.797 | 250 |

# Empirical Methodology

- Model adapted from Absar et al. (2013)

$$\log UNEMP_{syq} = \beta_0 + \beta_1 UI\_WEEKS_{syq-1} + \beta_2 CONS_{syq} + \beta_3 FIN_{syq} + \beta_4 MANU_{syq} + \beta_5 EDUCATION_{syq} + \beta_6 AFRI_{syq} + \beta_7 GDP\_RATE_{syq} + \beta_8 MED\_INC_{syq} + \varepsilon$$

**DEPENDENT VARIABLE:** UNEMP – State Unemployment Rate (state-year-quarter)

**INDEPENDENT VARIABLE:** UI_WEEKS – Maximum number of weeks of UI benefits available (state-year-quarter)

**CONTROLS:**

CONS – Percentage of workers employed in construction sector

FIN – Percentage of workers employed in financial service sector

MANU – Percentage of workers employed in manufacturing sector

EDUCATION – Percentage of state population 25 and older with high school diploma or higher

AFRI – Percentage of African-Americans in state

GDP_Rate – State GDP as share of national GDP

MED_INC – Individual median income per worker by state

# Empirical Results

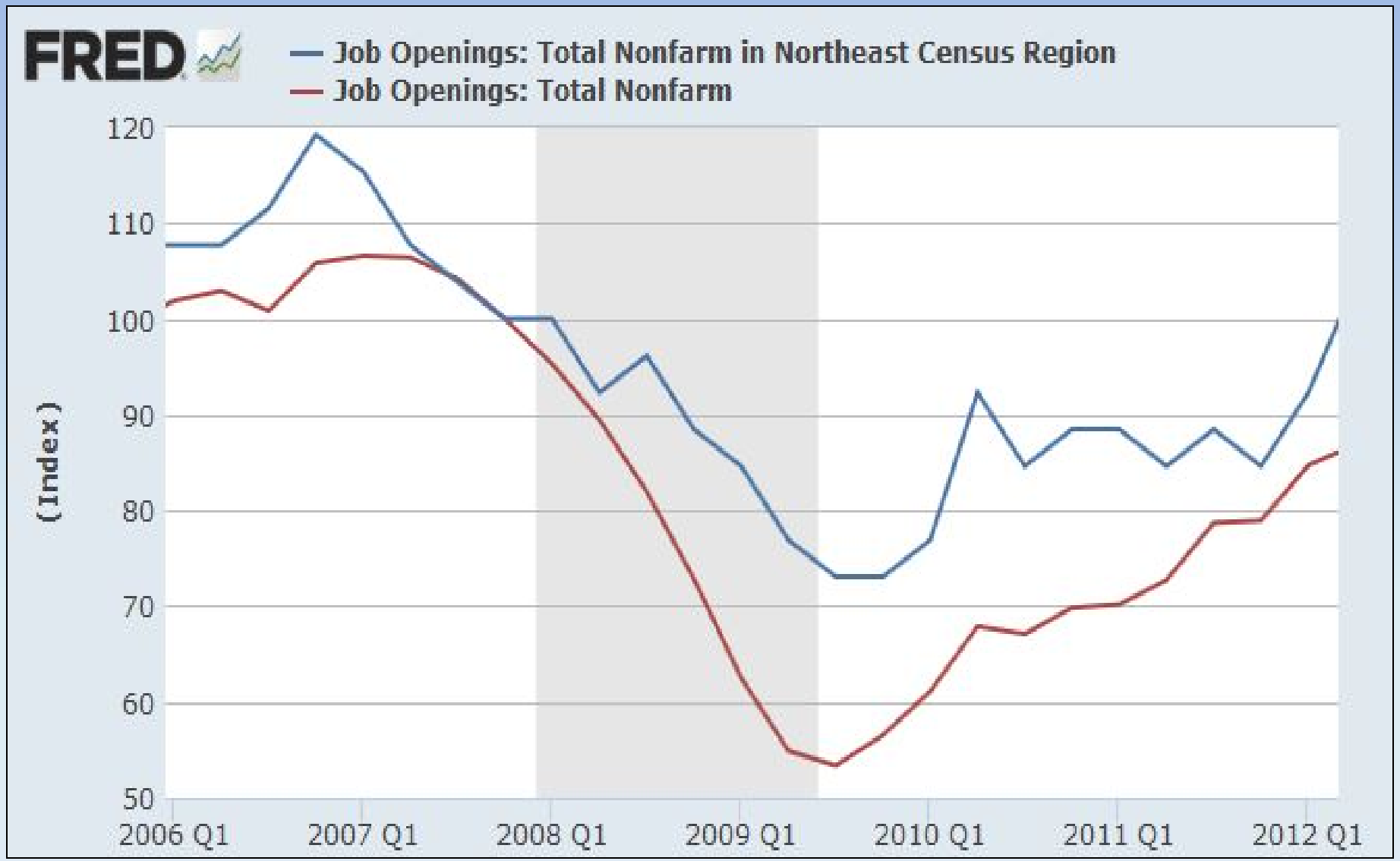
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| UI_WEEKS | 0.006756 | 0.001617 | 4.179135 | 0.0000*** |
| CONS | -0.119321 | 0.067834 | -1.759 | 0.0799* |
| FIN | 0.126324 | 0.105962 | 1.192158 | 0.2344 |
| MANU | -0.021001 | 0.076283 | -0.27531 | 0.7833 |
| EDUCATION | 0.015872 | 0.053642 | 0.295888 | 0.7676 |
| AFRI | -0.005429 | 0.038432 | -0.14126 | 0.8878 |
| GDP_RATE | 0.004309 | 0.530684 | 0.00812 | 0.9935 |
| MED_INC | 6.91E-05 | 2.00E-05 | 3.461804 | 0.0006*** |
| C | -2.073796 | 5.066541 | -0.40931 | 0.6827 |

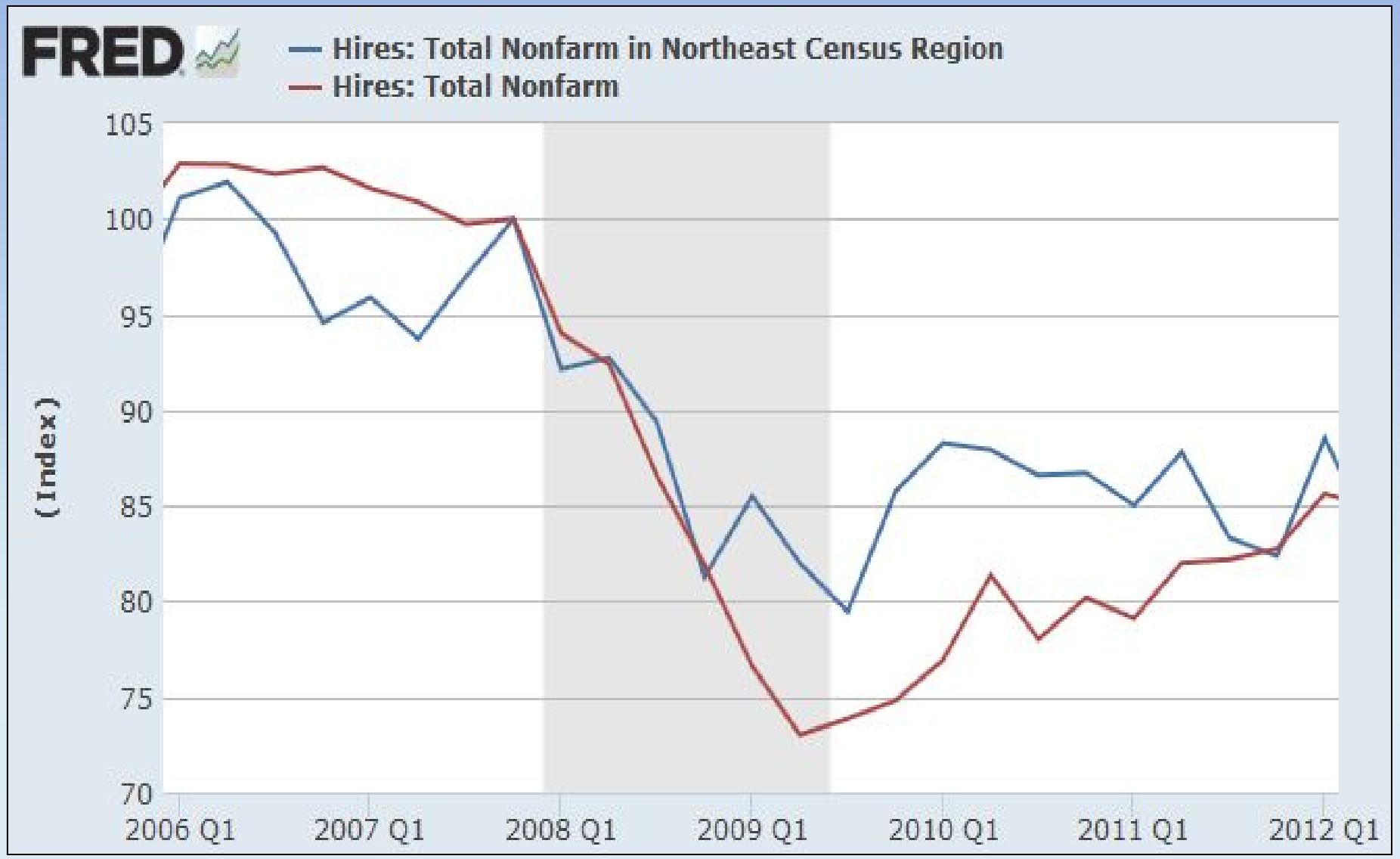
Note: ***, **, and * denotes significance at 1%, 5%, and 10%

R-Squared: **0.555016**

# Empirical Results

- 10-week extension in UI benefits results in 0.068% increase in unemployment
- Higher level of job openings and hires in region


FRED
Job Openings: Total Nonfarm in Northeast Census Region
Job Openings: Total Nonfarm
(Index)
120
110
100
90
80
70
60
50
2006 Q1
2007 Q1
2008 Q1
2009 Q1
2010 Q1
2011 Q1
2012 Q1


FRED
Hires: Total Nonfarm in Northeast Census Region
Hires: Total Nonfarm
105
100
95
90
85
80
75
70
(Index)
2006 Q1
2007 Q1
2008 Q1
2009 Q1
2010 Q1
2011 Q1
2012 Q1

# Empirical Results

- 10-week extension in UI benefits results in 0.068% increase in unemployment
- Higher level of job openings and hires in region
- Faster recovery from recession
- NYC, Boston, Philadelphia
- Construction variable significant
- Median income significant

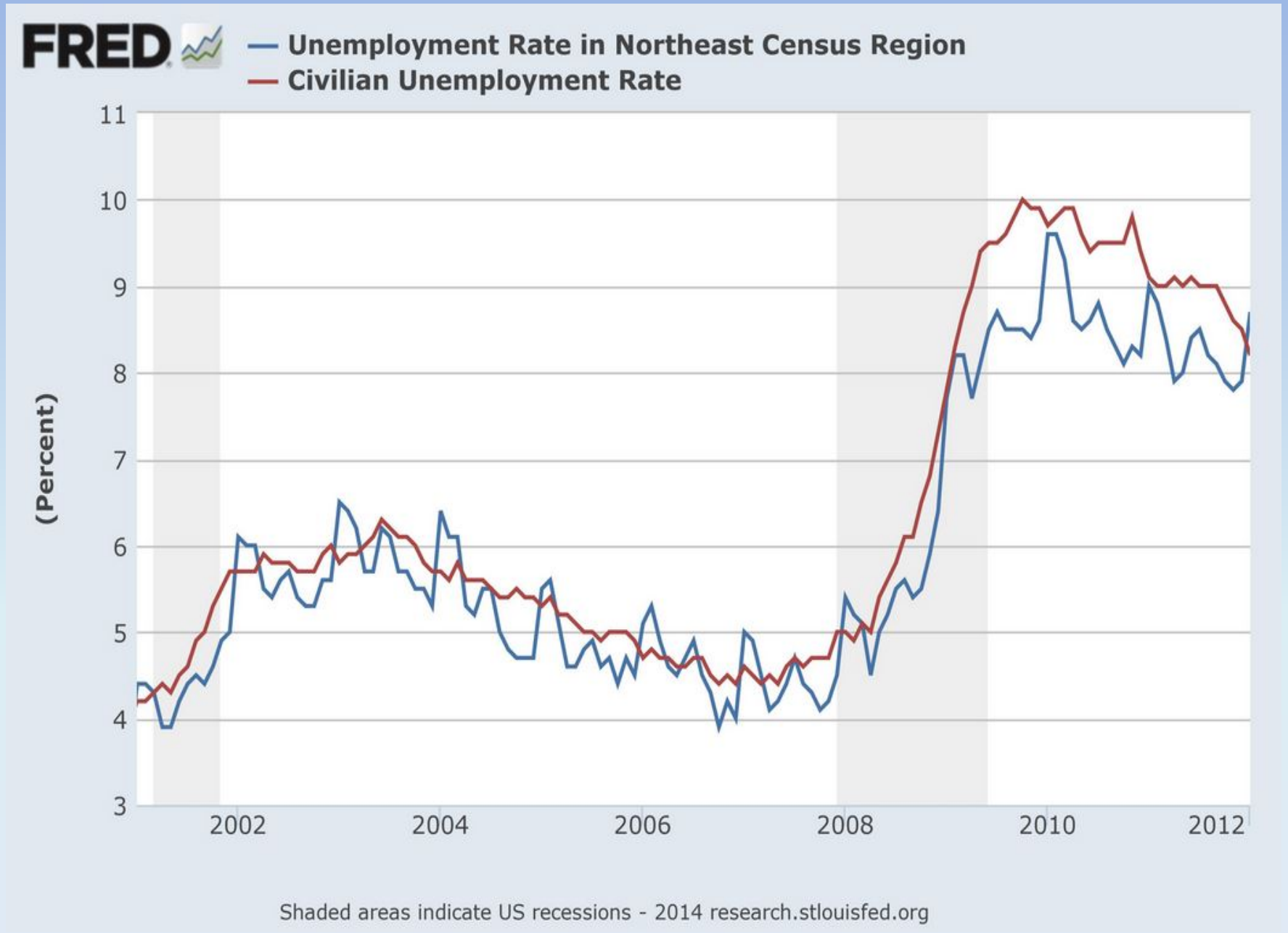
# Empirical Results

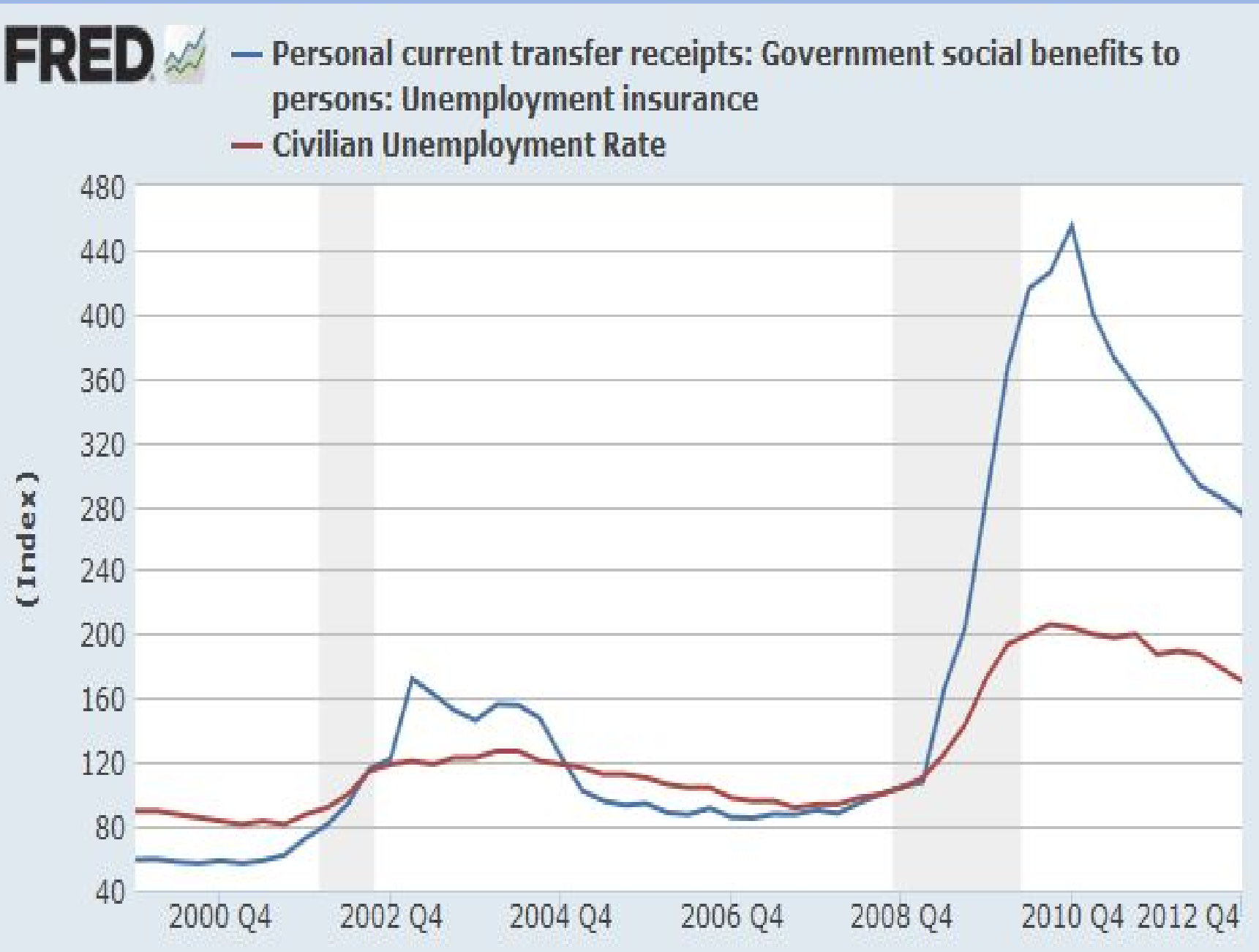
- Several variables not significant

- Possible reasons
  - Only one demographic variable used
  - Most data was annual, not quarterly
  - Lack of fluctuation in data
  - Northeast much different than other regions

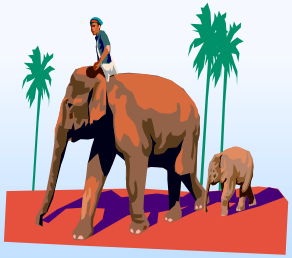
# Conclusions

- Data consistent with previous studies
- Northeast stronger economically & has more robust labor market
- Increased UI benefits increase unemployment and discourage job search efforts
- Causes labor market inefficiencies
- Stricter requirements for UI


FRED
Unemployment Rate in Northeast Census Region
Civilian Unemployment Rate
(Percent)
11
10
9
8
7
6
5
4
3
2002
2004
2006
2008
2010
2012
Shaded areas indicate US recessions - 2014 research.stlouisfed.org


FRED
Personal current transfer receipts: Government social benefits to persons: Unemployment insurance
Civilian Unemployment Rate
(Index)
480
440
400
360
320
280
240
200
160
120
80
40
2000 Q4
2002 Q4
2004 Q4
2006 Q4
2008 Q4
2010 Q4
2012 Q4

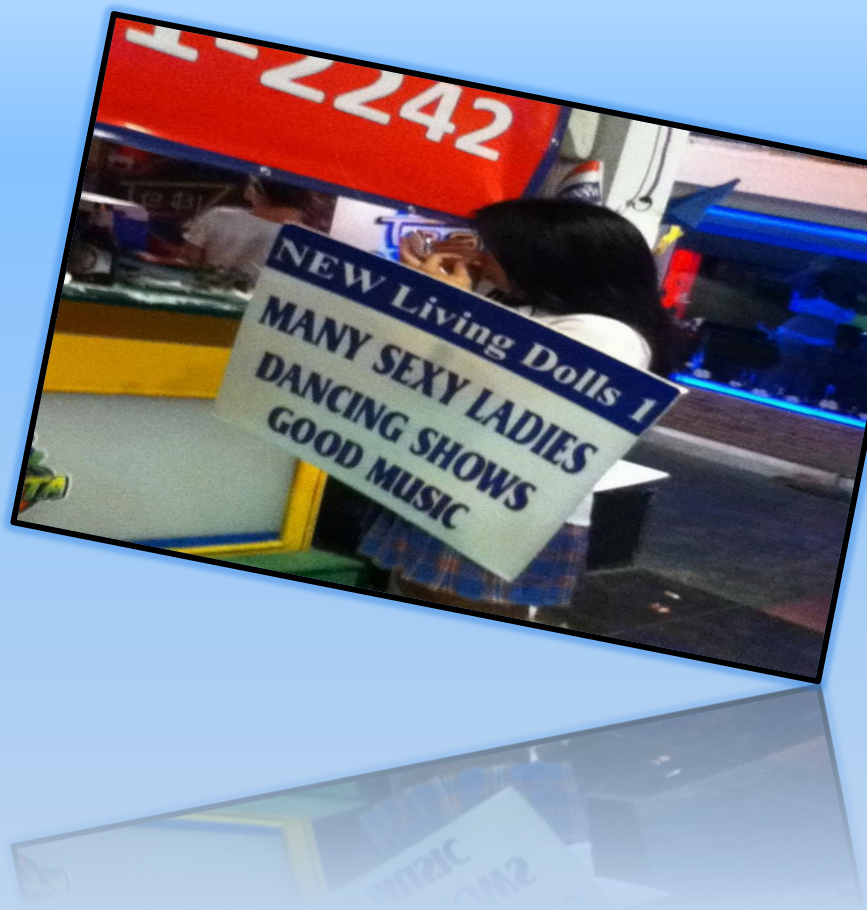
# Sex Tourism in Thailand



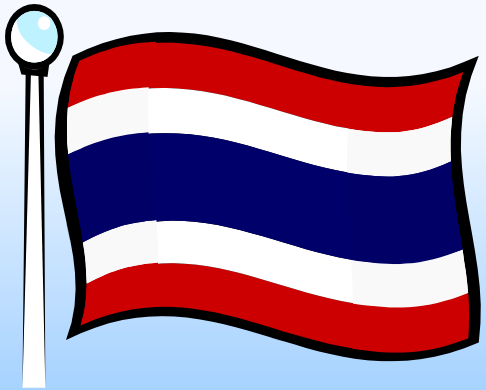
Guillaume Sabourin

# Agenda

- Country background
- Introduction to topic
- History and root causes
- Macroeconomic impact
- Negative Externalities
- Conclusions



# Thailand



"The land of the smiles"

Population – 67.7mil

GDP (PPP) – $674.3bn  Real Growth – 3.1%

GDP per capita - $9,900 (Income disparity)

Unemployment – 0.8%

Inflation – 2.2%

Currency – Thai Baht  $1 = 30BHT

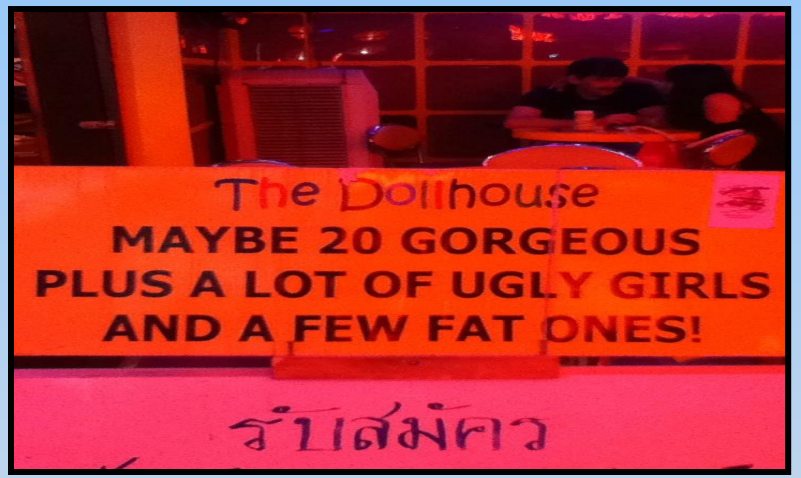

Myanmar
Laos
China
Chiang Mai
South China Sea
Bangkok
Vietnam
Cambodia
Andaman Sea
Thailand
Malaysia

# Sex Tourism

- “Consisting of people from economically developed nations traveling to underdeveloped countries specifically to purchase the sexual services of local men, women, and children”

# Sex Tourism

- Illegal but condoned
- 26.7 million tourists in 2013
  - 11.2 million sex tourists
- 800,000-2 million prostitutes
- 20% under age 18
- 2%-14% of economy



# History and Root Causes

- 1960s – Militarization
- Tourism Authority of Thailand
- Prostitution Suppression Act of 1960

Causes

- Poverty
- Cultural acceptance
- Education
- High pay

# Macroeconomic Impact

- Tourism industry 16.7% of GDP
- Huge source of foreign currency
- Contributes to higher wages
- Drives foreign investment

# Negative Externalities

- Exploitation
- Human Trafficking
- Fuels drug trade
- Corruption
- STDs

# Conclusions

- Industry is under-regulated
- Legalization would help

- Promote tourism for reasons other than sex
- Significant macroeconomic impact

# China and the WTO: What Price Membership?

Guillaume Sabourin
Brianna Watt

# AGENDA

- Introduction
- Background: Reforms since 1978
- Negotiating China's WTO Membership
- Reforms Facilitating Foreign Enterprise
- Reforms Facilitating Free Trade
- Systematic Reforms
- Complications caused by Accession
- China's Long-Term Growth
- Conclusion

# Introduction

- 2001: China's accession into the WTO
  - Numerous policy changes
  - Foreigners promised more direct access
  - Optimism ran high

- December 11, 2006
  - 5 year anniversary of accession
  - Deadline for implementation
  - How successfully were they completing their commitments?
  - How had it affected the rest of the world?

# Introduction

- The mood in the West had soured
  - The U.S. trade deficit: $202 billion in 2005
  - China blamed for job losses in manufacturing
  - Accused of currency manipulation and ongoing protectionism
- Problems for China
  - Concern about international competitors
  - Unemployment rate
  - Rural-urban income gap

# Introduction

- 2003: General Party Secretary, Hu Jintao, and State Premier, Wen Jiabao, assumed power
  - Troubled banking system
  - Regional and social inequality
  - Problems of persistent corruption

- Would WTO membership help, or hinder?
- Would it enhance central state power, or undermine it?
- Could the Communist Party meet the demands and still remain powerful?

# Background: Reforms since 1978

- 1978: Deng Xiaoping takes power
  - Averaged 9.3% 1978-2002
  - Improved standard-of-living
  - Maintained Communist Party's political hold
- "Household Responsibility System"
- Township-village Enterprises (TVEs)
- State-owned Enterprises (SOEs)
- "Dual Track" Pricing
- Government Bureaucratic Reforms
- Foreign investment welcomed in China

# Background: Reforms since 1978

- 1998: Zhu Rongji took over for Li Peng as Premier
  - Redoubled modernizing efforts
  - Reversed trend of rising public-sector employment

- "Zhu's fingerprints are all over the streamlining of the Chinese economy, much of it in anticipation of entering the WTO" – Nicholas Lardy, China Scholar

# Negotiating China's WTO Entry

- "Most Favored Nation" (MFN) status
- Gains from lower barriers
- Eliminate inefficiencies in economy
- Transnational production chains
- Devastating if Taiwan gained entry first
  - 1986: Started seeking entry into GATT
    - States role in economy was too big
  - Shed many command economy institutions in favor of market institutions

# Negotiating China's WTO Entry

- 1989: Tiananmen Square
  - Earned the world's disapproval and sanctions
- 1991: Collapse of USSR
  - More stringent with China
- Lackadaisical attitude toward violations
- "Developed" or "Developing"
  - Major implications for tariff rates and pace of market opening

# Negotiating China's WTO Entry

- September 17, 2001: approved as a member
- Preexisting GATT/WTO agreements and new, China specific agreements
  - Some unprecedented
- Terms classified into three realms
  - Reforms facilitating foreign business
  - Reforms promoting free trade
  - Systematic reforms

# Negotiating China's WTO Entry

- Not granted full "developing" country status
  - Due to enormous size and rapid growth
- Limited agricultural subsidies to 8.5% of production cost
  - Other "developing" countries: 10%
- "Safeguards"
  - Quotas on excessive Chinese imports
  - Accused China of "dumping" goods

# Reforms Facilitating Foreign Enterprise

- Restrictions of foreign businesses before accession
- Wholesaling, retailing and franchising reserved for Chinese companies
- Location and scope of their operations
- Discriminatory prices and consumer taxes
- Domestic content requirements

# Reforms Facilitating Foreign Enterprise

- Full trading and distribution rights, within 3 years
- Abolish dual pricing
- Foreign companies allowed majority share, after two years
- Foreign companies allowed to provide their own retail service, after three years
- Service sectors opened to foreign providers immediately
  - Geographic restrictions eliminated within five years

# Reforms Facilitating Foreign Enterprise

- 2006: Good implementation
  - 97% of U.S.-China Business council members optimistic
- China became world's largest recipient of FDI in 2002
- 2004: inward FDI surpassed $60 billion
  - Up from $40.72 billion in 2000
- 2006: over 1,000 foreign retailers in China
  - Up from 314 in 2004

# Reforms Facilitating Foreign Enterprise

- Increased FDI brought in funds
- Spillovers of technology and human capital
  - 85.4% of foreign-invested export-processing firms trained employees in China
  - 90% of those employees left the foreign firms
- China's state-owned banks and enterprises were in jeopardy

# Reforms Facilitating Foreign Enterprise

- Four large state banks: 67% of total bank deposits
- Banks were part of the government
  - Lending as told
  - No regard to profit
- 1994: Beijing attempted to reform the issues
  - Four main commercial banks
  - Relegated policy lending
  - Banks accumulated bad debts
  - Estimated to be officially insolvent by

# Reforms Facilitating Foreign Enterprise

- Limit foreign banks' freedom
- Government spent billions cleaning up state balance sheets
  - $170 billion into new asset management companies
  - Recapitalized the state banks, $32 billion
- New bad loans accumulated again
  - Government injected additional billions of dollars

# Reforms Facilitating Foreign Enterprise

- 2005: Bank of America Corporation, $3 billion
  - 9% stake in China Construction Bank
- Merrill Lynch & Co. partnered with the Royal Bank of Scotland Group, $3.1 billion
  - 10% stake in the Bank of China
- Outlook was worrisome
- “The state banks will come under sever pressure during post-WTO accession liberalization” -World Bank, 2004

# Reforms Facilitating Free Trade

- Tariffs
- Trade-distorting practices
- Not fully implemented
  - Subsidies on exports and to domestic industries remained
- Export restrictions
- Massive increase in imports

**Exhibit 8** Protection to Industrial Sectors in China (% tariff)

| | 1995 | 2001 | Post-accession |
|---|---|---|---|
| Processed food | 20.1 | 26.2 | 9.9 |
| Beverages & tobacco | 137.2 | 43.2 | 15.6 |
| Extractive industries | 3.4 | 1.0 | 0.6 |
| Textiles | 56.0 | 21.6 | 8.9 |
| Apparel | 76.1 | 23.7 | 14.9 |
| Light manufactures | 32.3 | 12.3 | 8.4 |
| Petrochemicals | 20.2 | 12.8 | 7.1 |
| Metals | 17.4 | 8.9 | 5.7 |
| Automobiles | 123.1 | 28.9 | 13.8 |
| Electronics | 24.4 | 10.3 | 2.3 |
| Other manufactures | 22.0 | 12.9 | 6.6 |
| Total manufactures | 25.3 | 13.5 | 6.9 |

Source: Will Martin, Deepak Bhattasali, and Shantong Li, "China's Accession to the WTO: Impacts on China," in Kathie Krumm and Homi Kharas, eds., *East Asia Integrates: A Trade Policy Agenda for Shared Growth* (Washington: World Bank, 2003), p. 45.

# Systemic Reforms

- Transparency
- Trade-related Intellectual Property Rights (TRIPS)
- Little or no effect
- Decreased FDI spillovers

# Complications Caused by China's Accession

- Domestic Impacts
- Tensions with the West

# Domestic Impacts

- Domestic sectors
- Household welfare
- Rural-urban inequality
- Environmental damage

# Tensions with the West

- Flooding of Chinese imports
- Political and economic clout
- Energy needs
- Currency undervaluation
- Loss of manufacturing jobs in US and EU
- Trade disagreements

# China's Long Term Growth

- Public discontent
- Millions of lost jobs
- State bank capitalization
- Delicate global integration
  - Openness vs Internal Stability

# Conclusion

- WTO implementation

**Exhibit 9** China's WTO Implementation: Perceptions of U.S. Firms in China, 2006

| Most Significant WTO Commitment China Has Implemented | % Responded | Most Significant WTO Commitment China Has Failed to Implement | % Responded |
|---|---|---|---|
| Trading/distribution rights | 25 | Intellectual property rights | 31 |
| Market access | 21 | Financial services | 14 |
| Tariff/duty reductions | 16 | Transparency | 12 |
| Foreign ownership/investment | 10 | Local content requirements | 5 |
| Financial services market openings | 9 | National treatment | 5 |
| Direct selling | 3 | Tariff/duty reductions | 5 |
| Express delivery services | 3 | Trading/distribution rights | 5 |
| Government procurement | 3 | Construction and engineering | 3 |
| Other | 10 | Direct selling | 3 |
| | | Government procurement | 3 |
| | | Other | 14 |

Source: Adapted from U.S.-China Business Council at http://www.uschina.org/public/documents/2006/08/member-priorities-survey.pdf.

# Conclusion

- WTO implementation
- Internal vs External forces
- Long-term growth
- China's political future