The Relationship Between the Unemployment Rate and Workplace Injuries

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Abstract

The United States has been experiencing a decline in workplace injuries since the 1970s, driven by workplace safety legislation and improvements in technology. However, workplace injuries flattened with an economic expansion in 2010. Previous research studied an era of the US which vastly differs from the labor force today. Using a difference-in-differences approach on unstudied industries and workplace injury outcomes from 1992 to 2018, I examine the relationship between the unemployment rate and workplace injuries in a new era. Further, using modern estimation techniques, I look at how the relationship of interest differs during an expansion and a recession which was previously assumed to be equal. My findings show that a one percent increase in unemployment is related to a 17.8% increase in nonfatal workplace injuries. This inverse relationship conforms to previous findings. However, a one percent increase in unemployment is also found to increase fatal injuries by 13.2% which is a significant update to previous findings contradicting conclusions of previous researchers. I cannot reject the hypothesis that these rates differ between expansions and recessions. However, when breaking down the nation by sector and industry, the relationship between unemployment and injuries can be found to be counter-cyclical and there can be large differences depending on the economy is experiencing a recession or an expansion which contrasts what the nation exhibits as a whole.

1 Introduction

In 2018, 3 in every 100 American workers suffered a debilitating workplace injury. This is down from 8% in 1992 but in recent years the decline in workplace injury rates has begun to flatten. This flattening coincides with a significant increase of worker complaints citing unsafe and unfair working conditions, the decline in labor union representation which has been shown to promote workplace safety standards, and a resurgence in the passage of right-to-work laws (Wich and Magee [2020] and Sinclair *et al.* [2010]). However, an overlooked contributing factor which aligns with the 2010 workplace injury deceleration is the large economic expansion that occurred at the same time.

The unemployment rate constantly fluctuates at a national level but even more so when considering individual states and industries. While the national unemployment rate in 2010 was 9.6%, construction workers in Alabama experienced an unemployment rate higher than 20%. At the same time, workers in the finance industry in Kansas continued to see unemployment below 4%. Understanding and measuring the correlation between the unemployment rate and workplace injuries is necessary for creating effective injury preventative measures. This can help reduce the estimated 67 billion dollars in medical costs experienced from workplace injuries in 2007 (Leigh [2011]). Worker's compensation is estimated to cover 25% of this cost meaning the other 75% is falling on the firms and on individuals. While injuries are costly, providing safety is also a large expense for a firm. Cutbacks to safety may occur when recessions occur, unemployment is high and firms are looking for cost savings (Chelius [1974]). The unemployment rate has the potential to influence workplace injuries because of its ability to influence incentives for both the firm and the workers (Leigh [1985] and Kossoris [1938]). Conflicting incentives lead to a theoretical ambiguity which researchers have addressed by empirically testing the direction of the association between business cycle indicators and occupational injuries.

Results from previous research illustrate that unemployment and workplace injuries are inversely related. However, little evidence is provided as to which mechanisms lead to injuries being pro-cyclical. Previous studies also overlook the potential differences in the sensitivity between the business cycle and workplace injuries within different industries. Furthermore, they do not study differences between the private and public sector, and no study has separately measured the changes on workplace injury rates during an expansionary period and a recession. The most recent estimates on the relationship between unemployment and workplace injury rates in the United States come from studies using data from 1976 to 1991. Since this time period of study, the labor force has changed dramatically with regards to its size, gender structure, and age structure (of Labor Statistics [1992 2018a]). Each of these changes to the labor force impact workplace injury rates. Technology advancement, the rise and fall in public sector and private sector labor unions, and national occupational composition changes further distinguish today's era from the era studied by previous researchers.

The purpose of this paper is to look at the relationship between unemployment and injuries in a new era. To verify previously found estimates, a study using data on the entire workforce is conducted. Because industries vary drastically in safety sensitivity and focus, the same analysis is conducted using data on the following seven industries: construction, manufacturing, wholesale, retail, transportation and warehousing, financial activities, and services. Applying a national estimate to an industry such as extremely safety-sensitive construction may grossly underestimate the relationship between unemployment and workplace injuries. Further, applying the same estimate to the less risky finance sector may overestimate a result. While conventional wisdom states that workplace injuries are pro-cyclical, this blanket statement is perhaps wrong for certain industries necessitating analysis for each industry individually. I also conduct analyses to compare the private and public sector because their differences in business incentives may lead to differing estimates.

I estimate the correlation between unemployment and workplace injury rates during recessionary and expansionary periods for the U.S. workforce, private and public sectors, and seven industries using four different two-way fixed effect equations. This allows me to fully exploit the large amount of variation in the US panel data from 1992 to 2018. My research advances the literature in several ways. First, I use recent US data which will provide estimates for a new era. Second, while previous studies have primarily focused on an individual country or a few specific industries, this study analyzes several industries including those which have not been previously studied. Further, estimates for the private and public sector will be compared which has not previously been done. Third, five different measures of workplace injury rates with differing severity of injury will be used to better help understand the mechanisms between unemployment and workplace injuries. Lastly, using a modern estimation strategy, the correlation between unemployment and injuries will be studied when a recession is occurring and compared to when an expansion is occurring in order to test whether the impact on injuries from a decrease in unemployment is equal to the impact on injuries from increases in unemployment. This is assumed to be true by previous estimation techniques when it may not be.

My findings when studying all workers show that a one percent increase in unemployment is related to a 17.8% increase in nonfatal workplace injuries. Contrary to several studies, a one percent increase in unemployment is also found to increase fatal injuries by 13.2%. These results equate to an increase of 120,000 injuries and 6,500 deaths. These pro-cyclical results are even stronger for the high-risk construction industry but are not found in the sector. Other industries such as the wholesale or service industry exhibit a counter-cyclical workplace injury rate. Through multiple definitions of recessions and expansions for robustness, I cannot reject that the decrease in workplace injury rates during a recessionary period is equal to the increase experienced during expansionary periods. However, this is not always the case depending on the industry and type of injury studied.

2 The Relationship Between Unemployment and Workplace Injuries

Multiple theories point to either a direct or inverse relationship between unemployment and workplace injuries. For a condensed version of these theories, see Table 1. Previous researchers have theories which compare the business cycle to workplace injuries. This paper's focus is on the relationship between unemployment and workplace injuries. However, the business cycle is strongly correlated with unemployment and is used interchangeably in the context of these theories.[1] Asfaw *et al.* [2011] splits these mechanisms into three sets of explanatory variables: working conditions, labor composition, and reporting.

Kossoris [1938] theorized that the increased pace of work experienced during economic expansions can lead to higher risk of injury at the workplace. Economic expansions may also lead to things such as longer work hours, overtime, and worker fatigue. These have been shown to be associated with increased workplace injury rates (Dembe *et al.* [2005] and Dembe *et al.* [2008]).[2] Hence, workers may be more injury prone during an economic expansion. Asfaw *et al.* [2011] also argues that booms lead to other safety risks such as less training given by firms and fewer breaks given. In contrast, recessionary periods can lead to slower and fewer working hours for employees leading to an opposite, but perhaps not equal, effect. These ideas lend to workplace injury rates being pro-cyclical.

[1]The business cycle consists of expansionary periods and recessionary periods. During expansions, businesses experience an increase in production which in turn leads to lower levels of unemployment. The opposite is true for recessions.

[2]There also exists evidence that overtime has no impact on injury rates Schuster and Rhodes [1985].

Chelius [1974] also considers how a firm may respond during economic upturn. A firm may see that the relative cost of providing safety increases when production is high and allow working conditions to deteriorate in the interest of increasing output. This would further the idea of injuries being pro-cyclical. However, when production is high, losing a worker to an injury could be detrimental to the company. Replacement of the injured employee is likely difficult due to the low levels of unemployment. Therefore, a firm may pursue higher safety standards leading workplace injuries to be counter-cyclical. The combination of these conflicting mechanisms creates uncertainty as to whether working conditions and safety become better or worsen during economic upturns and vice versa.

Kossoris [1938] and Robinson [1988] also theorized that the business cycle can impact the level of new or inexperienced employees in a workplace. These new hires have been shown to be more injury prone as they have less working experience (Keyserling [1983], Oh and Shin [2003], Chi *et al.* [2005], Fabiano *et al.* [2010], Leung *et al.* [2009]). Empirical research has argued that during economic upturns, the level of new hires increases. This can lead to a workforce that is overall more inexperienced which increases workplace injury rates (Davies *et al.* [2009], Fernández-Muñiz *et al.* [2018], Asfaw *et al.* [2011]). Not only are there increases of inexperienced new hires, but job switching for experienced workers also increases during expansions (Akerlof *et al.* [1988]). So far, these theories relating to labor composition support a direct relationship. Conversely, during recessions, unemployed workers may be more likely to take positions in an industry which do not match their previous experience (cite). Because workers may swap industries when unemployment is high, recessions may also lead to increases in inexperienced workers. It is therefore unclear if expansions or recessions have a greater impact on workplace injuries due to inexperienced workers. Chang *et al.* [2018] finds empirical evidence suggesting that inexperienced workers do not lead to changes in workplace injury rates. Further research is needed to clarify whether this mechanism has an impact when considering the relationship between the business cycle and workplace injury rates.

Leigh [1985] theorized that workers are less likely to file an injury claim when unemployment is high. This is because injury claims increase the chance of job loss which can be detrimental during a recession (Boone and Van Ours [2006] and Boone *et al.* [2011]). This reporting bias would push workplace injury rates to be pro-cyclical. A workplace injury claim is costly to a firm for several reasons including time to file the report, lost production from the employee, possible increases in insurance premiums, or, if self-insured, out-of-pocket costs. Hence, an incentive exists to under report workplace injuries to avoid these costs. If this incentive is higher during an expansion then this can also become a source of reporting bias. However, this reporting bias would push workplace injury rates to be counter-cyclical. Again, these conflicting mechanisms create uncertainty about the relationship between the business cycle and workplace injuries. Previous literature has tested this reporting mechanism by studying fatal and non-fatal workplace injury rates. The idea is that fatal injury rates are not subject to the same reporting bias as non-fatal injury rates. Davies *et al.* [2009], Boone and Van Ours [2006], Boone *et al.* [2011], and Amuedo-Dorantes and Borra [2013] all argue in favor of Leigh [1985]'s hypothesis of reporting bias, finding that fatal injuries or severe nonfatal injuries are not affected by the business cycle while less severe nonfatal injuries are. However, Nielsen *et al.* [2015] finds a negative relationship between unemployment and both nonfatal and fatal workplace injury rates. These contradicting results exacerbates the need for further empirical evidence to help clarify this mechanism's potential impact.

The majority of previous literature using U.S. data is outdated, studying an economy with a vastly different labor force with regards to its size, gender and age structure, and occupational composition (Kossoris [1938], Chelius [1974], Smith [1976], Leigh [1985], Shea [1990]). The two recent studies which use US data are Asfaw *et al.* [2011] and Boone and Van Ours [2006] but even these use data with the most recent year being 1976 and 1991, respectively. Additionally, these studies primarily focus on a single industry or single state. Other studies which include

several industries are focused in Canada (Lanoie [1992] and Brooker *et al.* [1997]), Spain (de la Fuente *et al.* [2014], Fernández-Muñiz *et al.* [2018], Amuedo-Dorantes and Borra [2013]), Denmark (Nielsen *et al.* [2015] and Lander *et al.* [2016]), and other countries (Chang *et al.* [2018], Davies *et al.* [2009], Boone *et al.* [2011], Al-Arrayed and Hamza [1995], Fabiano *et al.* [1995]). Since the US labor force and economy are experiencing rapid transformations with regards to labor unions (Zepeda [2021]), worker composition (**?**) and unemployment, a new study of the United State's sectors and major industries is warranted.

3 Estimation Strategies

I use a multi-state two-way fixed effect estimation strategy to take full advantage of the panel data constructed. The following equation estimates the reduced form impact of unemployment on workplace injuries:

$$I_{st} = \alpha + \beta_1 \text{UNEMP}_{st} + \beta_2 \mathbf{X}_{st} + \sigma_s + \tau_t + \epsilon_{st} \tag{1}$$

The dependent variable, I_{st}, represents the natural log of five workplace injury variables which vary in injury severity. UNEMP_{st} is the unemployment rate within state s and year t. The vector $\mathbf{X}_{st}$ comprises time-varying state-specific control variables. Log variables are used for all controls with the exception of the political variable due to the large amount of zeros. The state fixed effect σ_s absorbs unobserved time-invariant state characteristics. Similarly, the year fixed effect τ_t captures unobserved factors changing each year that are common to all states for a given year (I called this national trends but Chris said that was incorrect... I don't remember why though). Models are estimated with OLS and standard errors are clustered at the state level.

To capture the reduced form effect of unemployment on workplace injuries, certain variables are intentionally omitted from equation 1 such as labor union representation or firm size. A labor unions purpose is to give greater bargaining power to the employees. This increase in bargaining power can allow employees to receive increased benefits in the form of salary, fringe benefits, job security, and even safety. Changes in the unemployment rate may influence employees to form or disband unions which in turn impacts workplace injury rates. Similarly, a state's average firm size may fluctuate with unemployment. Changes in firm size can also lead to changes in workplace safety. Omission of these variables is to show the total effect that may work through the various mechanisms.

Previous study results suggest that β_1 from equation 1 will be negative. A negative sign on β_1 would mean that when unemployment increases, the rate of workplace injuries would decrease, and a positive sign would mean that when unemployment increases, the rate of workplace injuries would increase. The setup of equation 1 postulates that the impact on workplace injury rates from a decrease in unemployment is equal to the impact on workplace injury rates from an increase in unemployment. However, the impact from a recession and an expansion may be asymmetric making equation 1 misleading. To test this asymmetry, I will follow Mocan and Bali [2010]'s estimation strategy. This is done by defining the workplace injury rate as an asymmetric function of the unemployment rate using the following equation:

$$I_{st} = \alpha + \beta_+ \text{UNEMP}^+_{st} + \beta_- \text{UNEMP}^-_{st} + \beta_2 \mathbf{X}_{st} + \sigma_s + \tau_t + \epsilon_{st} \tag{2}$$

where

$$\begin{aligned}
\text{UNEMP}^+_{st} &= \text{UNEMP}_{st} \quad \text{if} \quad \text{UNEMP}_{st} \geq \text{UNEMP}_{s(t-1)} \quad \text{and} \quad = 0, \quad \text{otherwise} \\
\text{UNEMP}^-_{st} &= \text{UNEMP}_{st} \quad \text{if} \quad \text{UNEMP}_{st} < \text{UNEMP}_{s(t-1)} \quad \text{and} \quad = 0, \quad \text{otherwise}
\end{aligned}$$

In other words, UNEMP_{st} from equation 1 is split into the two variables, UNEMP_{st}^{+} and UNEMP_{st}^{-}, based on whether unemployment experiences an increase or decrease from the previous period. All other variables are identical to equation 1. This separation of unemployment should capture any impact differences between expansions and recessions.

Using UNEMP_{st}^{+} and UNEMP_{st}^{-} to represent an expansion and recession may seem crude since the National Bureau of Economic Research (NBER) defines a recession to be a significant decline in economic activity for a few months measured by real GDP, real income, employment, industrial production, and wholesale-retail sales. However, the NBER defines a recession nationally. For state level business cycle data, researchers have used the State Coincident Indexes published by the Federal Reserve Bank of Philadelphia (Crone and Clayton-Matthews [2005], Bram *et al.* [2009], Crone and others [2006], Novak and others [2008]). The following equation is estimated to study possible asymmetric relationship using a more formal definition of recession and expansion:

$$I_{st} = \alpha + \beta_{+}\text{UNEMP}_{st}\mathbb{1}_{st}(\text{SCI}^{-}) + \beta_{-}\text{UNEMP}_{st}\mathbb{1}_{st}(\text{SCI}^{+}) + \beta_2\mathbf{X}_{st} + \sigma_s + \tau_t + \epsilon_{st} \qquad (3)$$

where the indicators for whether a state s in time t is experiencing a recession or an expansion is defined by whether the State's coincident index experienced an average increase or decrease from the previous year. As a robustness check, this indicator will be changed to whether there are two quarterly declines in the SCL.

Equations 1 and 2 will be estimated first for all industries combined, second for public and private sectors and finally for specific industries. The indicators in equation 3 cannot be broken down by industry or sector. If some industries thrive while others struggle within the same state and year, breaking equation 3 down by industry or sector can result in inaccuracies. Before the definition change of a recession by the NBER, a recession was defined by Julius Shiskin (1974) as a period when GDP declines for two consecutive quarters. Using this definition, the following equation can be estimated for each industry and sector listed:

$$I_{st} = \alpha + \beta_{+}\text{UNEMP}_{st}\mathbb{1}_{st}(\text{GDP}^{-}) + \beta_{-}\text{UNEMP}_{st}\mathbb{1}_{st}(\text{GDP}^{+}) + \beta_2\mathbf{X}_{st} + \sigma_s + \tau_t + \epsilon_{st} \qquad (4)$$

where $\mathbb{1}_{st}(\text{GDP}^{-})$ is one if a state s in year t experienced a second quarter of decline in GDP and $\mathbb{1}_{st}(\text{GDP}^{+})$ is the opposite.

Having additional definitions of what a declining economy is in the form of equations 3 and 4 serves as a form of robustness. Further, unlike equation 3 and similar to equations 1 and 2, equation 4 can be done at the industry and sector level. However, monthly GDP data at the industry level is only available beginning in 2005 resulting in a smaller sample size. Because of the data restrictions on equations 3 and 4, they should be viewed as a robustness with equations 1 and 2 being the primary analysis.

4 Data

The U.S. Bureau of Labor Statistics provides both the Survey of Occupational Injuries and Illnesses (SOII) and the Census of Fatal Occupational Injuries (CFOI) which give information on nonfatal and fatal workplace injuries, respectively. I aggregate multiple data sources to construct a strongly balanced panel of 1,350 state-year observations from 1992 to 2018 for fatal workplace injuries and an unbalanced panel of 943 state-year observations from 1996 to 2018 for national nonfatal workplace injuries. The panel for nonfatal workplace injuries is unbalanced because some states choose not to participate in the SOII, some fully participate, and others participate some years and not others. Non-participation from state governments is likely because the costs are shared between BLS and the state government. These counts, along with

estimates of total employment from the Current Population Survey (CPS), are used to calculate the rate of workplace injuries for each state-year. There are five outcome measures, namely, rates of fatal and nonfatal injuries, lost workday injuries, job restriction/transfer injuries, and all other nonfatal injuries. Lost workday cases are nonfatal injuries which resulted in time away from work. Job restriction or job transfer cases are nonfatal injuries which resulted in the inability to perform the employee's tasks but did not result in time away from work. "Other" nonfatal injuries are nonfatal injuries which did not result in lost workdays or job restriction/transfer. Injuries which are more severe are more likely to result in time away from work while small injuries may result in no time away from work and may not result in any job restrictions at all. The SOII and the CFOI is provided for each industry and the public and private sectors allowing for independent and comparison analyses.[3]

The CPS provides the unemployment rate for each state-year-industry. This dataset is further used to estimate multiple state demographics including fraction male, age, marital status, and education variables for each state-year. A state's industry composition is also estimated from CPS in order to help control for states which may have higher concentrations of riskier industries within a certain year. Controls for industry composition are used for estimations on the nation and private sector but are excluded when studying individual industries. The Federal Reserve Bank of Philadelphia provides the State Coincident Indexes which allows me to calculate recession periods at the state level and the Bureau of Economic Analysis provides state-industry level GDP data for equations 3 and 4, respectively. GDP data for equation 4 is only available from 2005 at the month-state-industry level.

The Occupational Health and Safety Administration (OSHA) has played a key role in the reduction of workplace injury rates since its formation in 1970 through the use of inspections and penalties (Weil [1996]). The federal OSHA program covers most private sector workers. Twenty-eight states have enacted their own state OSHA plans covering public sectors with twenty-two of them also giving additional effectiveness to the private sector. Little variation exists on when states enacted a state OSHA plan meaning controlling for whether a state has a state plan would be swallowed by state fixed effects. However, OSHA provides information on when inspections were done by state and industry which can fluctuate significantly from year to year within a state. Using this and the number of establishments in each state from the United States Census Bureau, I calculate and control for the OSHA inspection rate.

To further account for other potential confounders, weather data from the National Oceanic and Atmospheric Administration is included. Varghese *et al.* [2018] show that an increase of heat exposure is positively related to workplace injuries for primarily outside working industries. Rainfall may have a similar impact as well. For a full list of variables and national summary statistics, see Table 2.

All data previously mentioned is collected for the following industries: construction, manufacturing, wholesale trade, retail trade, transportation and warehousing, financial activities, and services.[4] Industries can vary in some key factors such as rates of injury, unemployment, and labor unions which impact the equations listed previously. For example, the nonfatal workplace injury rate in 2019 for the finance industry was 0.5% but was 4.5% in transportation and warehousing industry. The difference in safety levels between industries can lead some industries to experience larger fluctuations in injury rates. The unemployment rate began to rise in 2009 for all industries, but some industries, such as construction and manufacturing, experienced a much larger rise in unemployment. For a comparison of unemployment rates by

[3]Some data on nonfatal injuries by industry are omitted resulting in slightly smaller sample sizes. For example, some states did not start with including the public sector in their counts leading the public sector nonfatal injury sample size to be 762.

[4]The state coincident indexes and the OSHA inspection rate are only available at the state-year level meaning this data is identical for each industry. Hence, equation 3 is only run at the national level. Further, some variables are not collected at the industry level by nature such as weather and political variables.

industry, see figure 2. Further, the objectives of a workplaces labor union can differ depending on the needs of the employees. A construction labor union may focus more on increased safety standards while a teacher labor union may focus on salary. This is important because labor union representation varies from industry to industry. For example, while the private sector has experienced a decline in labor union representation, the public sector has had a continual increase. Private sector union representation was 6.2% in 2019 while 33.6% of the public sector had union representation. As private sector firms may be driven by profits, the public sector can be less revenue driven and have stricter policies and procedures with regards to workplace safety. Hence, results from the estimation strategies previously listed may vary drastically by industry and sector substantiating the importance of studying each. Looking at the relationship between unemployment and workplace injuries as a whole may lead to a result which is a large underestimate for some industries and an overestimate for others. For a full list of mean differences which may influence the workplace injury rate, see table 2.[5]

5 Results

The results section will first focus on the entire workforce. Differences will then be shown between the private and public sectors along with different industry results. I will finish the results section discussing robustness checks.

5.1 National Results

Table 3 presents results from equations 1 - 4 using data on the whole workforce. Controls and fixed effects are included but their results are excluded from the table. See Tables 21 - 24 in the appendix for full regression tables for each equation. Column (1)'s outcome variable is log fatal workplace injury rates. Column (2) is for log all nonfatal workplace injuries. Columns (3)-(5) are log rates of lost workday injuries, job restriction/transfer injuries, and all other nonfatal injuries. Of the different types of nonfatal injury outcomes, lost workday injuries are the most severe, job restriction/transfer cases are less severe, and "other" nonfatal injuries are the least severe.

According to model 1, no matter the severity of the injury, a one percent decrease in the unemployment rate is estimated to increase workplace injuries somewhere between 13.2% and 22.6%. These point estimates align with findings from previous studies. The estimate for fatal injuries translates to 693 more fatal workplace injuries in relation to a one percent increase in national unemployment. Further, on average, a one percent decrease in national unemployment is correlated with about 500,000 more nonfatal injuries. Assuming unemployment is a proxy for the business cycle, these results suggest that when states experience an expansionary period, they also experience more fatal and nonfatal workplace injuries and vice-versa, i.e., workplace injuries are pro-cyclical.

Model 2 in Table 3 splits the unemployment rate dependent on whether unemployment experienced a decrease or increase relative the previous year. The coefficient during periods of rising unemployment, β_+, suggests that a one percent increase in state unemployment rate decreases fatal workplace injuries by 13.4% and nonfatal workplace injuries by 20.5%. Similarly, the coefficient during periods of decreasing unemployment, β_-, suggests that a one percent decrease in the state unemployment rate increases workplace injuries by 13.3% for fatal workplace injuries and 19.7% for nonfatal workplace injuries. The null hypothesis of the equality of the coefficients UNEMP_t^+ and UNEMP_t^- is conducted for each outcome with the results of this test given in the F_diff and p_diff. Because the null hypothesis testing the equality between UNEMP_t^+ and UNEMP_t^- cannot be rejected for columns (1), (3), and (4), the decrease in

[5]For standard deviation, minimum, and maximum, see tables 11 through 20 in the appendix.

workplace injury rates during a recessionary period is equivalent to the increase in workplace injury rates during an expansionary period. However, the null hypothesis that $\text{UNEMP}_t^+ = \text{UNEMP}_t^-$ can be rejected at the 5% level for columns (2) and (5). This result suggests that the decrease in total nonfatal injuries and less severe workplace injury rates during a recessionary period is less than the increase in less severe workplace injury rates during an expansionary period.

Saying that a state's economy experienced a recession because unemployment may have increased slightly is a crude definition of what a recessionary period is. Hence, model 3 uses the State Coincident Indexes (SCI) to provide a better definition of when a state-year was experiencing a recession or expansion. If a state experiences at least two quarters of a decreasing SCI, than that state is labeled to have experienced a recession that year. Point estimates from model (3) are all slightly less than those found in model (2). Tests for whether the regression coefficients found are equal are given for model (3) as well and tell a different story than model (2). Model (3) suggests that there is equality for the two regression coefficients when nonfatal injuries are studied but that the decrease in fatal injuries during a recession is less than the decrease experienced during an expansion. As a robustness check, the definition of recession is changed to whether or not a state's average SCI decreased for the year. Results for this robustness check are shown in Table 4. Differences between a yearly and a quarterly definition of recession show some changes in results but these changes are small.

Model 4 uses GDP data and the Julius Shiskin defintion of a recession to give indicators of when a state-year was experiencing a recession. These results differ slightly from the previous models but do point towards the same pro-cyclical relationship. One possibility for a few of the differences is the change in sample size.This is because GDP data at the state and industry level is only available beginning in 2005. Although more noisy, model 4 primarily indicates that the relationship between the unemployment rate and workplace injuries is about the same whether or not the economy is experiencing a recession or expansion.

The consistent pro-cyclical relationship for fatal workplace and more severe workplace injuries also contradicts finding from Davies *et al.* [2009], Boone and Van Ours [2006], Boone *et al.* [2011], and Amuedo-Dorantes and Borra [2013] who find no relationship for these types of injuries. These researchers argue that since they find no relationship for these types of injuries but do see a relationship for less severe workplace injuries, then there is a high plausibility of the reporting bias mentioned in section 2. Because fatal workplace injuries are likely not impacted by any reporting bias, my results suggest that the mechanism for the correlation between workplace injuries and unemployment is not any type of reporting bias. This aligns with findings from Nielsen *et al.* [2015] and Chang *et al.* [2018]. This leaves changes in working conditions and changes in worker experience as commonly cited mechanisms for the relationship found.

5.2 Private vs Public Sector

For easy comparisons, Tables 5 - 9 give the estimations for equations 1, 2, and 4 for the private and public sectors as well as each industry. Each table represents a different type of injury.[6] Results for the private sector are somewhat similar to those found for the nation as a whole. There are a few important differences when studying the private sector in comparison to national results. When studying fatal workplace injuries, point estimates appear to be slightly higher for the private sector. Point estimates for nonfatal injuries are slightly less in models (1) and (2) for the private industry in comparison to the full workforce. Model (4) results are slightly higher for the private sector and show two point estimates that are much closer in value further suggesting no difference between the relationship of unemployment and injuries during expansions and recessions for the private sector. Results for nonfatal injuries resulting in days

[6]For a table of results including controls and fixed effects, see Tables 25 - 30 in the appendix.

away from work are very similar to those found for the full workforce. The null hypothesis for the equality of $UNEMP_+$ and $UNEMP_-$ in model 2 for job restriction/transfer cases cannot be rejected for the private sector which differs from the results found for the total workforce. However, this hypothesis can be rejected for the private sector when studying all other nonfatal injuries which also differs from the results found for the total workforce.

The results for the public sector are largely different than those discussed so far. Results for fatal injuries are statistically insignificant and close to zero for models (1) and (2) and are positive and insignificant for model (4). Results for nonfatal injuries are also statistically insignificant and much closer to zero for every model studied giving further evidence to the lack of correlation between the unemployment rate and workplace injuries in the public sector. Although insignificant, these results have small standard errors showing that the true results likely are null or close to a one percent change.

The mechanisms discussed in section 2 can be summarized under three categories: working conditions, labor composition, and reporting. The public sector may not be impacted by these mechanisms. For example, while a private sector firm may change provided safety levels based on production rates, a public firm is more likely to continue to follow safety protocols set by the state or federal government. Further, when the number of new hires increases, the public sector may do a better job at training new employees to follow safety guidelines than a private sector firm. Reporting is also likely not a mechanism that a public firm deals with due to differences in incentives compared to a private firm. The null results found for the public sector likely come from either industry composition differences between the private and public sectors or incentive differences.

5.3 Differences in Industries

As before, Tables 5 through 9 can be used for quick comparisons between industries.[7] Of the seven industries studied, the construction industry, manufacturing industry, and retail industry are the three which stand out as exhibiting multiple negative point estimates. Results for the construction industry suggest that a one percent increase in the unemployment rate is related to a 62.3% decrease in the fatal injury rate significant at the 5% level. Both models (2) and (4) cannot reject the equality of this decrease during a recession and expansion. When looking at nonfatal injuries, a one percent increase in the unemployment rate is found to decrease nonfatal injuries by 10.3% significant at the 1% level. Results for days away from work, job restriction, and other nonfatal injuries are similar for the construction industry with results for other nonfatal injuries being significant at the 5% level. When studying the manufacturing industry, results seem null for total nonfatal injuries, lost workday cases, and other nonfatal injuries. However, a one percent increase in the unemployment rate is found to increase job restriction or transfer nonfatal cases by 17.1% which is fairly consistent across each model. Fatal injury results in the manufacturing industry suggest a large decrease following an increase in unemployment but results are insignificant. This is also true for the retail industry which is shown to have small results for lost workday cases and other nonfatal injuries, large and insignificant results for fatal injuries, and significant results for job restriction or transfer cases showing that a one percent increase in unemployment is related to a 14% decrease in the injury rate. There is perhaps a decrease in nonfatal injuries as well for the retail industry but this is inconsistent across models.

The four other industries studied, wholesale, transportation and warehousing, finance, and services, have results which are mixed. Most models and outcomes for these four industries have insignificant results with small point estimates. However, some estimates jump out as being important. Overall the wholesale trade industry shows null results with some results being significant when studying days away from work cases. However, these significant point

[7] For a full set of results, see Tables 40 - 51 in the appendix.

estimates are very small. Job restriction or transfer nonfatal injuries are shown to decrease during increasing unemployment for the finance industry significant at the 5% level. Results for the transportation and warehousing, finance, and service industries suggest that not all industries show either a null or inverse relationship between unemployment and workplace injuries. These three industries give multiple instances of a direct relationship between the two. The transportation industry has positive coefficients for other nonfatal cases in model (4) and the service industry has large positive coefficients for job restriction or transfer nonfatal cases in model (4). These significant findings are perhaps the result of type I error. The probability of type I error occurring increases as the number of hypotheses tested increases which could be the case for some of the estimates found. However, given the number of positive estimates found, the results suggest that the negative relationship between unemployment and workplace injuries that is commonly found in previous literature may not hold for every industry and this relationship may even be positive for some industries.

Break this down into three paragraphs from here. Discuss con, man, and retail together, finance and service together, and whole and transportation together. Go into detail about each of them in each paragraph to give them length.

5.4 Multiple Hypothesis Testing

When several hypothesis are tested simultaneously, the probability of falsely rejecting true null hypotheses increases. Each model studied uses the same data with a slightly different independent variable of interest. Further, while different data is used when studying the total workforce, the private and public sectors, and the seven different industries, each data set likely follows a similar trend. This paper has studied three models in ten different settings each with five different outcomes. In models (2)-(4), there are two independent variables of interest. Further, model (3) is studied for the total workforce and the public sector. Hence, there are a total of $10 * 5 + 2 * 10 * 5 + 2 * 2 * 5 + 2 * 10 * 5 = 270$ coefficients of interest that are estimated. To avoid type I error, multiple hypothesis testing adjustments are made using the Romano-Wolf method (Clarke *et al.* [2020]).

Table 10 gives the orignial p-value calculated along with the new Romano-Wolf adjusted p-value which accounts for the large number of hypotheses tested. (Not sure how to present these p-values. I'd like to just adjust the standard errors but haven't found an easy way to implement this into stata/latex). After the Romano-Wolf correction, no estimates for fatal injuries remain significant. The volatility in the fatal outcome measure has lead to larger increases in adjusted p-values than for nonfatal estimates. While it is likely that estimates for fatal injuries are negative, as always, there is the possibility that this is not the case and the Romano-Wolf p-values are evidence of this. Further, only estimates which studied the private sector and total workforce remained significant after adjustment as well as nonfatal model (2) results for the construction industry.

6 Discussion

Using a fixed effects model on U.S. state level data from 1992 - 2018, this paper provides evidence that increases in the unemployment rate may lead to decreases in both fatal and nonfatal workplace injury rates. When studying the total labor force, I find that a one percent decrease in the unemployment rate is related to a 13.2% increase in fatal injuries and a 17.8% increase in nonfatal injuries. Based on the number of fatal and nonfatal injuries in 2018, a 1 percent decrease in the unemployment rate nation wide is related to an increase of 693 fatal injuries and about 500,000 more nonfatal injuries. Because unemployment is highly correlated with the business cycle, results from this paper give further evidence that workplace injuries are pro-cyclical. In order to test for potential relationship differences, the nonfatal injury rate

is split into three outcomes which differ in level of severity. Unlike previous research findings, results give evidence that, no matter the injury severity, the unemployment rate in inversely related to workplace injuries. This result is evidence against a reporting bias story that is told by previous researchers because fatal injuries are not likely to suffer from misreporting. Instead, the inverse relationship found is more likely to be the result of changes in the amount of new hires or untrained employees and a firms decision to provide lower safety standards during lower levels of unemployment.

Using three different models to split the unemployment rate during recessionary and expansionary periods, this paper also provides evidence that the decreases experienced in the workplace injury rate from increases in unemployment during an expansionary period may be less than the decreases experienced during a recessionary period. However, any differences which are found to be statistically different are usually less than a one percent difference, i.e., it is likely that the decreases in injury rates from increases in unemployment are equal during a recession and expansion.

I also run these same models for the private and public sectors as well as seven different private sector industries. My findings show that workplace injuries are pro-cyclical in the private sector but there is no relationship between unemployment and workplace injuries in the public sector. A common mechanism to explain the correlation between unemployment and workplace injuries is the number of new hires that occur during lower levels of unemployment. Both the private and public sectors are likely to have increases in new hires during lower levels of unemployment. However, the null results from the public sector may indicate that public sector firms do a better job at safety training new hires than private sector firms.

Results from the construction, manufacturing, and retail industries indicate that the magnitude of change from changes in unemployment is higher for these industries than for others, especially for construction. Other industries such as the finance and service industries may have injury rates which are actually counter-cyclical. This evidence demonstrates why assuming injuries are pro-cyclical for all industries can result in incorrect conclusions. Results for the wholesale trade and for the transportation and warehousing industries indicate a small or null relationship between unemployment and workplace injuries.

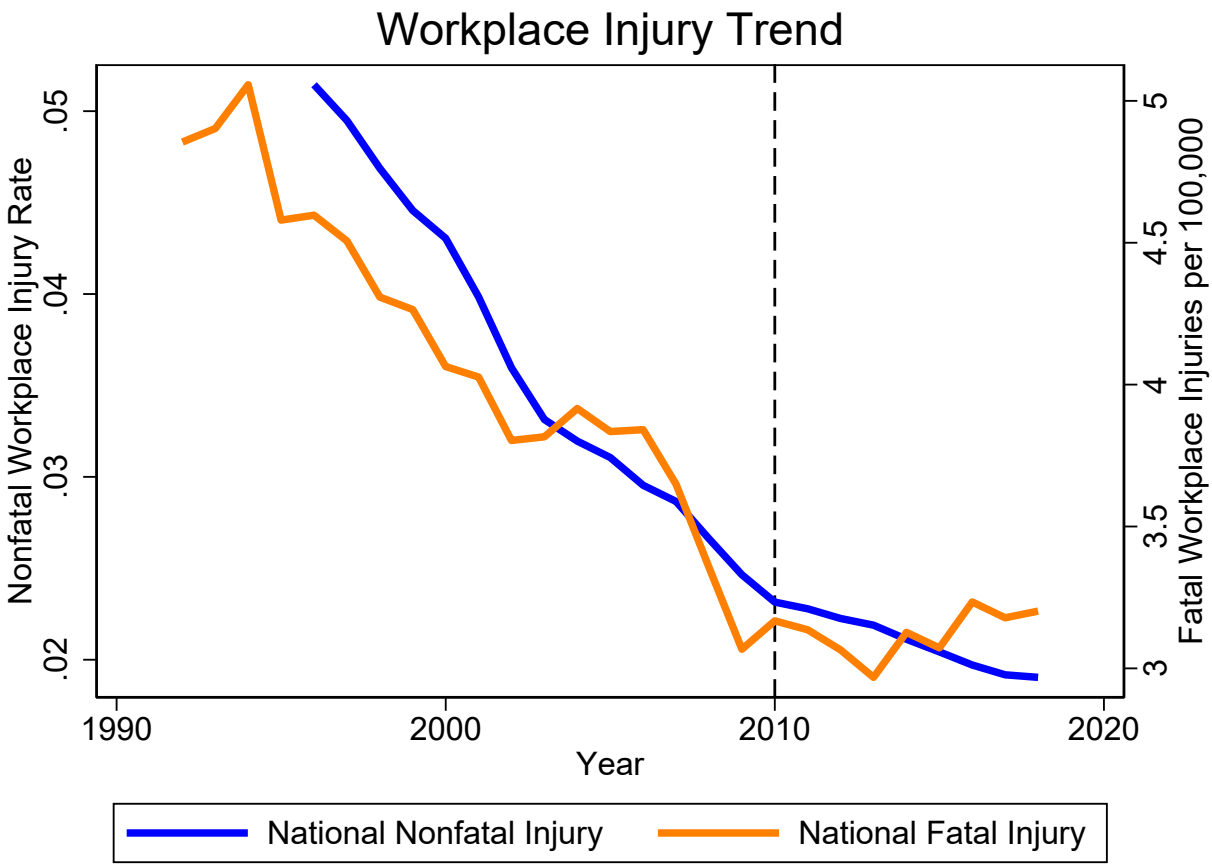

Figure 1: Running a Chow-test for a structural break at 2010 results in F(2, 19) = 59.29 for the nonfatal injury rate and F(2, 23) = 20.37 for the fatal injury rate. Hence, we reject the null hypothesis of structural stability before and after 2010 for each series.

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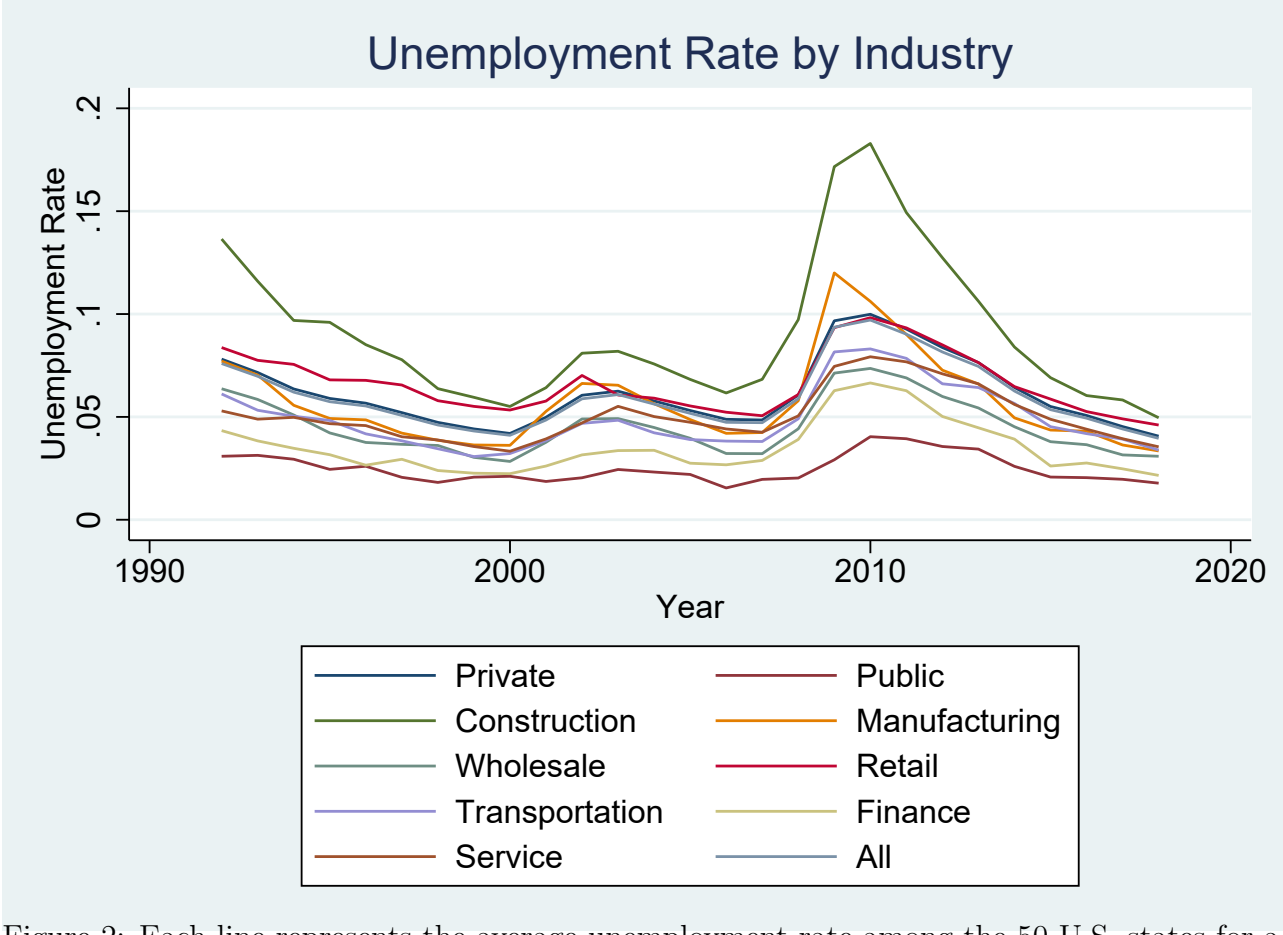

Figure 2: Each line represents the average unemployment rate among the 50 U.S. states for a specific sector or industry.

Table 1: Theories for the Relationship Between Unemployment and Workplace Injuries

Theory	Direction	Explanation
Keeping Workers Safe When Needed	Direct	High levels of production increase the value of workers to the firm. Hence, the firm increases safety precautions to reduce risk of losing an employee.
Production Per Worker	Direct	When unemployment is high, the level of production per worker increases leading to higher rates of injury and vice versa.
Firm's Underreporting	Direct	High levels of production increase the value of workers to the firm. Hence, the firm dissuades reporting in order to keep employees working.
Switching Industries	Direct	When unemployment is high, workers may be forced to seek employment in industries with which their experience is low. Inexperienced workers are more at risk of injury.
The Safety Production Trade-off	Inverse	When production is high, the relative cost of safety increases. Hence, a firm may decrease safety to focus on the high production.
New Hires	Inverse	When unemployment is low, there may be an influx of new and inexperienced employees. Inexperienced employees are at higher risk of injury.
Employee's Underreporting	Inverse	Reporting an injury increases the chance of job loss. Hence, when unemployment is high, employees underreport injuries to avoid job loss during a recession.

Table 2: Summary Statistics by Sector and Industry

	All	Private	Public	Construction	Manufacturing	Wholesale	Retail	Transportation	Finance	Service
	mean/sd	mean/sd	mean/sd	mean/sd	mean/sd	mean/sd	mean/sd	mean/sd	mean/sd	mean/sd
Unemployment Rate	0.056	0.058	0.025	0.089	0.056	0.041	0.062	0.045	0.031	0.047
	(0.019)	(0.019)	(0.014)	(0.043)	(0.027)	(0.023)	(0.020)	(0.022)	(0.017)	(0.015)
Fatal Injuries per 100,000	4.924	4.668	10.158	11.273	3.543	4.453	1.915	16.875	0.640	1.432
	(2.883)	(2.790)	(7.870)	(7.012)	(7.712)	(6.182)	(1.740)	(13.501)	(1.410)	(1.064)
Nonfatal Injuries per 100	3.548	3.240	12.472	3.683	5.804	6.160	3.594	4.713	1.146	2.411
	(1.174)	(1.201)	(4.892)	(1.899)	(3.434)	(2.162)	(1.104)	(1.921)	(0.543)	(0.698)
Lost Workdays Cases per 100	1.094	0.992	3.999	1.415	1.539	2.128	1.072	2.108	0.355	0.699
	(0.401)	(0.389)	(2.098)	(0.729)	(1.197)	(0.871)	(0.402)	(0.929)	(0.220)	(0.276)
Job Restr./Transfer Cases per 100	0.643	0.622	1.408	0.456	1.537	1.410	0.681	0.941	0.116	0.386
	(0.290)	(0.288)	(0.873)	(0.279)	(0.883)	(0.675)	(0.283)	(0.459)	(0.119)	(0.195)
Other Cases per 100	1.811	1.625	7.100	1.814	2.733	2.633	1.844	1.670	0.658	1.325
	(0.689)	(0.697)	(3.072)	(1.109)	(1.782)	(1.314)	(0.797)	(0.963)	(0.360)	(0.413)
Aged 15-24	0.156	0.161	0.054	0.125	0.099	0.096	0.289	0.081	0.097	0.157
	(0.022)	(0.023)	(0.021)	(0.038)	(0.030)	(0.036)	(0.059)	(0.029)	(0.033)	(0.027)
Aged 25-34	0.223	0.224	0.205	0.250	0.222	0.233	0.215	0.204	0.237	0.225
	(0.024)	(0.025)	(0.043)	(0.042)	(0.044)	(0.054)	(0.031)	(0.051)	(0.042)	(0.024)
Aged 35-44	0.236	0.234	0.270	0.266	0.263	0.260	0.184	0.259	0.246	0.233
	(0.031)	(0.031)	(0.051)	(0.044)	(0.045)	(0.056)	(0.026)	(0.056)	(0.041)	(0.036)
Aged 45-54	0.214	0.211	0.276	0.215	0.246	0.229	0.160	0.261	0.226	0.212
	(0.023)	(0.023)	(0.045)	(0.041)	(0.042)	(0.054)	(0.032)	(0.046)	(0.037)	(0.023)
Aged 55-64	0.130	0.129	0.157	0.116	0.142	0.141	0.107	0.155	0.144	0.130
	(0.034)	(0.033)	(0.052)	(0.040)	(0.048)	(0.052)	(0.035)	(0.054)	(0.044)	(0.030)
Fraction Male	0.532	0.532	0.544	0.907	0.697	0.720	0.493	0.753	0.418	0.381
	(0.013)	(0.013)	(0.046)	(0.020)	(0.043)	(0.049)	(0.036)	(0.045)	(0.053)	(0.032)
Fraction White	0.838	0.840	0.812	0.898	0.832	0.882	0.839	0.810	0.863	0.827
	(0.124)	(0.124)	(0.137)	(0.107)	(0.131)	(0.124)	(0.132)	(0.155)	(0.118)	(0.124)
Fraction Black	0.096	0.094	0.122	0.054	0.093	0.066	0.093	0.133	0.079	0.103
	(0.090)	(0.089)	(0.112)	(0.060)	(0.102)	(0.069)	(0.090)	(0.124)	(0.072)	(0.093)
Fraction Asian	0.040	0.041	0.030	0.020	0.051	0.035	0.042	0.033	0.039	0.044
	(0.086)	(0.086)	(0.089)	(0.079)	(0.094)	(0.093)	(0.091)	(0.092)	(0.088)	(0.086)
Fraction Single	0.281	0.286	0.184	0.257	0.225	0.218	0.404	0.211	0.215	0.287
	(0.033)	(0.033)	(0.045)	(0.041)	(0.041)	(0.051)	(0.050)	(0.058)	(0.048)	(0.044)
Fraction Married	0.572	0.568	0.649	0.601	0.621	0.643	0.457	0.626	0.633	0.562
	(0.033)	(0.033)	(0.051)	(0.043)	(0.044)	(0.059)	(0.041)	(0.065)	(0.053)	(0.042)
Fraction Divorced	0.108	0.107	0.129	0.112	0.116	0.107	0.098	0.126	0.115	0.107
	(0.016)	(0.016)	(0.032)	(0.027)	(0.023)	(0.034)	(0.022)	(0.033)	(0.030)	(0.018)
Obtained HS Degree Only	0.604	0.606	0.583	0.710	0.657	0.658	0.693	0.752	0.578	0.532
	(0.048)	(0.048)	(0.071)	(0.068)	(0.074)	(0.074)	(0.042)	(0.047)	(0.088)	(0.044)
Obtained Bachelor's Degree	0.282	0.277	0.391	0.109	0.217	0.254	0.151	0.152	0.390	0.374
	(0.061)	(0.061)	(0.077)	(0.034)	(0.076)	(0.073)	(0.047)	(0.047)	(0.094)	(0.054)

Standard deviations given in parenthesis.
Statistics come from all state-years within the data.
All workplace injury rates are calculated by taking the total number of injury type within a state and year over the number of employees (CPS) within the same state and year.
Lost workday cases are nonfatal injuries which resulted in days away from work. These injuries are the most severe nonfatal injuries.
Job restriction/transfer cases are nonfatal injuries which resulted in job restriction or job transfer. Employees remained at work after the injury.
Other Cases are nonfatal injuries which did not result in lost workdays or job restriction/transfer. These are the least severe nonfatal injuries.
Nonfatal Injury Rate is the sum of the three different types of nonfatal injuries.
The unemployment rate is from CPS.
OSHA inspection rate (aggregated from Occupational Health and Safety Administration) is the total number of OSHA inspections within a state-year over the total number of fi
rms within the same state-year.
Weather data comes from the National Oceanic and Atmospheric Administration.
Maximum Temperature is in Fahrenheit.
Amount of monthly precipitation is in inches.
Summary statistics about the industrial composition of each state are not listed in this table but can be found in table **??**.
Minimum and Maximums can be found for each variable and sector/industry in tables 11 - 20 in the appendix.

Table 3: Full Workforce Results

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
Unemployment	-0.132**	-0.178***	-0.193***	-0.226***	-0.159***
	(0.0593)	(0.0405)	(0.0403)	(0.0554)	(0.0549)
N	1350	943	943	943	943
r2	0.863	0.947	0.949	0.944	0.926
Recession (UNEMP+)	-0.134**	-0.205***	-0.207***	-0.248***	-0.192***
	(0.0655)	(0.0450)	(0.0439)	(0.0587)	(0.0612)
Expansion (UNEMP-)	-0.133**	-0.197***	-0.203***	-0.241***	-0.182***
	(0.0631)	(0.0431)	(0.0425)	(0.0573)	(0.0587)
N	1350	943	943	943	943
r2	0.863	0.948	0.949	0.944	0.927
F_diff	0.0153	6.423	2.651	2.237	5.606
p_diff	0.902	0.0150	0.111	0.142	0.0225
Recession (SCI Decreased)	-0.114*	-0.178***	-0.187***	-0.229***	-0.160***
	(0.0622)	(0.0410)	(0.0419)	(0.0575)	(0.0544)
Expansion (SCI Increased)	-0.129**	-0.178***	-0.191***	-0.227***	-0.159***
	(0.0595)	(0.0406)	(0.0406)	(0.0558)	(0.0547)
N	1350	943	943	943	943
r2	0.863	0.947	0.949	0.944	0.926
F_diff	3.053	0.00205	0.904	0.0866	0.102
p_diff	0.0869	0.964	0.347	0.770	0.750
Recession (Julius Shiskin)	-0.213***	-0.0927	-0.126**	-0.0446	-0.0686
	(0.0761)	(0.0569)	(0.0544)	(0.0653)	(0.0737)
Expansion	-0.217***	-0.0871	-0.124**	-0.0313	-0.0619
	(0.0726)	(0.0554)	(0.0534)	(0.0652)	(0.0730)
N	700	577	577	577	577
r2	0.868	0.909	0.938	0.963	0.879
F_diff	0.147	2.193	0.156	4.865	2.101
p_diff	0.703	0.146	0.695	0.0328	0.154

Results for equations 1 - 4.

Each estimation includes controls, state fixed effects, and time fixed effects.

Robust standard errors are clustered at the state level.

Each outcome is log transformed as well as the main variable of interest listed.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 4: Model 3 Robustness Check

	(1) all_lnfatalr	(2) all_lnnon_totr	(3) all_lnnon_awayr	(4) all_lnnon_tranr	(5) all_lnnon_othr
Recession (SCI Decreased, quarterly)	-0.114*	-0.178***	-0.187***	-0.229***	-0.160***
	(0.0622)	(0.0410)	(0.0419)	(0.0575)	(0.0544)
Expansion (SCI Increased, quarterly)	-0.129**	-0.178***	-0.191***	-0.227***	-0.159***
	(0.0595)	(0.0406)	(0.0406)	(0.0558)	(0.0547)
N	1350	943	943	943	943
r2	0.863	0.947	0.949	0.944	0.926
F_diff	3.053	0.00205	0.904	0.0866	0.102
p_diff	0.0869	0.964	0.347	0.770	0.750
Recession (SCI Decreased, yearly)	-0.125*	-0.189***	-0.193***	-0.240***	-0.170***
	(0.0639)	(0.0437)	(0.0451)	(0.0651)	(0.0579)
Expansion (SCI Increased, yearly)	-0.130**	-0.182***	-0.193***	-0.231***	-0.163***
	(0.0604)	(0.0414)	(0.0418)	(0.0587)	(0.0558)
N	1350	943	943	943	943
r2	0.863	0.948	0.949	0.944	0.926
F_diff	0.206	1.663	0.00132	1.084	1.515
p_diff	0.652	0.204	0.971	0.304	0.225

Results study the full workforce.

Results for the quarterly definition of a recession are identical to those found in Table 3.

The yearly definition means that a state's average SCI index decreased from the previous year. This definition is similar to equation 2 but using the SCI index.

Table 5: Fatal Injury Results

	(1) All	(2) Private	(3) Public	(4) Construction	(5) Manufacturing	(6) Whole Sale	(7) Retail	(8) Transportation	(9) Finance	(10) Service
Unemployment	-0.132**	-0.157**	-0.0205	-0.623**	-0.166	-0.0242	-0.250	-0.0490	0.0647	0.422
	(0.0593)	(0.0629)	(0.0550)	(0.240)	(0.317)	(0.0971)	(0.406)	(0.156)	(0.102)	(0.485)
N	1350	1350	1350	1350	1350	1349	1349	1350	1350	1350
r2	0.863	0.855	0.329	0.433	0.508	0.503	0.568	0.546	0.375	0.486
Recession (UNEMP+)	-0.134**	-0.168**	-0.0464	-0.768**	-0.226	-0.113	-0.268	0.0965	-0.0312	0.310
	(0.0655)	(0.0683)	(0.0561)	(0.334)	(0.380)	(0.120)	(0.465)	(0.213)	(0.134)	(0.536)
Expansion (UNEMP-)	-0.133**	-0.164**	-0.0262	-0.701**	-0.205	-0.0461	-0.263	0.0412	0.0194	0.342
	(0.0631)	(0.0662)	(0.0530)	(0.282)	(0.349)	(0.0986)	(0.439)	(0.186)	(0.112)	(0.516)
N	1350	1350	1350	1350	1350	1349	1349	1350	1350	1350
r2	0.863	0.855	0.330	0.434	0.509	0.504	0.568	0.546	0.376	0.486
F_diff	0.0153	0.453	0.436	0.754	0.114	1.663	0.00791	1.615	0.858	0.444
p_diff	0.902	0.504	0.512	0.389	0.737	0.203	0.930	0.210	0.359	0.509
Recession (Julius Shiskin)	-0.213***	-0.212**	0.171	-0.985**	-0.318	-0.100	-0.577	-0.0153	0.143	0.909
	(0.0761)	(0.0852)	(0.150)	(0.413)	(0.413)	(0.159)	(0.730)	(0.277)	(0.119)	(0.580)
Expansion	-0.217***	-0.222***	0.0829	-1.077**	-0.309	-0.0101	-0.656	-0.0711	0.227	0.915
	(0.0726)	(0.0807)	(0.118)	(0.423)	(0.420)	(0.0883)	(0.732)	(0.288)	(0.151)	(0.597)
N	700	700	700	700	700	699	699	700	700	700
r2	0.868	0.861	0.374	0.461	0.544	0.505	0.541	0.538	0.367	0.503
F_diff	0.147	1.007	1.298	1.119	0.0188	0.563	0.760	1.005	0.758	0.00248
p_diff	0.703	0.321	0.260	0.295	0.892	0.457	0.388	0.321	0.388	0.960

Results for equations 1 - 4.

Each estimation includes controls, state fixed effects, and time fixed effects.

Robust standard errors are clustered at the state level.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's is the result of industries choosing not to report or errors in reporting injuries.

Table 6: Nonfatal Injury Results

	(1) All	(2) Private	(3) Public	(4) Construction	(5) Manufacturing	(6) Whole Sale	(7) Retail	(8) Transportation	(9) Finance	(10) Service
Unemployment	-0.178***	-0.168***	-0.0114	-0.103***	-0.0344	0.00549	-0.0400	0.0193	0.0165	-0.0349
	(0.0405)	(0.0258)	(0.00699)	(0.0337)	(0.0367)	(0.00408)	(0.0385)	(0.0210)	(0.0177)	(0.0295)
N	943	943	762	941	942	933	940	936	912	913
r2	0.947	0.970	0.842	0.888	0.925	0.697	0.802	0.777	0.498	0.876
Recession (UNEMP+)	-0.205***	-0.185***	-0.00831	-0.158***	-0.0631	-0.00273	-0.0750*	0.0126	0.00447	-0.0460
	(0.0450)	(0.0272)	(0.00856)	(0.0399)	(0.0475)	(0.00730)	(0.0395)	(0.0224)	(0.0137)	(0.0356)
Expansion (UNEMP-)	-0.197***	-0.180***	-0.0104	-0.135***	-0.0533	0.00367	-0.0655*	0.0150	0.0113	-0.0428
	(0.0431)	(0.0264)	(0.00699)	(0.0358)	(0.0432)	(0.00435)	(0.0385)	(0.0213)	(0.0145)	(0.0336)
N	943	943	762	941	942	933	940	936	912	913
r2	0.948	0.970	0.842	0.890	0.926	0.698	0.803	0.777	0.499	0.876
F_diff	6.423	6.488	0.257	11.26	3.054	2.039	4.401	0.375	0.558	0.905
p_diff	0.0150	0.0145	0.615	0.00166	0.0877	0.161	0.0418	0.543	0.459	0.347
Recession (Julius Shiskin)	-0.0927	-0.0993***	-0.0145	-0.0823*	-0.0324	0.00387	-0.00715	0.0290	0.0133	0.0216
	(0.0569)	(0.0364)	(0.0101)	(0.0434)	(0.0504)	(0.0127)	(0.0518)	(0.0296)	(0.0256)	(0.0369)
Expansion	-0.0871	-0.0982***	-0.0134	-0.0869**	-0.0332	0.00545	-0.00680	0.0286	0.00730	0.0232
	(0.0554)	(0.0353)	(0.00896)	(0.0423)	(0.0503)	(0.00442)	(0.0489)	(0.0282)	(0.0275)	(0.0368)
N	577	577	529	577	577	571	576	575	552	554
r2	0.909	0.958	0.804	0.848	0.885	0.608	0.673	0.713	0.438	0.876
F_diff	2.193	0.0931	0.0369	0.280	0.0449	0.0215	0.00446	0.00244	0.215	0.168
p_diff	0.146	0.762	0.849	0.599	0.833	0.884	0.947	0.961	0.645	0.684

Results for equations 1 - 4.

Each estimation includes controls, state fixed effects, and time fixed effects.

Robust standard errors are clustered at the state level.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's is the result of industries choosing not to report or errors in reporting injuries.

Table 7: Days Away from Work Injury Results Injury Results

	(1) All	(2) Private	(3) Public	(4) Construction	(5) Manufacturing	(6) Whole Sale	(7) Retail	(8) Transportation	(9) Finance	(10) Service
Unemployment	-0.193***	-0.181***	-0.0139*	-0.0814	-0.0189	0.0116**	-0.0274	-0.0186	-0.0633	-0.0184
	(0.0403)	(0.0406)	(0.00714)	(0.0512)	(0.0546)	(0.00560)	(0.0511)	(0.0290)	(0.0472)	(0.0358)
N	943	943	762	941	942	933	941	934	907	907
r2	0.949	0.958	0.880	0.824	0.803	0.620	0.796	0.704	0.434	0.894
Recession (UNEMP+)	-0.207***	-0.193***	-0.0130	-0.137**	-0.0757	0.00148	-0.0615	-0.00253	-0.0539	-0.0451
	(0.0439)	(0.0436)	(0.00854)	(0.0577)	(0.0879)	(0.00902)	(0.0585)	(0.0321)	(0.0598)	(0.0421)
Expansion (UNEMP-)	-0.203***	-0.190***	-0.0136*	-0.114**	-0.0563	0.00932	-0.0523	-0.00827	-0.0592	-0.0374
	(0.0425)	(0.0425)	(0.00729)	(0.0536)	(0.0760)	(0.00588)	(0.0557)	(0.0304)	(0.0470)	(0.0399)
N	943	943	762	941	942	933	941	934	907	907
r2	0.949	0.958	0.880	0.826	0.804	0.621	0.796	0.705	0.434	0.894
F_diff	2.651	2.442	0.0304	8.157	2.340	2.360	2.176	1.670	0.0395	4.058
p_diff	0.111	0.125	0.862	0.00658	0.133	0.132	0.147	0.203	0.843	0.0502
Recession (Julius Shiskin)	-0.126**	-0.142***	-0.0164	-0.0912	-0.0645	0.00324	-0.0224	-0.0149	-0.0983	0.0182
	(0.0544)	(0.0506)	(0.0154)	(0.0728)	(0.118)	(0.0192)	(0.0646)	(0.0359)	(0.0995)	(0.0572)
Expansion	-0.124**	-0.145***	-0.0203*	-0.0935	-0.0681	0.0115**	-0.0281	-0.0144	-0.0959	0.0163
	(0.0534)	(0.0511)	(0.0114)	(0.0747)	(0.120)	(0.00540)	(0.0613)	(0.0351)	(0.0980)	(0.0560)
N	577	577	529	577	577	571	576	573	547	548
r2	0.938	0.947	0.851	0.735	0.711	0.534	0.761	0.590	0.463	0.897
F_diff	0.156	0.267	0.234	0.0409	0.212	0.224	0.659	0.00228	0.00244	0.0618
p_diff	0.695	0.608	0.631	0.841	0.648	0.638	0.421	0.962	0.961	0.805

Results for equations 1 - 4.

Each estimation includes controls, state fixed effects, and time fixed effects.

Robust standard errors are clustered at the state level.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's is the result of industries choosing not to report or errors in reporting injuries.

Table 8: Job Restriction or Transfer Injury Results

	(1) All	(2) Private	(3) Public	(4) Construction	(5) Manufacturing	(6) Whole Sale	(7) Retail	(8) Transportation	(9) Finance	(10) Service
Unemployment	-0.226***	-0.237***	0.000391	-0.129	-0.171**	0.0311	-0.140**	0.316	-0.106**	-0.123
	(0.0554)	(0.0528)	(0.00880)	(0.125)	(0.0821)	(0.0434)	(0.0588)	(0.198)	(0.0519)	(0.0822)
N	943	943	744	941	942	933	940	934	903	909
r2	0.944	0.945	0.845	0.410	0.647	0.613	0.778	0.394	0.551	0.808
Recession (UNEMP+)	-0.248***	-0.269***	-0.00761	-0.156	-0.179*	0.0894	-0.184**	0.319	-0.0772	-0.142
	(0.0587)	(0.0557)	(0.0148)	(0.122)	(0.103)	(0.0535)	(0.0706)	(0.253)	(0.0943)	(0.0850)
Expansion (UNEMP-)	-0.241***	-0.259***	-0.00208	-0.145	-0.176*	0.0440	-0.172**	0.318	-0.0935	-0.137
	(0.0573)	(0.0545)	(0.0101)	(0.119)	(0.0934)	(0.0435)	(0.0666)	(0.232)	(0.0667)	(0.0837)
N	943	943	744	941	942	933	940	934	903	909
r2	0.944	0.946	0.845	0.410	0.647	0.616	0.779	0.394	0.551	0.808
F_diff	2.237	6.632	0.640	0.167	0.0273	2.915	2.623	0.00127	0.174	0.742
p_diff	0.142	0.0135	0.428	0.685	0.870	0.0950	0.113	0.972	0.679	0.394
Recession (Julius Shiskin)	-0.0446	-0.0527	-0.0226	0.0732	-0.175*	-0.0677	-0.000534	0.435*	-0.120**	0.183**
	(0.0653)	(0.0635)	(0.0220)	(0.139)	(0.0988)	(0.0945)	(0.0668)	(0.251)	(0.0501)	(0.0683)
Expansion	-0.0313	-0.0455	-0.000509	-0.0166	-0.215*	0.0278	0.00487	0.428*	-0.0595	0.194***
	(0.0652)	(0.0631)	(0.0115)	(0.132)	(0.107)	(0.0438)	(0.0674)	(0.238)	(0.0763)	(0.0681)
N	577	577	517	577	577	571	575	573	543	550
r2	0.963	0.961	0.852	0.459	0.550	0.623	0.846	0.404	0.578	0.901
F_diff	4.865	1.189	1.886	1.937	1.876	1.830	0.771	0.102	1.191	0.670
p_diff	0.0328	0.282	0.177	0.171	0.178	0.183	0.385	0.751	0.281	0.418

Results for equations 1 - 4.

Each estimation includes controls, state fixed effects, and time fixed effects.

Robust standard errors are clustered at the state level.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's is the result of industries choosing not to report or errors in reporting injuries.

Table 9: Other Nonfatal Injury Results

	(1) All	(2) Private	(3) Public	(4) Construction	(5) Manufacturing	(6) Whole Sale	(7) Retail	(8) Transportation	(9) Finance	(10) Service
Unemployment	-0.159***	-0.139***	-0.0104	-0.0973**	-0.0362	-0.000728	0.00441	0.0237	0.0210	-0.0442
	(0.0549)	(0.0288)	(0.00923)	(0.0389)	(0.0353)	(0.00861)	(0.0362)	(0.0231)	(0.0266)	(0.0397)
N	943	943	762	941	942	933	940	936	909	910
r2	0.926	0.961	0.788	0.866	0.943	0.531	0.866	0.771	0.390	0.808
Recession (UNEMP+)	-0.192***	-0.153***	-0.00636	-0.143***	-0.0552	-0.0153	-0.0422	0.00841	0.0223	-0.0410
	(0.0612)	(0.0302)	(0.0121)	(0.0468)	(0.0424)	(0.0118)	(0.0430)	(0.0309)	(0.0362)	(0.0461)
Expansion (UNEMP-)	-0.182***	-0.149***	-0.00916	-0.124***	-0.0487	-0.00396	-0.0296	0.0139	0.0216	-0.0420
	(0.0587)	(0.0293)	(0.00939)	(0.0417)	(0.0394)	(0.00844)	(0.0403)	(0.0268)	(0.0273)	(0.0437)
N	943	943	762	941	942	933	940	936	909	910
r2	0.927	0.961	0.789	0.867	0.943	0.531	0.868	0.771	0.390	0.808
F_diff	5.606	1.827	0.208	4.303	1.698	2.126	6.120	0.606	0.00205	0.0398
p_diff	0.0225	0.184	0.651	0.0441	0.199	0.152	0.0174	0.440	0.964	0.843
Recession (Julius Shiskin)	-0.0686	-0.0664	-0.0133	-0.0467	-0.0335	-0.0129	0.0650	0.0727**	0.0243	-0.0101
	(0.0737)	(0.0459)	(0.00966)	(0.0570)	(0.0377)	(0.0198)	(0.0415)	(0.0321)	(0.0335)	(0.0543)
Expansion	-0.0619	-0.0647	-0.0105	-0.0465	-0.0333	-0.00264	0.0617	0.0672*	-0.00218	-0.00582
	(0.0730)	(0.0450)	(0.0101)	(0.0554)	(0.0379)	(0.00973)	(0.0403)	(0.0335)	(0.0385)	(0.0552)
N	577	577	529	577	577	571	575	575	549	551
r2	0.879	0.947	0.769	0.820	0.917	0.364	0.775	0.726	0.292	0.828
F_diff	2.101	0.136	0.203	0.000227	0.00326	0.298	0.459	0.243	1.456	0.858
p_diff	0.154	0.714	0.654	0.988	0.955	0.588	0.502	0.625	0.234	0.359

Results for equations 1 - 4.

Each estimation includes controls, state fixed effects, and time fixed effects.

Robust standard errors are clustered at the state level.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's is the result of industries choosing not to report or errors in reporting injuries.

Table 10: Multiple Hypothesis Testing Romano-Wolf

Romano-Wolf step-down adjusted p-values
Number of resamples: 1000

	Model p-value	Resample p-value	Romano-Wolf p-value
all_lnfatalr			
all_unempr	0.0305	0.0010	0.5804
all_totr			
all_unempr	0.0001	0.0010	0.0210
all_awayr			
all_unempr	0.0000	0.0010	0.0110
all_tranr			
all_unempr	0.0002	0.0010	0.0380
all_othr			
all_unempr	0.0060	0.0010	0.2627
all_lnfatalr			
all_rec	0.0460	0.0010	0.7143
all_exp	0.0397	0.0010	0.6543
all_totr			
all_rec	0.0000	0.0010	0.0150
all_exp	0.0000	0.0010	0.0150
all_awayr			
all_rec	0.0000	0.0010	0.0130
all_exp	0.0000	0.0010	0.0110
all_tranr			
all_rec	0.0001	0.0010	0.0260
all_exp	0.0001	0.0010	0.0270
all_othr			
all_rec	0.0030	0.0010	0.1808
all_exp	0.0034	0.0010	0.1908
all_lnfatalr			
all_SCIrec	0.0719	0.0040	0.8482
all_SCIexp	0.0347	0.0010	0.6154
all_totr			
all_SCIrec	0.0001	0.0010	0.0260
all_SCIexp	0.0001	0.0010	0.0210
all_awayr			
all_SCIrec	0.0001	0.0010	0.0170
all_SCIexp	0.0000	0.0010	0.0130
all_tranr			
all_SCIrec	0.0003	0.0010	0.0480
all_SCIexp	0.0002	0.0010	0.0390
all_othr			
all_SCIrec	0.0052	0.0010	0.2398
all_SCIexp	0.0058	0.0010	0.2567
all_lnfatalr			
all_Julrec	0.6680	0.4615	1.0000
all_Julexp	0.5666	0.3506	1.0000
all_totr			
all_Julrec	0.0000	0.0010	0.0130
all_Julexp	0.0001	0.0010	0.0170
all_awayr			
all_Julrec	0.0003	0.0010	0.0500
all_Julexp	0.0002	0.0010	0.0440
all_tranr			
all_Julrec	0.0000	0.0010	0.0130
all_Julexp	0.0001	0.0010	0.0220
all_othr			
all_Julrec	0.0014	0.0010	0.1239
all_Julexp	0.0052	0.0010	0.2398

priv_lnfatalr			
priv_unempr	0.0161	0.0010	0.4236
priv_totr			
priv_unempr	0.0000	0.0010	0.0010
priv_awayr			
priv_unempr	0.0001	0.0010	0.0170
priv_tranr			
priv_unempr	0.0001	0.0010	0.0170
priv_othr			
priv_unempr	0.0000	0.0010	0.0100
priv_lnfatalr			
priv_rec	0.0176	0.0010	0.4535
priv_exp	0.0166	0.0010	0.4366
priv_totr			
priv_rec	0.0000	0.0010	0.0010
priv_exp	0.0000	0.0010	0.0010
priv_awayr			
priv_rec	0.0001	0.0010	0.0190
priv_exp	0.0001	0.0010	0.0180
priv_tranr			
priv_rec	0.0000	0.0010	0.0090
priv_exp	0.0000	0.0010	0.0110
priv_othr			
priv_rec	0.0000	0.0010	0.0070
priv_exp	0.0000	0.0010	0.0070
priv_lnfatalr			
priv_SCIrec	0.0386	0.0010	0.6474
priv_SCIexp	0.0184	0.0010	0.4695
priv_totr			
priv_SCIrec	0.0000	0.0010	0.0010
priv_SCIexp	0.0000	0.0010	0.0010
priv_awayr			
priv_SCIrec	0.0001	0.0010	0.0270
priv_SCIexp	0.0001	0.0010	0.0210
priv_tranr			
priv_SCIrec	0.0001	0.0010	0.0260
priv_SCIexp	0.0001	0.0010	0.0180
priv_othr			
priv_SCIrec	0.0000	0.0010	0.0090
priv_SCIexp	0.0000	0.0010	0.0080
priv_lnfatalr			
priv_Julrec	0.5647	0.3187	1.0000
priv_Julexp	0.3931	0.1538	1.0000
priv_totr			
priv_Julrec	0.0000	0.0010	0.0030
priv_Julexp	0.0000	0.0010	0.0030
priv_awayr			
priv_Julrec	0.0009	0.0010	0.1029
priv_Julexp	0.0004	0.0010	0.0659
priv_tranr			
priv_Julrec	0.0000	0.0010	0.0080
priv_Julexp	0.0000	0.0010	0.0080
priv_othr			
priv_Julrec	0.0001	0.0010	0.0260
priv_Julexp	0.0001	0.0010	0.0270

pub_lnfatalr			
pub_unempr	0.7110	0.6713	1.0000
pub_totr			
pub_unempr	0.1118	0.0470	0.9451
pub_awayr			
pub_unempr	0.0589	0.0150	0.7892
pub_tranr			
pub_unempr	0.9647	0.9540	1.0000
pub_othr			
pub_unempr	0.2641	0.1518	1.0000
pub_lnfatalr			
pub_rec	0.4122	0.3417	1.0000
pub_exp	0.6233	0.5644	1.0000
pub_totr			
pub_rec	0.3368	0.2438	1.0000
pub_exp	0.1445	0.0729	0.9790
pub_awayr			
pub_rec	0.1343	0.0559	0.9700
pub_exp	0.0690	0.0270	0.8322
pub_tranr			
pub_rec	0.6095	0.4715	1.0000
pub_exp	0.8374	0.7962	1.0000
pub_othr			
pub_rec	0.6022	0.4785	1.0000
pub_exp	0.3352	0.2358	1.0000
pub_lnfatalr			
pub_Julrec	0.9307	0.9291	1.0000
pub_Julexp	0.2482	0.1548	0.9990
pub_totr			
pub_Julrec	0.0759	0.0280	0.8581
pub_Julexp	0.1378	0.0330	0.9720
pub_awayr			
pub_Julrec	0.3988	0.2408	1.0000
pub_Julexp	0.0560	0.0110	0.7712
pub_tranr			
pub_Julrec	0.2197	0.0959	0.9980
pub_Julexp	0.4240	0.2607	1.0000
pub_othr			
pub_Julrec	0.1003	0.0450	0.9311
pub_Julexp	0.3146	0.1668	1.0000

con_lnfatalr			
con_unempr	0.0124	0.0030	0.3766
con_totr			
con_unempr	0.0038	0.0010	0.2038
con_awayr			
con_unempr	0.1189	0.0130	0.9550
con_tranr			
con_unempr	0.3063	0.2318	1.0000
con_othr			
con_unempr	0.0162	0.0010	0.4176
con_lnfatalr			
con_rec	0.0258	0.0070	0.5395
con_exp	0.0162	0.0040	0.4266
con_totr			
con_rec	0.0003	0.0010	0.0500
con_exp	0.0005	0.0010	0.0759
con_awayr			
con_rec	0.0224	0.0020	0.5125
con_exp	0.0399	0.0040	0.6513
con_tranr			
con_rec	0.2076	0.1379	0.9980
con_exp	0.2287	0.1628	0.9980
con_othr			
con_rec	0.0039	0.0010	0.2058
con_exp	0.0049	0.0010	0.2338
con_lnfatalr			
con_Julrec	0.4070	0.2398	1.0000
con_Julexp	0.1679	0.0689	0.9920
con_totr			
con_Julrec	0.0075	0.0010	0.2957
con_Julexp	0.0068	0.0010	0.2787
con_awayr			
con_Julrec	0.2561	0.0579	0.9990
con_Julexp	0.2288	0.0400	0.9980
con_tranr			
con_Julrec	0.5802	0.5145	1.0000
con_Julexp	0.2153	0.1159	0.9980
con_othr			
con_Julrec	0.0020	0.0010	0.1489
con_Julexp	0.0060	0.0010	0.2627
man_lnfatalr			

man_lnfatalr			
man_unempr	0.6025	0.4945	1.0000
man_totr			
man_unempr	0.3549	0.1189	1.0000
man_awayr			
man_unempr	0.7303	0.6643	1.0000
man_tranr			
man_unempr	0.0437	0.0699	0.6953
man_othr			
man_unempr	0.3103	0.0959	1.0000
man_lnfatalr			
man_rec	0.5548	0.4146	1.0000
man_exp	0.5599	0.4256	1.0000
man_totr			
man_rec	0.1910	0.0559	0.9980
man_exp	0.2245	0.0659	0.9980
man_awayr			
man_rec	0.3938	0.3506	1.0000
man_exp	0.4630	0.3936	1.0000
man_tranr			
man_rec	0.0895	0.0789	0.9111
man_exp	0.0661	0.0699	0.8252
man_othr			
man_rec	0.1999	0.0400	0.9980
man_exp	0.2223	0.0450	0.9980
man_lnfatalr			
man_Julrec	0.6768	0.5504	1.0000
man_Julexp	0.8693	0.8392	1.0000
man_totr			
man_Julrec	0.2016	0.0370	0.9980
man_Julexp	0.1953	0.0320	0.9980
man_awayr			
man_Julrec	0.5196	0.3746	1.0000
man_Julexp	0.4441	0.2917	1.0000
man_tranr			
man_Julrec	0.0230	0.0210	0.5175
man_Julexp	0.0239	0.0579	0.5245
man_othr			
man_Julrec	0.2437	0.0430	0.9990
man_Julexp	0.2861	0.0619	1.0000

whole_lnfatalr			
whole_unempr	0.7594	0.7053	1.0000
whole_totr			
whole_unempr	0.2456	0.2108	0.9990
whole_awayr			
whole_unempr	0.0619	0.0320	0.8022
whole_tranr			
whole_unempr	0.4760	0.4555	1.0000
whole_othr			
whole_unempr	0.7513	0.7213	1.0000
whole_lnfatalr			
whole_rec	0.3642	0.2597	1.0000
whole_exp	0.6141	0.5544	1.0000
whole_totr			
whole_rec	0.5650	0.4316	1.0000
whole_exp	0.5147	0.4655	1.0000
whole_awayr			
whole_rec	0.9723	0.9670	1.0000
whole_exp	0.1656	0.0859	0.9910
whole_tranr			
whole_rec	0.0905	0.1439	0.9111
whole_exp	0.3052	0.3516	1.0000
whole_othr			
whole_rec	0.1288	0.0360	0.9630
whole_exp	0.4625	0.3417	1.0000
whole_lnfatalr			
whole_Julrec	0.7274	0.6264	1.0000
whole_Julexp	0.9939	0.9940	1.0000
whole_totr			
whole_Julrec	0.6251	0.4845	1.0000
whole_Julexp	0.1603	0.1299	0.9890
whole_awayr			
whole_Julrec	0.8297	0.7562	1.0000
whole_Julexp	0.0608	0.0280	0.7972
whole_tranr			
whole_Julrec	0.4990	0.3107	1.0000
whole_Julexp	0.4002	0.3976	1.0000
whole_othr			
whole_Julrec	0.8630	0.8252	1.0000
whole_Julexp	0.9614	0.9630	1.0000

retail_lnfatalr			
retail_unempr	0.5404	0.4376	1.0000
retail_totr			
retail_unempr	0.3050	0.1419	1.0000
retail_awayr			
retail_unempr	0.5942	0.4026	1.0000
retail_tranr			
retail_unempr	0.0219	0.0020	0.5075
retail_othr			
retail_unempr	0.9037	0.8402	1.0000
retail_lnfatalr			
retail_rec	0.5670	0.4486	1.0000
retail_exp	0.5524	0.4486	1.0000
retail_totr			
retail_rec	0.0640	0.0080	0.8112
retail_exp	0.0959	0.0170	0.9221
retail_awayr			
retail_rec	0.2989	0.0919	1.0000
retail_exp	0.3529	0.1369	1.0000
retail_tranr			
retail_rec	0.0126	0.0010	0.3736
retail_exp	0.0133	0.0010	0.3836
retail_othr			
retail_rec	0.3311	0.1538	1.0000
retail_exp	0.4672	0.2847	1.0000
retail_lnfatalr			
retail_Julrec	0.3889	0.2747	1.0000
retail_Julexp	0.6563	0.5844	1.0000
retail_totr			
retail_Julrec	0.2448	0.0909	0.9990
retail_Julexp	0.2302	0.0769	0.9990
retail_awayr			
retail_Julrec	0.9468	0.9091	1.0000
retail_Julexp	0.7915	0.6773	1.0000
retail_tranr			
retail_Julrec	0.0014	0.0010	0.1259
retail_Julexp	0.0014	0.0010	0.1259
retail_othr			
retail_Julrec	0.8885	0.8372	1.0000
retail_Julexp	0.9049	0.8462	1.0000

tran_lnfatalr			
tran_unempr	0.7554	0.7033	1.0000
tran_totr			
tran_unempr	0.3624	0.1768	1.0000
tran_awayr			
tran_unempr	0.5235	0.3487	1.0000
tran_tranr			
tran_unempr	0.1175	0.0370	0.9520
tran_othr			
tran_unempr	0.3103	0.1818	1.0000
tran_lnfatalr			
tran_rec	0.6529	0.5944	1.0000
tran_exp	0.8258	0.7972	1.0000
tran_totr			
tran_rec	0.5760	0.4426	1.0000
tran_exp	0.4845	0.3277	1.0000
tran_awayr			
tran_rec	0.9375	0.9081	1.0000
tran_exp	0.7870	0.6813	1.0000
tran_tranr			
tran_rec	0.2152	0.0500	0.9980
tran_exp	0.1787	0.0460	0.9930
tran_othr			
tran_rec	0.7869	0.7473	1.0000
tran_exp	0.6072	0.5045	1.0000
tran_lnfatalr			
tran_Julrec	0.3571	0.2517	1.0000
tran_Julexp	0.5686	0.5115	1.0000
tran_totr			
tran_Julrec	0.2598	0.1039	0.9990
tran_Julexp	0.3146	0.1449	1.0000
tran_awayr			
tran_Julrec	0.7215	0.5894	1.0000
tran_Julexp	0.6165	0.4366	1.0000
tran_tranr			
tran_Julrec	0.1980	0.0669	0.9980
tran_Julexp	0.1675	0.0589	0.9920
tran_othr			
tran_Julrec	0.3357	0.1838	1.0000
tran_Julexp	0.4948	0.3646	1.0000

tran_othr			
tran_Julrec	0.3357	0.1838	1.0000
tran_Julexp	0.4948	0.3646	1.0000
fin_lnfatalr			
fin_unempr	0.4952	0.3976	1.0000
fin_totr			
fin_unempr	0.4447	0.3087	1.0000
fin_awayr			
fin_unempr	0.1904	0.1698	0.9980
fin_tranr			
fin_unempr	0.0105	0.0030	0.3387
fin_othr			
fin_unempr	0.6145	0.5375	1.0000
fin_lnfatalr			
fin_rec	0.8863	0.8801	1.0000
fin_exp	0.8024	0.7822	1.0000
fin_totr			
fin_rec	0.8203	0.7882	1.0000
fin_exp	0.5385	0.4216	1.0000
fin_awayr			
fin_rec	0.4402	0.3317	1.0000
fin_exp	0.2367	0.2028	0.9990
fin_tranr			
fin_rec	0.2660	0.1528	1.0000
fin_exp	0.0613	0.0240	0.8012
fin_othr			
fin_rec	0.7158	0.6444	1.0000
fin_exp	0.6272	0.5554	1.0000
fin_lnfatalr			
fin_Julrec	0.6925	0.5954	1.0000
fin_Julexp	0.3960	0.2358	1.0000
fin_totr			
fin_Julrec	0.2933	0.1858	1.0000
fin_Julexp	0.4191	0.3397	1.0000
fin_awayr			
fin_Julrec	0.2875	0.1608	1.0000
fin_Julexp	0.4466	0.3457	1.0000
fin_tranr			
fin_Julrec	0.0043	0.0020	0.2168
fin_Julexp	0.2534	0.1199	0.9990
fin_othr			
fin_Julrec	0.3447	0.2817	1.0000
fin_Julexp	0.9550	0.9500	1.0000

serv_lnfatalr			
serv_unempr	0.3885	0.1928	1.0000
serv_totr			
serv_unempr	0.2435	0.0989	0.9990
serv_awayr			
serv_unempr	0.6101	0.4875	1.0000
serv_tranr			
serv_unempr	0.1404	0.0370	0.9760
serv_othr			
serv_unempr	0.2716	0.1169	1.0000
serv_lnfatalr			
serv_rec	0.5648	0.3616	1.0000
serv_exp	0.5114	0.3077	1.0000
serv_totr			
serv_rec	0.2033	0.0509	0.9980
serv_exp	0.2092	0.0569	0.9980
serv_awayr			
serv_rec	0.2892	0.1179	1.0000
serv_exp	0.3528	0.1818	1.0000
serv_tranr			
serv_rec	0.1011	0.0130	0.9321
serv_exp	0.1089	0.0160	0.9421
serv_othr			
serv_rec	0.3780	0.1968	1.0000
serv_exp	0.3425	0.1648	1.0000
serv_lnfatalr			
serv_Julrec	0.1891	0.0400	0.9970
serv_Julexp	0.2262	0.0629	0.9980
serv_totr			
serv_Julrec	0.2766	0.1189	1.0000
serv_Julexp	0.3077	0.1419	1.0000
serv_awayr			
serv_Julrec	0.5471	0.3916	1.0000
serv_Julexp	0.4679	0.2987	1.0000
serv_tranr			
serv_Julrec	0.0782	0.0280	0.8651
serv_Julexp	0.0738	0.0270	0.8521
serv_othr			
serv_Julrec	0.4577	0.3057	1.0000
serv_Julexp	0.5699	0.4356	1.0000

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Appendix A

Table 11: Full Workforce Summary Statistics for 50 U.S. States from 1992-2018

	mean	sd	min	max
Fatal Injuries per 100,000	4.924	2.883	0.848	34.60
Nonfatal Injuries per 100	3.548	1.174	1.438	7.743
Lost Workdays Cases per 100	1.094	0.401	0.448	2.507
Job Restriction/Transfer Cases per 100	0.643	0.290	0.0897	1.763
Other Cases per 100	1.811	0.689	0.630	4.553
Unemployment Rate	0.0562	0.0187	0.0230	0.146
Fraction Construction	0.0727	0.0119	0.0426	0.125
Fraction Manufacturing	0.122	0.0504	0.0237	0.266
Fraction Transportation	0.0421	0.00902	0.0220	0.0809
Fraction Wholesale	0.0302	0.00765	0.0112	0.0547
Fraction Retail	0.140	0.0306	0.0847	0.217
Fraction Services	0.415	0.0630	0.273	0.563
OSHA Inspection Rate	0.0149	0.0114	0.00284	0.187
Aged 15-24	0.156	0.0221	0.101	0.265
Aged 25-34	0.223	0.0245	0.157	0.300
Aged 35-44	0.236	0.0313	0.164	0.331
Aged 45-54	0.214	0.0227	0.142	0.279
Aged 55-64	0.130	0.0335	0.0621	0.218
Fraction Male	0.532	0.0127	0.494	0.582
Fraction White	0.838	0.124	0.196	0.991
Fraction Black	0.0956	0.0896	0.000698	0.366
Fraction Asian	0.0401	0.0864	0.00164	0.735
Fraction Single	0.281	0.0330	0.188	0.384
Fraction Married	0.572	0.0326	0.478	0.668
Fraction Divorced	0.108	0.0161	0.0688	0.165
Obtained HS Degree Only	0.604	0.0478	0.435	0.708
Obtained Bachelor's Degree	0.282	0.0610	0.143	0.504
Fraction of Lower House Republican	0.539	0.317	0	1
Maximum Temperature	85.99	6.346	58.80	102.9
Monthly Precipitation	3.119	1.237	0.377	6.148

See table 2 for a description of variables.

Table 12: Private Industry Summary Statistics for 50 U.S. States from 1992-2018

	mean	sd	min	max
Fatal Injuries per 100,000	4.668	2.790	0.763	33.62
Nonfatal Injuries per 100	3.240	1.201	1.322	7.335
Lost Workdays Cases per 100	0.992	0.389	0.386	2.363
Job Restriction/Transfer Cases per 100	0.622	0.288	0.0876	1.770
Other Cases per 100	1.625	0.697	0.538	4.273
Unemployment Rate	0.0577	0.0193	0.0230	0.150
Fraction Construction	0.0727	0.0119	0.0426	0.125
Fraction Manufacturing	0.122	0.0504	0.0237	0.266
Fraction Transportation	0.0421	0.00902	0.0220	0.0809
Fraction Wholesale	0.0302	0.00765	0.0112	0.0547
Fraction Retail	0.140	0.0306	0.0847	0.217
Fraction Services	0.415	0.0630	0.273	0.563
OSHA Inspection Rate	0.0149	0.0114	0.00284	0.187
Aged 15-24	0.161	0.0227	0.104	0.276
Aged 25-34	0.224	0.0246	0.158	0.302
Aged 35-44	0.234	0.0312	0.162	0.330
Aged 45-54	0.211	0.0227	0.142	0.268
Aged 55-64	0.129	0.0331	0.0596	0.217
Fraction Male	0.532	0.0132	0.493	0.585
Fraction White	0.840	0.124	0.197	0.992
Fraction Black	0.0942	0.0885	0.000732	0.363
Fraction Asian	0.0405	0.0863	0.00173	0.732
Fraction Single	0.286	0.0334	0.193	0.386
Fraction Married	0.568	0.0330	0.474	0.666
Fraction Divorced	0.107	0.0161	0.0688	0.164
Obtained HS Degree Only	0.606	0.0481	0.435	0.709
Obtained Bachelor's Degree	0.277	0.0608	0.139	0.503
Fraction of Lower House Republican	0.539	0.317	0	1
Maximum Temperature	85.99	6.346	58.80	102.9
Monthly Precipitation	3.119	1.237	0.377	6.148

See table 2 for a description of variables.

Table 13: Public Industry Summary Statistics for 50 U.S. States from 1992-2018

	mean	sd	min	max
Fatal Injuries per 100,000	10.16	7.870	0	95.86
Nonfatal Injuries per 100	12.47	4.892	2.589	30.27
Lost Workdays Cases per 100	3.999	2.098	0.839	15.90
Job Restriction/Transfer Cases per 100	1.408	0.873	0.0643	5.444
Other Cases per 100	7.100	3.072	1.009	27.03
Unemployment Rate	0.0252	0.0138	1.00e-08	0.110
OSHA Inspection Rate	0.0149	0.0114	0.00284	0.187
Aged 15-24	0.0545	0.0215	0.00273	0.173
Aged 25-34	0.205	0.0430	0.0892	0.377
Aged 35-44	0.270	0.0506	0.121	0.468
Aged 45-54	0.276	0.0451	0.121	0.488
Aged 55-64	0.157	0.0521	0.0257	0.301
Fraction Male	0.544	0.0458	0.351	0.709
Fraction White	0.812	0.137	0.132	1
Fraction Black	0.122	0.112	1.00e-08	0.475
Fraction Asian	0.0301	0.0892	1.00e-08	0.782
Fraction Single	0.184	0.0454	0.0647	0.352
Fraction Married	0.649	0.0514	0.484	0.801
Fraction Divorced	0.129	0.0322	0.0340	0.253
Obtained HS Degree Only	0.583	0.0712	0.312	0.777
Obtained Bachelor's Degree	0.391	0.0766	0.208	0.683
Fraction of Lower House Republican	0.539	0.317	0	1
Maximum Temperature	85.99	6.346	58.80	102.9
Monthly Precipitation	3.119	1.237	0.377	6.148

See table 2 for a description of variables.

Table 14: Construction Industry Summary Statistics for 50 U.S. States from 1992-2018

	mean	sd	min	max
Fatal Injuries per 100,000	11.27	7.012	0	91.51
Nonfatal Injuries per 100	3.683	1.899	0.482	13.78
Lost Workdays Cases per 100	1.415	0.729	0.120	4.502
Job Restriction/Transfer Cases per 100	0.456	0.279	0	2.605
Other Cases per 100	1.814	1.109	0.216	8.161
Unemployment Rate	0.0895	0.0429	0.0200	0.409
OSHA Inspection Rate	0.0149	0.0114	0.00284	0.187
Aged 15-24	0.125	0.0383	0.0428	0.303
Aged 25-34	0.250	0.0421	0.102	0.401
Aged 35-44	0.266	0.0440	0.143	0.445
Aged 45-54	0.215	0.0414	0.0927	0.339
Aged 55-64	0.116	0.0402	0.0278	0.288
Fraction Male	0.907	0.0197	0.832	0.973
Fraction White	0.898	0.107	0.214	1
Fraction Black	0.0542	0.0599	1.00e-08	0.304
Fraction Asian	0.0196	0.0787	1.00e-08	0.728
Fraction Single	0.257	0.0413	0.105	0.423
Fraction Married	0.601	0.0426	0.468	0.767
Fraction Divorced	0.112	0.0266	0.0449	0.217
Obtained HS Degree Only	0.710	0.0680	0.488	0.855
Obtained Bachelor's Degree	0.109	0.0343	0.0151	0.229
Fraction of Lower House Republican	0.539	0.317	0	1
Maximum Temperature	85.99	6.346	58.80	102.9
Monthly Precipitation	3.119	1.237	0.377	6.148

See table 2 for a description of variables.

Table 15: Manufacturing Industry Summary Statistics for 50 U.S. States from 1992-2018

	mean	sd	min	max
Fatal Injuries per 100,000	3.543	7.712	0	162.9
Nonfatal Injuries per 100	5.804	3.434	0.227	25.36
Lost Workdays Cases per 100	1.539	1.197	0	10.88
Job Restriction/Transfer Cases per 100	1.537	0.883	0	5.765
Other Cases per 100	2.733	1.782	0.227	11.71
Unemployment Rate	0.0557	0.0267	0.00609	0.208
OSHA Inspection Rate	0.0149	0.0114	0.00284	0.187
Aged 15-24	0.0987	0.0299	0.0289	0.239
Aged 25-34	0.222	0.0436	0.0835	0.369
Aged 35-44	0.263	0.0450	0.128	0.395
Aged 45-54	0.246	0.0425	0.117	0.377
Aged 55-64	0.142	0.0477	0.0346	0.295
Fraction Male	0.697	0.0425	0.510	0.850
Fraction White	0.832	0.131	0.148	0.998
Fraction Black	0.0929	0.102	1.00e-08	0.524
Fraction Asian	0.0506	0.0936	1.00e-08	0.797
Fraction Single	0.225	0.0409	0.115	0.453
Fraction Married	0.621	0.0437	0.431	0.736
Fraction Divorced	0.116	0.0234	0.0171	0.200
Obtained HS Degree Only	0.657	0.0739	0.399	0.849
Obtained Bachelor's Degree	0.217	0.0765	0.0627	0.544
Fraction of Lower House Republican	0.539	0.317	0	1
Maximum Temperature	85.99	6.346	58.80	102.9
Monthly Precipitation	3.119	1.237	0.377	6.148

See table 2 for a description of variables.

Table 16: Wholesale Industry Summary Statistics for 50 U.S. States from 1992-2018

	mean	sd	min	max
Fatal Injuries per 100,000	4.453	6.182	0	101.7
Nonfatal Injuries per 100	6.160	2.162	1.563	15.44
Lost Workdays Cases per 100	2.128	0.871	0.493	5.755
Job Restriction/Transfer Cases per 100	1.410	0.675	0	5.154
Other Cases per 100	2.633	1.314	0	7.727
Unemployment Rate	0.0410	0.0229	1.00e-08	0.199
OSHA Inspection Rate	0.0149	0.0114	0.00284	0.187
Aged 15-24	0.0960	0.0356	0	0.246
Aged 25-34	0.233	0.0542	0.0863	0.460
Aged 35-44	0.260	0.0557	0.0645	0.460
Aged 45-54	0.229	0.0536	0.0679	0.408
Aged 55-64	0.141	0.0521	0.00321	0.402
Fraction Male	0.720	0.0490	0.553	0.904
Fraction White	0.882	0.124	0.133	1
Fraction Black	0.0655	0.0692	1.00e-08	0.380
Fraction Asian	0.0346	0.0933	1.00e-08	0.784
Fraction Single	0.218	0.0510	0.0822	0.434
Fraction Married	0.643	0.0590	0.360	0.835
Fraction Divorced	0.107	0.0340	0.0235	0.290
Obtained HS Degree Only	0.658	0.0743	0.427	0.894
Obtained Bachelor's Degree	0.254	0.0728	0.0427	0.517
Fraction of Lower House Republican	0.539	0.317	0	1
Maximum Temperature	85.99	6.346	58.80	102.9
Monthly Precipitation	3.119	1.237	0.377	6.148

See table 2 for a description of variables.

Table 17: Retail Industry Summary Statistics for 50 U.S. States from 1992-2018

	mean	sd	min	max
Fatal Injuries per 100,000	1.915	1.740	0	12.44
Nonfatal Injuries per 100	3.594	1.104	0.188	7.790
Lost Workdays Cases per 100	1.072	0.402	0.0938	2.610
Job Restriction/Transfer Cases per 100	0.681	0.283	0.0741	1.920
Other Cases per 100	1.844	0.797	0.576	5.439
Unemployment Rate	0.0623	0.0198	0.0193	0.134
OSHA Inspection Rate	0.0149	0.0114	0.00284	0.187
Aged 15-24	0.289	0.0585	0.132	0.478
Aged 25-34	0.215	0.0313	0.128	0.337
Aged 35-44	0.184	0.0263	0.108	0.263
Aged 45-54	0.160	0.0316	0.0731	0.249
Aged 55-64	0.107	0.0347	0.0311	0.218
Fraction Male	0.493	0.0360	0.377	0.594
Fraction White	0.839	0.132	0.145	0.995
Fraction Black	0.0926	0.0904	1.00e-08	0.405
Fraction Asian	0.0420	0.0908	1.00e-08	0.747
Fraction Single	0.404	0.0503	0.217	0.533
Fraction Married	0.457	0.0415	0.341	0.606
Fraction Divorced	0.0979	0.0220	0.0428	0.177
Obtained HS Degree Only	0.693	0.0423	0.573	0.819
Obtained Bachelor's Degree	0.151	0.0465	0.0486	0.331
Fraction of Lower House Republican	0.539	0.317	0	1
Maximum Temperature	85.99	6.346	58.80	102.9
Monthly Precipitation	3.119	1.237	0.377	6.148

See table 2 for a description of variables.

Table 18: Transportation and Warehousing Industry Summary Statistics for 50 U.S. States from 1992-2018

	mean	sd	min	max
Fatal Injuries per 100,000	16.88	13.50	0	110.2
Nonfatal Injuries per 100	4.713	1.921	0.466	13.33
Lost Workdays Cases per 100	2.108	0.929	0.280	6.111
Job Restriction/Transfer Cases per 100	0.941	0.459	0	2.681
Other Cases per 100	1.670	0.963	0.0933	7.793
Unemployment Rate	0.0453	0.0217	0.00459	0.154
OSHA Inspection Rate	0.0149	0.0114	0.00284	0.187
Aged 15-24	0.0810	0.0293	0	0.234
Aged 25-34	0.204	0.0511	0.0938	0.395
Aged 35-44	0.259	0.0563	0.0820	0.554
Aged 45-54	0.261	0.0459	0.133	0.407
Aged 55-64	0.155	0.0542	0.0366	0.338
Fraction Male	0.753	0.0450	0.593	0.915
Fraction White	0.810	0.155	0.122	1
Fraction Black	0.133	0.124	1.00e-08	0.565
Fraction Asian	0.0333	0.0919	1.00e-08	0.823
Fraction Single	0.211	0.0579	0.0624	0.435
Fraction Married	0.626	0.0648	0.424	0.824
Fraction Divorced	0.126	0.0334	0.0239	0.324
Obtained HS Degree Only	0.752	0.0473	0.580	0.876
Obtained Bachelor's Degree	0.152	0.0470	0.0351	0.358
Fraction of Lower House Republican	0.539	0.317	0	1
Maximum Temperature	85.99	6.346	58.80	102.9
Monthly Precipitation	3.119	1.237	0.377	6.148

See table 2 for a description of variables.

Table 19: Financial Activity Industry Summary Statistics for 50 U.S. States from 1992-2018

	mean	sd	min	max
Fatal Injuries per 100,000	0.640	1.410	0	19.72
Nonfatal Injuries per 100	1.146	0.543	0	4.083
Lost Workdays Cases per 100	0.355	0.220	0	2.117
Job Restriction/Transfer Cases per 100	0.116	0.119	0	0.972
Other Cases per 100	0.658	0.360	0	2.794
Unemployment Rate	0.0314	0.0171	1.00e-08	0.135
OSHA Inspection Rate	0.0149	0.0114	0.00284	0.187
Aged 15-24	0.0967	0.0334	0.0197	0.269
Aged 25-34	0.237	0.0422	0.125	0.395
Aged 35-44	0.246	0.0409	0.109	0.386
Aged 45-54	0.226	0.0367	0.115	0.348
Aged 55-64	0.144	0.0438	0.0295	0.296
Fraction Male	0.418	0.0532	0.259	0.596
Fraction White	0.863	0.118	0.181	1
Fraction Black	0.0792	0.0722	1.00e-08	0.322
Fraction Asian	0.0391	0.0879	1.00e-08	0.775
Fraction Single	0.215	0.0482	0.0654	0.416
Fraction Married	0.633	0.0529	0.431	0.813
Fraction Divorced	0.115	0.0296	0.0192	0.250
Obtained HS Degree Only	0.578	0.0879	0.270	0.826
Obtained Bachelor's Degree	0.390	0.0944	0.152	0.725
Fraction of Lower House Republican	0.539	0.317	0	1
Maximum Temperature	85.99	6.346	58.80	102.9
Monthly Precipitation	3.119	1.237	0.377	6.148

See table 2 for a description of variables.

Table 20: Service Industry Summary Statistics for 50 U.S. States from 1992-2018

	mean	sd	min	max
Fatal Injuries per 100,000	1.432	1.064	0	10.54
Nonfatal Injuries per 100	2.411	0.698	0.703	6.238
Lost Workdays Cases per 100	0.699	0.276	0.204	2.100
Job Restriction/Transfer Cases per 100	0.386	0.195	0	1.370
Other Cases per 100	1.325	0.413	0.407	4.002
Unemployment Rate	0.0474	0.0151	0.0173	0.110
OSHA Inspection Rate	0.0149	0.0114	0.00284	0.187
Aged 15-24	0.157	0.0266	0.0915	0.279
Aged 25-34	0.225	0.0237	0.153	0.308
Aged 35-44	0.233	0.0360	0.135	0.344
Aged 45-54	0.212	0.0225	0.140	0.290
Aged 55-64	0.130	0.0298	0.0578	0.218
Fraction Male	0.381	0.0324	0.282	0.484
Fraction White	0.827	0.124	0.207	0.994
Fraction Black	0.103	0.0930	1.00e-08	0.382
Fraction Asian	0.0435	0.0855	0.00155	0.730
Fraction Single	0.287	0.0439	0.163	0.394
Fraction Married	0.562	0.0422	0.445	0.678
Fraction Divorced	0.107	0.0178	0.0703	0.181
Obtained HS Degree Only	0.532	0.0443	0.378	0.662
Obtained Bachelor's Degree	0.374	0.0536	0.203	0.566
Fraction of Lower House Republican	0.539	0.317	0	1
Maximum Temperature	85.99	6.346	58.80	102.9
Monthly Precipitation	3.119	1.237	0.377	6.148

See table 2 for a description of variables.

Table 21: Full Workforce Results: Model 1

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
Unemployment	-0.132**	-0.178***	-0.193***	-0.226***	-0.159***
	(0.0593)	(0.0405)	(0.0403)	(0.0554)	(0.0549)
Fraction Construction	-0.721	1.097	1.785**	1.470	0.598
	(1.516)	(0.763)	(0.868)	(1.227)	(0.942)
Fraction Manufacturing	-0.921	0.138	-0.229	1.983**	0.208
	(1.185)	(0.500)	(0.575)	(0.826)	(0.689)
Fraction Transportation/Warehouse	-2.697	-1.297	-1.252	0.576	-1.553
	(1.725)	(0.974)	(1.026)	(1.731)	(1.149)
Fraction Wholesale	-2.266	0.981	-0.180	0.774	1.834
	(2.915)	(1.102)	(1.120)	(1.962)	(1.726)
Fraction Retail	-0.750	-0.697	0.694	-0.821	-1.478
	(1.289)	(0.628)	(0.512)	(1.218)	(0.941)
Fraction Services	-0.863	-0.0849	0.540	0.547	-0.540
	(1.050)	(0.534)	(0.503)	(0.732)	(0.744)
Inspection Rate	1.844	0.171	0.0909	-1.389	0.813
	(1.205)	(0.345)	(0.527)	(0.931)	(0.557)
Age 25-34	-0.535	-1.519***	-1.828***	-2.652**	-1.279*
	(0.996)	(0.460)	(0.643)	(0.991)	(0.689)
Age 35-44	-1.904	-1.626**	-1.615*	-3.138**	-1.567*
	(1.256)	(0.670)	(0.833)	(1.256)	(0.898)
Age 45-54	0.491	-2.121***	-1.895**	-5.312***	-1.734*
	(1.260)	(0.763)	(0.914)	(1.279)	(0.888)
Age 55-64	0.595	-0.967	-0.691	-2.466**	-0.564
	(1.417)	(0.699)	(0.753)	(1.170)	(1.054)
Male	1.791	0.00679	-0.442	1.641*	-0.0465
	(1.114)	(0.529)	(0.729)	(0.914)	(0.752)
White	0.353	-0.274	-0.857*	-1.055	0.343
	(0.880)	(0.489)	(0.496)	(0.925)	(0.722)
Black	1.705	0.886	0.367	-0.655	1.709
	(1.403)	(0.655)	(0.785)	(1.318)	(1.020)
Asian	-0.444	0.503*	0.0420	0.921*	0.730
	(0.960)	(0.266)	(0.227)	(0.525)	(0.493)
Single	0.182	-0.785	-0.844	-1.395	-0.730
	(0.916)	(0.479)	(0.583)	(0.977)	(0.657)
HS Degree Only	-1.126*	-0.286	-0.791*	-0.0345	0.0683
	(0.613)	(0.368)	(0.438)	(0.807)	(0.429)
Frac. of Lower Rep.	0.0955	-0.0346	-0.0734**	0.00437	-0.00173
	(0.0628)	(0.0290)	(0.0325)	(0.0678)	(0.0551)
Maximum Temperature	0.00256	0.00322**	0.00221	0.00526**	0.00311*
	(0.00279)	(0.00129)	(0.00152)	(0.00215)	(0.00182)
Monthly Precipitation	0.0139	0.00487	-0.00174	0.00687	0.00925
	(0.0108)	(0.00543)	(0.00535)	(0.00925)	(0.00772)
Constant	-9.895***	-8.960***	-9.398***	-10.20***	-10.32***
	(1.817)	(0.799)	(0.927)	(1.739)	(1.243)
N	1350	943	943	943	943
r2	0.863	0.947	0.949	0.944	0.926

Robust standard errors are clustered at the state level.

Independent variable of interest in the unemployment rate.

For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 22: Full Workforce Results: Model 2

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
all_recession	-0.106*	-0.199***	-0.201***	-0.250***	-0.185***
	(0.0627)	(0.0439)	(0.0429)	(0.0607)	(0.0588)
all_expansion	-0.107*	-0.191***	-0.196***	-0.243***	-0.175***
	(0.0610)	(0.0422)	(0.0417)	(0.0595)	(0.0564)
Fraction Construction	-0.331	0.610	1.475	1.026	0.0245
	(1.754)	(0.781)	(0.961)	(1.403)	(1.021)
Fraction Manufacturing	-0.903	-0.258	-0.521	1.659	-0.243
	(1.448)	(0.485)	(0.601)	(1.149)	(0.693)
Fraction Transportation/Warehouse	-2.111	-1.323	-1.286	0.514	-1.562
	(1.775)	(1.038)	(1.099)	(1.826)	(1.232)
Fraction Wholesale	-2.094	0.931	-0.217	0.699	1.787
	(2.838)	(1.131)	(1.223)	(2.087)	(1.720)
Fraction Retail	-0.432	-0.927	0.500	-1.012	-1.724*
	(1.468)	(0.637)	(0.642)	(1.449)	(0.946)
Fraction Services	-0.356	-0.300	0.373	0.346	-0.773
	(1.218)	(0.540)	(0.543)	(0.918)	(0.782)
Inspection Rate	1.706	0.145	0.0727	-1.418	0.785
	(1.097)	(0.337)	(0.527)	(0.955)	(0.533)
Age 25-34	-1.075	-1.613***	-1.946***	-2.634***	-1.385*
	(0.914)	(0.472)	(0.639)	(0.970)	(0.691)
Age 35-44	-2.019*	-1.709**	-1.695**	-3.164**	-1.663*
	(1.191)	(0.663)	(0.827)	(1.270)	(0.892)
Age 45-54	0.426	-2.044***	-1.861**	-5.245***	-1.632*
	(1.237)	(0.745)	(0.914)	(1.261)	(0.878)
Age 55-64	0.558	-0.886	-0.642	-2.412**	-0.461
	(1.370)	(0.683)	(0.749)	(1.157)	(1.048)
Male	0.847	0.0651	-0.454	1.795*	0.0232
	(1.114)	(0.502)	(0.706)	(0.901)	(0.763)
White	0.273	-0.256	-0.843*	-1.045	0.364
	(0.802)	(0.448)	(0.468)	(0.927)	(0.674)
Black	1.399	0.918	0.385	-0.620	1.747*
	(1.294)	(0.640)	(0.782)	(1.343)	(0.991)
Asian	-0.371	0.610**	0.114	0.999*	0.859*
	(0.879)	(0.261)	(0.245)	(0.538)	(0.476)
Single	0.302	-0.786	-0.826	-1.420	-0.735
	(0.895)	(0.469)	(0.585)	(0.982)	(0.636)
HS Degree Only	-1.267**	-0.247	-0.768*	0.00151	0.116
	(0.613)	(0.366)	(0.448)	(0.821)	(0.417)
Frac. of Lower Rep.	0.0796	-0.0373	-0.0746**	0.00156	-0.00526
	(0.0542)	(0.0295)	(0.0312)	(0.0688)	(0.0563)
Maximum Temperature	0.00235	0.00350***	0.00240	0.00539**	0.00347*
	(0.00274)	(0.00128)	(0.00153)	(0.00212)	(0.00180)
Monthly Precipitation	0.0159	0.00485	-0.00177	0.00677	0.00927
	(0.0108)	(0.00533)	(0.00539)	(0.00928)	(0.00758)
Constant	-9.136***	-8.816***	-9.212***	-10.17***	-10.18***
	(1.765)	(0.724)	(0.926)	(1.631)	(1.186)
N	1350	943	943	943	943
r2	0.866	0.949	0.950	0.944	0.928
F_diff	0.0325	6.231	2.524	2.284	5.428
p_diff	0.858	0.0165	0.119	0.138	0.0246

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 2. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 23: Full Workforce Results: Model 3

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
Unemployment Increased	-0.114*	-0.178***	-0.187***	-0.229***	-0.160***
	(0.0622)	(0.0410)	(0.0419)	(0.0575)	(0.0544)
Unemployment Decreased	-0.129**	-0.178***	-0.191***	-0.227***	-0.159***
	(0.0595)	(0.0406)	(0.0406)	(0.0558)	(0.0547)
Inspection Rate	1.765	0.171	0.0705	-1.378	0.820
	(1.206)	(0.346)	(0.527)	(0.934)	(0.561)
Age 25-34	-0.549	-1.519***	-1.828***	-2.652**	-1.279*
	(1.001)	(0.461)	(0.644)	(0.992)	(0.690)
Age 35-44	-1.896	-1.626**	-1.611*	-3.139**	-1.568*
	(1.261)	(0.670)	(0.830)	(1.256)	(0.898)
Age 45-54	0.502	-2.121***	-1.894**	-5.312***	-1.735*
	(1.265)	(0.764)	(0.911)	(1.281)	(0.889)
Age 55-64	0.573	-0.968	-0.698	-2.462**	-0.561
	(1.388)	(0.698)	(0.747)	(1.169)	(1.054)
Male	1.739	0.00515	-0.477	1.659*	-0.0352
	(1.123)	(0.539)	(0.733)	(0.932)	(0.760)
White	0.415	-0.274	-0.864*	-1.051	0.345
	(0.885)	(0.491)	(0.497)	(0.926)	(0.723)
Black	1.790	0.885	0.353	-0.648	1.713*
	(1.397)	(0.656)	(0.786)	(1.316)	(1.019)
Asian	-0.454	0.503*	0.0338	0.926*	0.733
	(0.942)	(0.268)	(0.232)	(0.523)	(0.495)
Single	0.184	-0.785	-0.837	-1.399	-0.732
	(0.909)	(0.481)	(0.580)	(0.976)	(0.660)
HS Degree Only	-1.118*	-0.286	-0.786*	-0.0368	0.0668
	(0.608)	(0.367)	(0.440)	(0.805)	(0.428)
Frac. of Lower Rep.	0.100	-0.0345	-0.0718**	0.00353	-0.00225
	(0.0636)	(0.0289)	(0.0327)	(0.0680)	(0.0548)
Maximum Temperature	0.00251	0.00322**	0.00223	0.00525**	0.00311*
	(0.00276)	(0.00129)	(0.00153)	(0.00215)	(0.00182)
Monthly Precipitation	0.0128	0.00485	-0.00203	0.00702	0.00934
	(0.0109)	(0.00535)	(0.00525)	(0.00929)	(0.00766)
Constant	-9.871***	-8.958***	-9.366***	-10.21***	-10.33***
	(1.813)	(0.811)	(0.940)	(1.747)	(1.251)
N	1350	943	943	943	943
r2	0.863	0.947	0.949	0.944	0.926
F_diff	3.053	0.00205	0.904	0.0866	0.102
p_diff	0.0869	0.964	0.347	0.770	0.750

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 3. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 24: Full Workforce Results: Model 4

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
all_recession	-0.213***	-0.0927	-0.126**	-0.0446	-0.0686
	(0.0761)	(0.0569)	(0.0544)	(0.0653)	(0.0737)
all_expansion	-0.217***	-0.0871	-0.124**	-0.0313	-0.0619
	(0.0726)	(0.0554)	(0.0534)	(0.0652)	(0.0730)
Fraction Construction	2.332	0.293	1.302	0.244	-0.114
	(2.021)	(0.917)	(1.096)	(0.958)	(1.145)
Fraction Manufacturing	1.215	-0.113	-0.317	0.836	0.147
	(1.566)	(0.616)	(1.041)	(0.991)	(0.777)
Fraction Transportation/Warehouse	-2.587	0.733	0.434	1.107	0.894
	(2.343)	(1.047)	(1.366)	(1.377)	(1.245)
Fraction Wholesale	5.032	1.421	0.338	2.033	1.945
	(3.997)	(1.006)	(1.490)	(2.235)	(1.537)
Fraction Retail	1.384	0.419	1.281	-0.0144	0.0858
	(1.695)	(0.741)	(0.854)	(1.139)	(1.052)
Fraction Services	0.536	-0.0348	0.391	0.704	-0.404
	(1.398)	(0.569)	(0.652)	(0.584)	(0.714)
Inspection Rate	1.275*	0.0924	-0.0527	-0.614	0.700
	(0.663)	(0.302)	(0.426)	(0.578)	(0.444)
Age 25-34	-2.548	-0.407	0.00280	-1.654*	-0.418
	(1.551)	(0.689)	(0.754)	(0.844)	(0.996)
Age 35-44	-3.348**	-0.289	0.308	-1.680	-0.308
	(1.431)	(0.761)	(0.966)	(1.272)	(0.985)
Age 45-54	-2.011	-1.609**	-0.666	-3.631***	-1.533*
	(1.875)	(0.733)	(0.757)	(0.888)	(0.906)
Age 55-64	-0.341	-1.861**	-1.296	-3.647***	-1.727*
	(2.343)	(0.710)	(0.874)	(0.877)	(0.941)
Male	3.347**	0.456	0.602	1.241	0.426
	(1.579)	(0.716)	(0.945)	(1.167)	(0.886)
White	-0.688	-0.233	-0.420	0.656	-0.356
	(0.795)	(0.384)	(0.479)	(0.627)	(0.618)
Black	1.171	1.433**	1.801**	-0.226	1.692*
	(1.422)	(0.607)	(0.749)	(1.066)	(0.973)
Asian	-0.436	0.536	0.696	2.309**	-0.352
	(1.561)	(0.640)	(0.707)	(0.960)	(1.064)
Single	-0.00535	-0.414	-0.253	-0.845	-0.416
	(1.178)	(0.394)	(0.420)	(0.644)	(0.509)
HS Degree Only	-0.197	-0.824**	-0.952***	-1.145**	-0.601
	(0.654)	(0.316)	(0.314)	(0.544)	(0.457)
Frac. of Lower Rep.	0.00324	-0.0334	-0.0772**	0.0349	-0.00756
	(0.0728)	(0.0241)	(0.0373)	(0.0574)	(0.0449)
Maximum Temperature	-0.00128	0.00393**	0.00129	0.00756***	0.00474**
	(0.00488)	(0.00164)	(0.00215)	(0.00261)	(0.00204)
Monthly Precipitation	-0.00938	0.00573	-0.00610	0.0195*	0.0106
	(0.0165)	(0.00699)	(0.00851)	(0.0112)	(0.00963)
Constant	-10.82***	-10.13***	-12.04***	-11.35***	-10.83***
	(2.763)	(0.880)	(0.994)	(1.333)	(1.123)
N	700	577	577	577	577
r2	0.868	0.909	0.938	0.963	0.879
F_diff	0.147	2.193	0.156	4.865	2.101
p_diff	0.703	0.146	0.695	0.0328	0.154

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 4. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 25: Private Sector Results: Model 1

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
Unemployment	-0.157**	-0.168***	-0.181***	-0.237***	-0.139***
	(0.0629)	(0.0258)	(0.0406)	(0.0528)	(0.0288)
Fraction Construction	-1.745	0.236	0.989	0.910	-0.453
	(1.437)	(0.693)	(0.953)	(1.213)	(0.819)
Fraction Manufacturing	-1.174	-0.355	-0.694	1.805**	-0.390
	(1.126)	(0.411)	(0.480)	(0.822)	(0.596)
Fraction Transportation/Warehouse	-3.526*	-2.244**	-1.562	-0.0642	-3.043**
	(1.826)	(1.005)	(1.131)	(1.749)	(1.202)
Fraction Wholesale	-3.147	-1.948**	-2.923**	0.215	-1.840
	(2.968)	(0.939)	(1.119)	(1.960)	(1.290)
Fraction Retail	-1.023	-1.630***	-0.0983	-1.396	-2.701***
	(1.301)	(0.583)	(0.539)	(1.258)	(0.756)
Fraction Services	-0.892	-0.603	0.114	0.0914	-1.153**
	(1.041)	(0.375)	(0.428)	(0.757)	(0.549)
Inspection Rate	0.0125	-0.268	-0.280	-1.618	0.274
	(1.600)	(0.391)	(0.518)	(1.014)	(0.404)
Age 25-34	-0.0834	-2.197***	-2.182***	-2.812***	-2.394***
	(0.951)	(0.418)	(0.560)	(0.913)	(0.560)
Age 35-44	-2.228*	-2.320***	-1.980***	-3.043**	-2.793***
	(1.313)	(0.460)	(0.706)	(1.195)	(0.562)
Age 45-54	0.490	-2.596***	-2.049**	-5.247***	-2.734***
	(1.272)	(0.510)	(0.795)	(1.221)	(0.579)
Age 55-64	0.207	-0.872*	-0.121	-2.038*	-0.921
	(1.465)	(0.515)	(0.780)	(1.198)	(0.724)
Male	2.096	0.466	-0.217	2.477***	0.465
	(1.275)	(0.432)	(0.599)	(0.915)	(0.630)
White	0.682	-0.638*	-1.070***	-1.243	-0.117
	(0.875)	(0.318)	(0.389)	(0.909)	(0.443)
Black	1.820	0.00969	-0.300	-0.900	0.506
	(1.372)	(0.499)	(0.849)	(1.272)	(0.691)
Asian	-0.792	0.231	-0.102	0.824	0.244
	(0.886)	(0.188)	(0.253)	(0.526)	(0.337)
Single	0.0749	-0.731*	-0.702	-1.338	-0.788
	(0.891)	(0.406)	(0.422)	(0.929)	(0.548)
HS Degree Only	-1.334**	-0.381	-0.839*	0.0684	-0.0989
	(0.589)	(0.341)	(0.436)	(0.800)	(0.387)
Frac. of Lower Rep.	0.0647	-0.0972**	-0.120**	-0.0370	-0.0813**
	(0.0644)	(0.0372)	(0.0564)	(0.0705)	(0.0369)
Maximum Temperature	0.00246	0.00275*	0.00105	0.00576**	0.00255
	(0.00286)	(0.00144)	(0.00128)	(0.00215)	(0.00218)
Monthly Precipitation	0.0160	0.000222	-0.00573	0.000333	0.00470
	(0.0111)	(0.00499)	(0.00515)	(0.00966)	(0.00607)
Constant	-10.04***	-7.409***	-8.262***	-10.16***	-7.967***
	(1.818)	(0.605)	(0.866)	(1.797)	(0.869)
N	1350	943	943	943	943
r2	0.855	0.970	0.958	0.945	0.961

Robust standard errors are clustered at the state level.

Independent variable of interest in the unemployment rate.

For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 26: Private Sector Results: Model 2

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
priv_recession	-0.142**	-0.195***	-0.204***	-0.281***	-0.162***
	(0.0654)	(0.0301)	(0.0439)	(0.0599)	(0.0328)
priv_expansion	-0.140**	-0.189***	-0.200***	-0.271***	-0.157***
	(0.0640)	(0.0293)	(0.0427)	(0.0586)	(0.0318)
Fraction Construction	-1.691	-0.439	0.379	0.203	-1.140
	(1.683)	(0.755)	(1.032)	(1.381)	(0.938)
Fraction Manufacturing	-1.502	-0.929*	-1.222*	1.325	-1.008
	(1.334)	(0.527)	(0.609)	(1.129)	(0.720)
Fraction Transportation/Warehouse	-3.024	-2.546**	-1.861	-0.313	-3.366***
	(1.897)	(1.012)	(1.144)	(1.828)	(1.232)
Fraction Wholesale	-3.109	-2.164**	-3.132**	0.0177	-2.068
	(2.869)	(0.976)	(1.197)	(2.051)	(1.297)
Fraction Retail	-0.979	-2.060***	-0.516	-1.671	-3.185***
	(1.434)	(0.628)	(0.642)	(1.415)	(0.836)
Fraction Services	-0.596	-1.051**	-0.314	-0.271	-1.637**
	(1.149)	(0.496)	(0.541)	(0.921)	(0.696)
Inspection Rate	-0.225	-0.319	-0.330	-1.655	0.217
	(1.408)	(0.408)	(0.521)	(1.037)	(0.409)
Age 25-34	-0.727	-2.147***	-2.123***	-2.636***	-2.380***
	(0.852)	(0.423)	(0.548)	(0.884)	(0.565)
Age 35-44	-2.406*	-2.351***	-1.999***	-3.030**	-2.839***
	(1.248)	(0.447)	(0.684)	(1.200)	(0.551)
Age 45-54	0.369	-2.547***	-2.019**	-5.138***	-2.699***
	(1.269)	(0.506)	(0.795)	(1.194)	(0.594)
Age 55-64	0.112	-0.844	-0.107	-1.986*	-0.897
	(1.415)	(0.506)	(0.790)	(1.168)	(0.722)
Male	1.238	0.720	0.0327	2.803***	0.704
	(1.272)	(0.441)	(0.593)	(0.926)	(0.684)
White	0.581	-0.618**	-1.054***	-1.219	-0.0964
	(0.797)	(0.294)	(0.369)	(0.900)	(0.420)
Black	1.467	0.0705	-0.246	-0.842	0.570
	(1.267)	(0.483)	(0.842)	(1.291)	(0.668)
Asian	-0.638	0.316*	-0.0329	0.912*	0.332
	(0.790)	(0.187)	(0.267)	(0.521)	(0.334)
Single	0.209	-0.746*	-0.717*	-1.388	-0.793
	(0.878)	(0.390)	(0.425)	(0.915)	(0.530)
HS Degree Only	-1.446**	-0.337	-0.801*	0.124	-0.0561
	(0.583)	(0.340)	(0.442)	(0.814)	(0.381)
Frac. of Lower Rep.	0.0450	-0.0991***	-0.122**	-0.0405	-0.0829**
	(0.0546)	(0.0360)	(0.0557)	(0.0703)	(0.0358)
Maximum Temperature	0.00223	0.00282**	0.00105	0.00597***	0.00259
	(0.00280)	(0.00140)	(0.00129)	(0.00214)	(0.00212)
Monthly Precipitation	0.0183	0.0000562	-0.00600	0.000472	0.00445
	(0.0112)	(0.00487)	(0.00516)	(0.00962)	(0.00594)
Constant	-9.041***	-7.245***	-8.099***	-10.24***	-7.731***
	(1.731)	(0.588)	(0.854)	(1.736)	(0.852)
N	1350	943	943	943	943
r2	0.859	0.971	0.959	0.946	0.961
F_diff	0.283	7.037	2.767	7.052	2.028
p_diff	0.597	0.0111	0.104	0.0111	0.162

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 2. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 27: Private Sector Results: Model 4

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
priv_recession	-0.212**	-0.0993***	-0.142***	-0.0527	-0.0664
	(0.0852)	(0.0364)	(0.0506)	(0.0635)	(0.0459)
priv_expansion	-0.222***	-0.0982***	-0.145***	-0.0455	-0.0647
	(0.0807)	(0.0353)	(0.0511)	(0.0631)	(0.0450)
Fraction Construction	1.233	-0.271	0.695	-0.329	-0.777
	(1.949)	(0.575)	(1.014)	(0.940)	(0.744)
Fraction Manufacturing	0.921	-0.557	-1.019	0.449	-0.135
	(1.630)	(0.546)	(1.033)	(0.929)	(0.690)
Fraction Transportation/Warehouse	-3.481	-0.874	-0.459	0.819	-1.628
	(2.757)	(1.095)	(1.388)	(1.402)	(1.309)
Fraction Wholesale	2.627	-0.877	-1.848	1.203	-0.813
	(3.925)	(0.879)	(1.349)	(2.312)	(1.194)
Fraction Retail	0.699	-0.854*	0.0137	-0.654	-1.442**
	(1.760)	(0.460)	(0.657)	(1.126)	(0.654)
Fraction Services	0.520	-0.652	-0.311	0.223	-1.116**
	(1.345)	(0.410)	(0.519)	(0.592)	(0.513)
Inspection Rate	-1.578***	-0.0892	-0.191	-0.730	0.418
	(0.579)	(0.221)	(0.376)	(0.551)	(0.300)
Age 25-34	-1.429	-0.966**	-0.299	-1.925**	-1.390**
	(1.429)	(0.460)	(0.656)	(0.745)	(0.649)
Age 35-44	-3.132**	-0.643	0.196	-1.940	-1.033
	(1.404)	(0.568)	(0.924)	(1.162)	(0.672)
Age 45-54	-1.609	-1.595**	-0.548	-3.872***	-1.745**
	(1.883)	(0.629)	(0.682)	(0.885)	(0.775)
Age 55-64	-0.0982	-1.628**	-0.839	-3.683***	-1.696*
	(2.248)	(0.619)	(0.737)	(0.848)	(0.943)
Male	3.388	0.337	0.248	1.664	0.257
	(2.132)	(0.466)	(0.674)	(1.060)	(0.698)
White	-0.870	-0.194	-0.684	0.474	0.0250
	(1.064)	(0.332)	(0.453)	(0.599)	(0.539)
Black	1.205	-0.506	-0.456	-0.656	-0.627
	(1.653)	(0.578)	(0.912)	(1.036)	(0.846)
Asian	-2.008	0.887*	0.713	2.194***	0.389
	(1.705)	(0.499)	(0.650)	(0.808)	(0.976)
Single	-0.0934	-0.221	0.0245	-0.985	-0.309
	(1.171)	(0.422)	(0.426)	(0.645)	(0.550)
HS Degree Only	-0.755	-0.416	-0.676*	-0.913*	-0.0184
	(0.771)	(0.261)	(0.350)	(0.526)	(0.330)
Frac. of Lower Rep.	-0.0379	-0.0787*	-0.0953	0.0148	-0.0738*
	(0.0786)	(0.0430)	(0.0633)	(0.0614)	(0.0420)
Maximum Temperature	-0.00183	0.00287**	-0.00112	0.00756***	0.00366**
	(0.00501)	(0.00124)	(0.00190)	(0.00267)	(0.00158)
Monthly Precipitation	-0.00658	-0.00533	-0.0168**	0.00849	-0.00192
	(0.0161)	(0.00635)	(0.00818)	(0.0124)	(0.00754)
Constant	-10.35***	-8.972***	-10.43***	-10.82***	-9.512***
	(2.855)	(0.568)	(0.742)	(1.220)	(0.659)
N	700	577	577	577	577
r2	0.861	0.958	0.947	0.961	0.947
F_diff	1.007	0.0931	0.267	1.189	0.136
p_diff	0.321	0.762	0.608	0.282	0.714

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 4. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 28: Public Sector Results: Model 1

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
Unemployment	-0.0205	-0.0114	-0.0139*	0.000391	-0.0104
	(0.0550)	(0.00699)	(0.00714)	(0.00880)	(0.00923)
Inspection Rate	2.495	-0.771	-0.820	-0.395	-0.778
	(4.543)	(0.810)	(0.797)	(1.756)	(1.119)
Age 25-34	-1.882	-0.577	-0.603*	-0.241	-0.544
	(2.288)	(0.518)	(0.353)	(0.678)	(0.633)
Age 35-44	2.992	-0.586	-0.377	0.0939	-0.655
	(1.980)	(0.494)	(0.318)	(0.751)	(0.627)
Age 45-54	1.083	-0.718	-0.369	0.670	-0.873
	(2.832)	(0.481)	(0.323)	(0.780)	(0.602)
Age 55-64	3.434	-0.337	-0.0622	0.489	-0.504
	(3.506)	(0.622)	(0.453)	(0.909)	(0.753)
Male	0.594	0.0919	-0.159	0.211	0.189
	(1.896)	(0.220)	(0.205)	(0.399)	(0.281)
White	3.888*	0.684*	0.480	0.906	0.884*
	(2.125)	(0.360)	(0.323)	(0.650)	(0.486)
Black	3.811	0.441	0.0760	0.118	0.733
	(2.316)	(0.392)	(0.429)	(0.786)	(0.501)
Asian	0.822	0.262	-0.990***	0.457	1.236
	(1.613)	(0.469)	(0.317)	(0.844)	(0.737)
Single	0.748	-0.464*	-0.302	0.0300	-0.594**
	(1.824)	(0.257)	(0.291)	(0.506)	(0.288)
HS Degree Only	0.0559	-0.0116	-0.1000	0.272	0.0965
	(1.737)	(0.171)	(0.222)	(0.382)	(0.226)
Frac. of Lower Rep.	1.193**	0.00459	-0.0775	0.146	0.00203
	(0.466)	(0.0905)	(0.0929)	(0.172)	(0.100)
Maximum Temperature	0.0232	0.000175	0.00207	-0.00318	-0.0000100
	(0.0280)	(0.00344)	(0.00306)	(0.00720)	(0.00475)
Monthly Precipitation	0.0321	0.0101	-0.0144	0.0410	0.0153
	(0.0974)	(0.0198)	(0.0179)	(0.0293)	(0.0248)
Constant	-16.93***	-9.285***	-10.32***	-13.11***	-9.971***
	(3.988)	(0.648)	(0.559)	(0.863)	(0.863)
N	1350	762	762	744	762
r2	0.329	0.842	0.880	0.845	0.788

Robust standard errors are clustered at the state level.

Independent variable of interest in the unemployment rate.

For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 29: Public Sector Results: Model 2

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
pub_recession	-0.0464	-0.00831	-0.0130	-0.00761	-0.00636
	(0.0561)	(0.00856)	(0.00854)	(0.0148)	(0.0121)
pub_expansion	-0.0262	-0.0104	-0.0136*	-0.00208	-0.00916
	(0.0530)	(0.00699)	(0.00729)	(0.0101)	(0.00939)
Inspection Rate	2.609	-0.795	-0.827	-0.324	-0.810
	(4.590)	(0.831)	(0.804)	(1.746)	(1.147)
Age 25-34	-1.761	-0.585	-0.605*	-0.220	-0.554
	(2.329)	(0.524)	(0.352)	(0.684)	(0.641)
Age 35-44	3.056	-0.594	-0.380	0.118	-0.666
	(2.013)	(0.498)	(0.314)	(0.755)	(0.633)
Age 45-54	1.223	-0.731	-0.372	0.706	-0.890
	(2.882)	(0.488)	(0.322)	(0.794)	(0.613)
Age 55-64	3.514	-0.343	-0.0639	0.509	-0.512
	(3.539)	(0.624)	(0.450)	(0.907)	(0.758)
Male	0.587	0.0942	-0.158	0.204	0.192
	(1.889)	(0.220)	(0.205)	(0.403)	(0.283)
White	3.900*	0.686*	0.481	0.902	0.885*
	(2.135)	(0.360)	(0.323)	(0.651)	(0.486)
Black	3.808	0.443	0.0766	0.111	0.736
	(2.326)	(0.392)	(0.430)	(0.786)	(0.502)
Asian	0.877	0.256	-0.992***	0.468	1.227
	(1.609)	(0.462)	(0.314)	(0.849)	(0.730)
Single	0.763	-0.465*	-0.302	0.0306	-0.595**
	(1.829)	(0.258)	(0.292)	(0.502)	(0.289)
HS Degree Only	0.0636	-0.0110	-0.0998	0.271	0.0973
	(1.748)	(0.171)	(0.223)	(0.382)	(0.227)
Frac. of Lower Rep.	1.184**	0.00578	-0.0772	0.144	0.00363
	(0.460)	(0.0901)	(0.0928)	(0.173)	(0.0999)
Maximum Temperature	0.0227	0.000243	0.00209	-0.00339	0.0000805
	(0.0281)	(0.00342)	(0.00308)	(0.00723)	(0.00473)
Monthly Precipitation	0.0308	0.0105	-0.0143	0.0402	0.0158
	(0.0971)	(0.0195)	(0.0179)	(0.0290)	(0.0243)
Constant	-17.09***	-9.279***	-10.32***	-13.13***	-9.963***
	(4.021)	(0.648)	(0.556)	(0.866)	(0.865)
N	1350	762	762	744	762
r2	0.330	0.842	0.880	0.845	0.789
F_diff	0.436	0.257	0.0304	0.640	0.208
p_diff	0.512	0.615	0.862	0.428	0.651

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 2. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 30: Public Sector Results: Model 4

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
GDP Decrease for 2 quarters	0.171	-0.0145	-0.0164	-0.0226	-0.0133
	(0.150)	(0.0101)	(0.0154)	(0.0220)	(0.00966)
Not Recession	0.0829	-0.0134	-0.0203*	-0.000509	-0.0105
	(0.118)	(0.00896)	(0.0114)	(0.0115)	(0.0101)
Inspection Rate	7.381	-0.924**	-1.034	-1.754*	-0.518
	(4.461)	(0.443)	(0.656)	(0.898)	(0.554)
Age 25-34	-1.287	-1.011	-0.690	-0.759	-1.216
	(2.901)	(0.747)	(0.521)	(0.739)	(0.897)
Age 35-44	2.418	-0.936	-0.269	-0.0888	-1.298
	(3.275)	(0.713)	(0.478)	(1.002)	(0.872)
Age 45-54	0.424	-0.988	-0.325	0.641	-1.364
	(4.183)	(0.688)	(0.456)	(1.030)	(0.855)
Age 55-64	5.447	-0.701	-0.141	0.441	-1.113
	(4.636)	(0.873)	(0.633)	(1.175)	(1.047)
Male	0.351	0.0123	-0.151	0.220	0.0548
	(2.425)	(0.240)	(0.277)	(0.402)	(0.307)
White	6.047	-0.144	0.0578	0.109	-0.458
	(4.550)	(0.343)	(0.332)	(0.703)	(0.576)
Black	6.416	-0.122	-0.363	-0.350	-0.237
	(4.568)	(0.465)	(0.540)	(1.047)	(0.656)
Asian	0.196	-1.019	-1.254	-0.545	-1.233*
	(5.509)	(0.637)	(1.005)	(1.212)	(0.698)
Single	-0.0619	-0.289	-0.118	0.406	-0.455*
	(3.215)	(0.218)	(0.311)	(0.521)	(0.248)
HS Degree Only	0.433	-0.104	-0.0910	0.133	-0.0535
	(2.077)	(0.207)	(0.276)	(0.448)	(0.240)
Frac. of Lower Rep.	1.588**	0.0211	-0.136	0.259	0.0579
	(0.702)	(0.107)	(0.0947)	(0.163)	(0.122)
Maximum Temperature	0.00428	0.000587	0.00398	0.00406	-0.000938
	(0.0458)	(0.00471)	(0.00482)	(0.00797)	(0.00621)
Monthly Precipitation	0.0476	0.0102	-0.0161	0.0684*	0.0157
	(0.171)	(0.0267)	(0.0248)	(0.0359)	(0.0337)
Constant	-18.93***	-8.399***	-10.42***	-12.60***	-8.240***
	(6.175)	(1.017)	(0.843)	(1.072)	(1.345)
N	700	529	529	517	529
r2	0.374	0.804	0.851	0.852	0.769
F_diff	1.298	0.0369	0.234	1.886	0.203
p_diff	0.260	0.849	0.631	0.177	0.654

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 4. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 31: Construction Industry Results: Model 1

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
Unemployment	-0.623**	-0.103***	-0.0814	-0.129	-0.0973**
	(0.240)	(0.0337)	(0.0512)	(0.125)	(0.0389)
Inspection Rate	14.10	-0.761	-0.604	-0.291	-0.0539
	(10.11)	(0.926)	(1.152)	(3.264)	(0.915)
Age 25-34	-5.335**	-0.193	-0.700	-1.592	0.144
	(2.553)	(0.371)	(0.454)	(1.127)	(0.447)
Age 35-44	-6.201**	-0.336	-0.245	-2.372	-0.404
	(2.520)	(0.326)	(0.417)	(1.420)	(0.389)
Age 45-54	-6.822**	-1.042**	-1.161**	-3.221**	-1.129**
	(3.134)	(0.402)	(0.497)	(1.374)	(0.500)
Age 55-64	-4.921	0.255	0.101	2.061	0.442
	(4.062)	(0.484)	(0.530)	(2.441)	(0.628)
Male	1.521	0.559	0.138	4.224	0.919**
	(3.276)	(0.363)	(0.473)	(3.436)	(0.412)
White	2.188	-0.140	-0.0159	-1.997	-0.514
	(4.082)	(0.418)	(0.558)	(1.262)	(0.576)
Black	4.367	1.581***	1.182	2.361*	1.477**
	(5.101)	(0.584)	(0.797)	(1.320)	(0.699)
Asian	-3.670*	-0.111	-0.236	-1.176	-0.262
	(2.135)	(0.286)	(0.286)	(0.754)	(0.521)
Single	0.616	0.00469	0.0680	-0.382	0.104
	(2.176)	(0.351)	(0.425)	(1.015)	(0.422)
HS Degree Only	2.372	-0.0694	0.229	0.211	-0.0786
	(2.261)	(0.239)	(0.282)	(1.191)	(0.283)
Frac. of Lower Rep.	0.940	-0.00739	-0.0732	-0.0656	0.00862
	(0.631)	(0.0743)	(0.148)	(0.191)	(0.0695)
Maximum Temperature	0.0700	0.00569	0.00272	-0.0300	0.00905**
	(0.0445)	(0.00357)	(0.00546)	(0.0383)	(0.00438)
Monthly Precipitation	0.224	0.00237	-0.00842	-0.0308	0.0152
	(0.149)	(0.0133)	(0.0165)	(0.0611)	(0.0211)
Constant	-18.88**	-10.93***	-11.36***	-10.53*	-11.96***
	(7.470)	(0.783)	(0.931)	(5.539)	(1.013)
N	1350	941	941	941	941
r2	0.433	0.888	0.824	0.410	0.866

Robust standard errors are clustered at the state level.

Independent variable of interest in the unemployment rate.

For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 32: Construction Industry Results: Model 2

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
con_recession	-0.768**	-0.158***	-0.137**	-0.156	-0.143***
	(0.334)	(0.0399)	(0.0577)	(0.122)	(0.0468)
con_expansion	-0.701**	-0.135***	-0.114**	-0.145	-0.124***
	(0.282)	(0.0358)	(0.0536)	(0.119)	(0.0417)
Inspection Rate	14.03	-0.829	-0.672	-0.324	-0.110
	(10.11)	(0.956)	(1.185)	(3.245)	(0.923)
Age 25-34	-5.193**	-0.152	-0.659	-1.572	0.179
	(2.529)	(0.376)	(0.461)	(1.125)	(0.450)
Age 35-44	-6.130**	-0.320	-0.229	-2.364	-0.391
	(2.531)	(0.319)	(0.415)	(1.420)	(0.379)
Age 45-54	-6.679**	-0.973**	-1.092**	-3.187**	-1.071**
	(3.121)	(0.393)	(0.490)	(1.376)	(0.494)
Age 55-64	-4.786	0.351	0.197	2.108	0.521
	(4.069)	(0.472)	(0.518)	(2.399)	(0.621)
Male	1.531	0.561	0.140	4.225	0.921**
	(3.272)	(0.380)	(0.488)	(3.436)	(0.426)
White	2.185	-0.120	0.00474	-1.987	-0.497
	(4.097)	(0.419)	(0.563)	(1.280)	(0.576)
Black	4.144	1.538**	1.139	2.340*	1.441**
	(5.179)	(0.579)	(0.796)	(1.313)	(0.696)
Asian	-3.501*	-0.0266	-0.151	-1.135	-0.192
	(2.067)	(0.293)	(0.288)	(0.717)	(0.531)
Single	0.508	-0.0222	0.0410	-0.395	0.0818
	(2.139)	(0.340)	(0.417)	(1.021)	(0.415)
HS Degree Only	2.437	-0.0487	0.250	0.221	-0.0616
	(2.290)	(0.242)	(0.284)	(1.181)	(0.285)
Frac. of Lower Rep.	0.937	-0.0115	-0.0774	-0.0676	0.00521
	(0.637)	(0.0736)	(0.148)	(0.192)	(0.0674)
Maximum Temperature	0.0706	0.00562	0.00265	-0.0300	0.00899**
	(0.0444)	(0.00360)	(0.00535)	(0.0384)	(0.00444)
Monthly Precipitation	0.219	0.00243	-0.00836	-0.0308	0.0152
	(0.149)	(0.0126)	(0.0159)	(0.0611)	(0.0207)
Constant	-19.28**	-11.07***	-11.50***	-10.60*	-12.07***
	(7.389)	(0.803)	(0.934)	(5.637)	(1.031)
N	1350	941	941	941	941
r2	0.434	0.890	0.826	0.410	0.867
F_diff	0.754	11.26	8.157	0.167	4.303
p_diff	0.389	0.00166	0.00658	0.685	0.0441

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 2. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 33: Construction Industry Results: Model 4

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
GDP Decrease for 2 quarters	-0.985**	-0.0823*	-0.0912	0.0732	-0.0467
	(0.413)	(0.0434)	(0.0728)	(0.139)	(0.0570)
Not Recession	-1.077**	-0.0869**	-0.0935	-0.0166	-0.0465
	(0.423)	(0.0423)	(0.0747)	(0.132)	(0.0554)
Inspection Rate	4.494	-0.301	0.240	-1.125	0.0621
	(8.324)	(0.870)	(1.090)	(1.591)	(0.935)
Age 25-34	-5.495	-0.167	-0.502	1.215	0.0422
	(4.539)	(0.507)	(0.628)	(1.599)	(0.625)
Age 35-44	-9.831**	-0.0454	0.388	0.893	-0.419
	(3.979)	(0.380)	(0.582)	(1.914)	(0.492)
Age 45-54	-11.76**	-0.662	-0.567	0.286	-1.125
	(5.082)	(0.508)	(0.634)	(2.095)	(0.717)
Age 55-64	-9.067	-0.177	-0.156	4.157	-0.561
	(7.135)	(0.702)	(0.783)	(3.825)	(0.942)
Male	-0.0839	0.337	0.145	-0.394	0.824
	(5.445)	(0.566)	(0.689)	(2.692)	(0.702)
White	3.975	0.486	1.117	1.484	-0.818
	(6.888)	(0.509)	(0.856)	(1.099)	(0.741)
Black	3.036	0.717	1.167	2.215	-0.646
	(6.985)	(0.916)	(1.254)	(1.766)	(1.272)
Asian	14.06	0.186	0.540	4.048**	-1.303
	(10.15)	(0.694)	(0.845)	(1.816)	(1.252)
Single	0.200	0.00590	0.180	0.810	-0.206
	(3.233)	(0.436)	(0.554)	(1.457)	(0.575)
HS Degree Only	3.396	-0.171	0.304	-0.104	-0.248
	(2.933)	(0.410)	(0.517)	(1.345)	(0.447)
Frac. of Lower Rep.	0.511	-0.0660	-0.0984	-0.129	-0.0895
	(0.460)	(0.0689)	(0.167)	(0.109)	(0.0908)
Maximum Temperature	0.0373	0.00610	0.00250	-0.0192	0.0108*
	(0.0845)	(0.00434)	(0.00715)	(0.0362)	(0.00565)
Monthly Precipitation	-0.100	-0.0150	-0.0309	-0.0478	-0.000261
	(0.192)	(0.0186)	(0.0255)	(0.0726)	(0.0295)
Constant	-13.91	-11.66***	-13.14***	-12.59***	-11.66***
	(10.49)	(1.093)	(1.324)	(3.889)	(1.398)
N	700	577	577	577	577
r2	0.461	0.848	0.735	0.459	0.820
F_diff	1.119	0.280	0.0409	1.937	0.000227
p_diff	0.295	0.599	0.841	0.171	0.988

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 4. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 34: Manufacturing Industry Results: Model 1

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
Unemployment	-0.166	-0.0344	-0.0189	-0.171**	-0.0362
	(0.317)	(0.0367)	(0.0546)	(0.0821)	(0.0353)
Inspection Rate	8.842	0.730	0.431	4.408	1.267
	(14.46)	(1.107)	(1.000)	(3.514)	(1.144)
Age 25-34	5.955	-1.054***	-1.110*	-2.166*	-1.038***
	(5.252)	(0.372)	(0.562)	(1.112)	(0.372)
Age 35-44	6.681	-1.326***	-1.453***	-3.195*	-1.391***
	(5.640)	(0.401)	(0.510)	(1.707)	(0.441)
Age 45-54	2.634	-1.568***	-1.708*	-4.988**	-1.467***
	(4.392)	(0.398)	(0.868)	(2.267)	(0.444)
Age 55-64	3.581	-0.0748	0.310	-0.412	-0.0478
	(6.969)	(0.392)	(0.570)	(1.037)	(0.371)
Male	2.081	0.217	0.350	1.214	0.440*
	(3.940)	(0.218)	(0.387)	(0.996)	(0.225)
White	4.606	-1.414***	-1.681**	0.190	-1.237***
	(5.439)	(0.514)	(0.708)	(0.974)	(0.366)
Black	5.485	-1.144**	-1.672**	0.778	-0.828*
	(6.782)	(0.516)	(0.743)	(1.433)	(0.489)
Asian	-5.711	-1.125**	-1.059	0.966	-1.101***
	(5.180)	(0.505)	(0.777)	(1.606)	(0.355)
Single	-0.310	-0.427*	-0.161	-1.031	-0.712***
	(4.788)	(0.236)	(0.387)	(0.992)	(0.255)
HS Degree Only	-1.384	0.224	0.286	0.142	0.397
	(3.402)	(0.260)	(0.334)	(0.644)	(0.330)
Frac. of Lower Rep.	-0.582	-0.0250	-0.0233	0.114	-0.0227
	(0.653)	(0.0903)	(0.114)	(0.101)	(0.0722)
Maximum Temperature	0.0137	0.00329	0.0000440	-0.00384	0.00485**
	(0.0379)	(0.00280)	(0.00610)	(0.00710)	(0.00221)
Monthly Precipitation	0.0427	-0.00364	-0.0143	-0.0197	0.00132
	(0.148)	(0.00953)	(0.0168)	(0.0261)	(0.00947)
Constant	-20.05*	-7.405***	-8.375***	-9.224***	-8.632***
	(10.22)	(0.721)	(1.090)	(1.559)	(0.667)
N	1350	942	942	942	942
r2	0.508	0.925	0.803	0.647	0.943

Robust standard errors are clustered at the state level.

Independent variable of interest in the unemployment rate.

For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 35: Manufacturing Industry Results: Model 2

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
man_recession	-0.226	-0.0631	-0.0757	-0.179*	-0.0552
	(0.380)	(0.0475)	(0.0879)	(0.103)	(0.0424)
man_expansion	-0.205	-0.0533	-0.0563	-0.176*	-0.0487
	(0.349)	(0.0432)	(0.0760)	(0.0934)	(0.0394)
Inspection Rate	9.119	0.939	0.843	4.468	1.405
	(14.13)	(1.142)	(1.149)	(3.409)	(1.174)
Age 25-34	5.955	-1.043***	-1.088*	-2.163*	-1.030***
	(5.261)	(0.364)	(0.544)	(1.111)	(0.366)
Age 35-44	6.687	-1.318***	-1.435***	-3.193*	-1.385***
	(5.644)	(0.407)	(0.531)	(1.716)	(0.443)
Age 45-54	2.620	-1.568***	-1.708*	-4.988**	-1.467***
	(4.391)	(0.398)	(0.875)	(2.267)	(0.444)
Age 55-64	3.640	-0.0450	0.369	-0.404	-0.0281
	(6.998)	(0.403)	(0.586)	(1.051)	(0.374)
Male	2.114	0.246	0.406	1.222	0.458*
	(3.978)	(0.219)	(0.387)	(0.987)	(0.232)
White	4.699	-1.342**	-1.540**	0.210	-1.189***
	(5.475)	(0.531)	(0.739)	(0.964)	(0.386)
Black	5.587	-1.065**	-1.516**	0.801	-0.775
	(6.809)	(0.526)	(0.751)	(1.428)	(0.502)
Asian	-5.617	-1.066**	-0.943	0.982	-1.063***
	(5.273)	(0.523)	(0.813)	(1.624)	(0.380)
Single	-0.390	-0.469*	-0.242	-1.042	-0.739***
	(4.779)	(0.240)	(0.421)	(0.994)	(0.259)
HS Degree Only	-1.382	0.239	0.315	0.147	0.407
	(3.399)	(0.265)	(0.345)	(0.662)	(0.333)
Frac. of Lower Rep.	-0.577	-0.0254	-0.0241	0.114	-0.0229
	(0.654)	(0.0894)	(0.113)	(0.101)	(0.0717)
Maximum Temperature	0.0137	0.00325	-0.0000424	-0.00385	0.00482**
	(0.0380)	(0.00281)	(0.00617)	(0.00714)	(0.00218)
Monthly Precipitation	0.0409	-0.00454	-0.0161	-0.0200	0.000726
	(0.148)	(0.00975)	(0.0174)	(0.0268)	(0.00954)
Constant	-20.31*	-7.571***	-8.702***	-9.272***	-8.742***
	(10.39)	(0.758)	(1.071)	(1.616)	(0.711)
N	1350	942	942	942	942
r2	0.509	0.926	0.804	0.647	0.943
F_diff	0.114	3.054	2.340	0.0273	1.698
p_diff	0.737	0.0877	0.133	0.870	0.199

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 2. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 36: Manufacturing Industry Results: Model 4

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
GDP Decrease for 2 quarters	-0.318	-0.0324	-0.0645	-0.175*	-0.0335
	(0.413)	(0.0504)	(0.118)	(0.0988)	(0.0377)
Not Recession	-0.309	-0.0332	-0.0681	-0.215*	-0.0333
	(0.420)	(0.0503)	(0.120)	(0.107)	(0.0379)
Inspection Rate	6.451	1.231	0.531	6.531*	1.745*
	(6.868)	(1.076)	(1.132)	(3.358)	(1.015)
Age 25-34	2.954	-0.502	-0.586	-2.519	-0.697
	(6.936)	(0.496)	(0.878)	(1.888)	(0.554)
Age 35-44	3.025	-0.688	-0.576	-3.911	-1.054
	(6.640)	(0.544)	(0.581)	(3.079)	(0.640)
Age 45-54	-0.928	-1.268***	-1.369	-6.064	-1.519***
	(7.632)	(0.444)	(0.845)	(3.608)	(0.540)
Age 55-64	3.710	-0.116	0.715	0.142	-0.397
	(9.390)	(0.480)	(0.855)	(1.388)	(0.393)
Male	-1.507	0.446	0.950*	2.339	0.533
	(4.867)	(0.278)	(0.515)	(1.667)	(0.360)
White	20.47*	-0.0799	-1.217**	0.972	-0.378
	(10.81)	(0.517)	(0.480)	(1.403)	(0.389)
Black	28.20**	0.320	-1.042	1.370	0.0604
	(10.63)	(0.676)	(0.950)	(2.421)	(0.728)
Asian	16.28	0.880	-0.445	2.974	0.386
	(13.53)	(0.633)	(0.537)	(2.378)	(0.491)
Single	-7.272	-0.483	-0.458	-1.304	-0.653*
	(5.616)	(0.317)	(0.470)	(1.438)	(0.351)
HS Degree Only	2.135	0.154	0.500	0.395	0.269
	(4.499)	(0.316)	(0.605)	(0.895)	(0.373)
Frac. of Lower Rep.	-0.490	-0.0425	-0.100	0.136	-0.0587
	(1.112)	(0.0929)	(0.109)	(0.109)	(0.0724)
Maximum Temperature	0.0995*	0.00394	-0.00110	-0.00423	0.00594*
	(0.0549)	(0.00408)	(0.00770)	(0.0112)	(0.00351)
Monthly Precipitation	0.127	-0.00499	-0.00823	-0.0113	-0.000983
	(0.228)	(0.0147)	(0.0277)	(0.0412)	(0.0134)
Constant	-44.07**	-9.825***	-10.45***	-10.64***	-10.38***
	(18.87)	(0.779)	(0.725)	(2.639)	(0.725)
N	700	577	577	577	577
r2	0.544	0.885	0.711	0.550	0.917
F_diff	0.0188	0.0449	0.212	1.876	0.00326
p_diff	0.892	0.833	0.648	0.178	0.955

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 4. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 37: Wholesale Trade Industry Results: Model 1

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
Unemployment	-0.0242	0.00549	0.0116**	0.0311	-0.000728
	(0.0971)	(0.00408)	(0.00560)	(0.0434)	(0.00861)
Inspection Rate	-18.21	-1.928*	-1.809*	-18.78**	1.155
	(15.43)	(1.002)	(0.932)	(6.989)	(2.646)
Age 25-34	-3.179	0.280	0.685**	0.209	0.223
	(4.339)	(0.240)	(0.315)	(1.241)	(0.444)
Age 35-44	-3.974	-0.191	0.112	-0.679	-0.0599
	(4.130)	(0.247)	(0.333)	(0.734)	(0.391)
Age 45-54	-2.971	0.350	0.524	-0.0978	0.579
	(4.229)	(0.218)	(0.338)	(0.480)	(0.507)
Age 55-64	-3.583	0.525**	1.020**	-0.957	0.751*
	(3.766)	(0.250)	(0.460)	(1.123)	(0.373)
Male	-5.007**	-0.284	-0.143	-0.991	-0.773
	(2.160)	(0.189)	(0.262)	(0.838)	(0.516)
White	-3.124	0.533	0.381	6.021*	0.716
	(4.599)	(0.396)	(0.629)	(3.090)	(0.782)
Black	-4.205	0.308	0.120	5.409*	-0.320
	(3.900)	(0.478)	(0.626)	(2.696)	(0.837)
Asian	0.224	0.231	-0.0167	4.353	-0.490
	(5.626)	(0.277)	(0.369)	(2.772)	(1.638)
Single	1.202	0.217	0.361	-0.499	0.591
	(2.881)	(0.204)	(0.289)	(1.399)	(0.511)
HS Degree Only	4.344*	0.00355	-0.0652	1.017	0.620
	(2.241)	(0.156)	(0.237)	(0.948)	(0.621)
Frac. of Lower Rep.	-0.0106	-0.0784	-0.0768	-0.149	-0.00157
	(0.637)	(0.0638)	(0.0898)	(0.153)	(0.0452)
Maximum Temperature	-0.0364	0.00258	0.00139	-0.0351	-0.000399
	(0.0543)	(0.00296)	(0.00376)	(0.0270)	(0.00493)
Monthly Precipitation	0.00723	0.0284	0.0359*	-0.00157	0.0388
	(0.184)	(0.0177)	(0.0199)	(0.0687)	(0.0329)
Constant	-1.121	-10.11***	-11.37***	-13.25***	-10.95***
	(7.425)	(0.559)	(0.740)	(4.205)	(1.071)
N	1349	933	933	933	933
r2	0.503	0.697	0.620	0.613	0.531

Robust standard errors are clustered at the state level.

Independent variable of interest in the unemployment rate.

For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 38: Wholesale Trade Industry Results: Model 2

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
whole_recession	-0.113	-0.00273	0.00148	0.0894	-0.0153
	(0.120)	(0.00730)	(0.00902)	(0.0535)	(0.0118)
whole_expansion	-0.0461	0.00367	0.00932	0.0440	-0.00396
	(0.0986)	(0.00435)	(0.00588)	(0.0435)	(0.00844)
Inspection Rate	-17.59	-1.885*	-1.756*	-19.09**	1.231
	(15.53)	(0.986)	(0.922)	(7.124)	(2.633)
Age 25-34	-3.104	0.283	0.689**	0.190	0.228
	(4.352)	(0.239)	(0.315)	(1.245)	(0.447)
Age 35-44	-3.925	-0.188	0.116	-0.702	-0.0541
	(4.143)	(0.247)	(0.332)	(0.739)	(0.389)
Age 45-54	-2.739	0.365	0.542	-0.202	0.605
	(4.252)	(0.219)	(0.335)	(0.492)	(0.501)
Age 55-64	-3.461	0.534**	1.030**	-1.015	0.765**
	(3.776)	(0.249)	(0.456)	(1.139)	(0.375)
Male	-4.961**	-0.283	-0.142	-0.998	-0.771
	(2.141)	(0.188)	(0.261)	(0.841)	(0.515)
White	-3.200	0.520	0.366	6.108*	0.694
	(4.604)	(0.395)	(0.628)	(3.105)	(0.784)
Black	-4.189	0.310	0.122	5.399*	-0.318
	(3.899)	(0.476)	(0.623)	(2.687)	(0.836)
Asian	0.343	0.244	-0.000902	4.261	-0.467
	(5.610)	(0.275)	(0.369)	(2.711)	(1.634)
Single	1.283	0.217	0.360	-0.495	0.590
	(2.881)	(0.203)	(0.285)	(1.386)	(0.508)
HS Degree Only	4.343*	-0.0000479	-0.0696	1.042	0.614
	(2.238)	(0.156)	(0.236)	(0.958)	(0.620)
Frac. of Lower Rep.	-0.0194	-0.0778	-0.0761	-0.153	-0.000493
	(0.635)	(0.0640)	(0.0900)	(0.155)	(0.0453)
Maximum Temperature	-0.0354	0.00280	0.00166	-0.0367	-0.0000107
	(0.0544)	(0.00299)	(0.00372)	(0.0275)	(0.00499)
Monthly Precipitation	0.00934	0.0290	0.0366*	-0.00546	0.0398
	(0.186)	(0.0178)	(0.0198)	(0.0674)	(0.0330)
Constant	-1.583	-10.14***	-11.41***	-12.99***	-11.01***
	(7.363)	(0.565)	(0.739)	(4.161)	(1.084)
N	1349	933	933	933	933
r2	0.504	0.698	0.621	0.616	0.531
F_diff	1.663	2.039	2.360	2.915	2.126
p_diff	0.203	0.161	0.132	0.0950	0.152

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 2. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 39: Wholesale Trade Industry Results: Model 4

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
GDP Decrease for 2 quarters	-0.100	0.00387	0.00324	-0.0677	-0.0129
	(0.159)	(0.0127)	(0.0192)	(0.0945)	(0.0198)
Not Recession	-0.0101	0.00545	0.0115**	0.0278	-0.00264
	(0.0883)	(0.00442)	(0.00540)	(0.0438)	(0.00973)
Inspection Rate	-23.32	-3.363***	-3.018***	-24.49***	-0.118
	(15.32)	(0.492)	(1.014)	(3.662)	(2.728)
Age 25-34	0.157	0.164	0.656	1.251	-0.144
	(4.554)	(0.320)	(0.502)	(1.804)	(0.608)
Age 35-44	-1.189	-0.00656	0.534	-0.0407	-0.185
	(4.740)	(0.303)	(0.504)	(0.705)	(0.461)
Age 45-54	-1.465	0.496	0.887	0.0627	0.313
	(4.457)	(0.329)	(0.571)	(0.846)	(0.747)
Age 55-64	-1.132	0.538	1.078*	-0.551	0.433
	(4.468)	(0.331)	(0.625)	(1.018)	(0.513)
Male	-10.33***	0.0280	0.274	-1.194	-0.662
	(2.838)	(0.229)	(0.372)	(1.506)	(0.607)
White	1.458	0.173	0.304	3.721	-0.428
	(7.760)	(0.565)	(0.897)	(6.644)	(1.429)
Black	3.553	-0.0933	0.0976	2.184	-1.734
	(7.814)	(0.599)	(0.905)	(6.265)	(1.619)
Asian	7.108	-0.0531	-0.140	-2.700	-1.766
	(11.15)	(0.695)	(0.803)	(8.422)	(3.342)
Single	-0.902	0.307	0.556	-0.229	0.815
	(3.584)	(0.204)	(0.387)	(1.884)	(0.758)
HS Degree Only	6.332**	-0.0675	-0.368*	0.928	0.942
	(2.868)	(0.159)	(0.215)	(1.167)	(0.872)
Frac. of Lower Rep.	-0.488	-0.0944	-0.0285	-0.156	-0.0500
	(0.857)	(0.0608)	(0.0887)	(0.200)	(0.0665)
Maximum Temperature	-0.106	0.00146	0.00156	-0.0170	-0.00647
	(0.0845)	(0.00368)	(0.00566)	(0.0201)	(0.00773)
Monthly Precipitation	-0.162	0.0117	0.0191	0.114	0.0307
	(0.269)	(0.0184)	(0.0229)	(0.0701)	(0.0505)
Constant	1.545	-10.24***	-12.12***	-12.86	-9.825***
	(12.15)	(0.794)	(1.316)	(7.926)	(1.508)
N	699	571	571	571	571
r2	0.505	0.608	0.534	0.623	0.364
F_diff	0.563	0.0215	0.224	1.830	0.298
p_diff	0.457	0.884	0.638	0.183	0.588

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 4. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 40: Retail Trade Industry Results: Model 1

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
Unemployment	-0.623**	-0.103***	-0.0814	-0.129	-0.0973**
	(0.240)	(0.0337)	(0.0512)	(0.125)	(0.0389)
Inspection Rate	14.10	-0.761	-0.604	-0.291	-0.0539
	(10.11)	(0.926)	(1.152)	(3.264)	(0.915)
Age 25-34	-5.335**	-0.193	-0.700	-1.592	0.144
	(2.553)	(0.371)	(0.454)	(1.127)	(0.447)
Age 35-44	-6.201**	-0.336	-0.245	-2.372	-0.404
	(2.520)	(0.326)	(0.417)	(1.420)	(0.389)
Age 45-54	-6.822**	-1.042**	-1.161**	-3.221**	-1.129**
	(3.134)	(0.402)	(0.497)	(1.374)	(0.500)
Age 55-64	-4.921	0.255	0.101	2.061	0.442
	(4.062)	(0.484)	(0.530)	(2.441)	(0.628)
Male	1.521	0.559	0.138	4.224	0.919**
	(3.276)	(0.363)	(0.473)	(3.436)	(0.412)
White	2.188	-0.140	-0.0159	-1.997	-0.514
	(4.082)	(0.418)	(0.558)	(1.262)	(0.576)
Black	4.367	1.581***	1.182	2.361*	1.477**
	(5.101)	(0.584)	(0.797)	(1.320)	(0.699)
Asian	-3.670*	-0.111	-0.236	-1.176	-0.262
	(2.135)	(0.286)	(0.286)	(0.754)	(0.521)
Single	0.616	0.00469	0.0680	-0.382	0.104
	(2.176)	(0.351)	(0.425)	(1.015)	(0.422)
HS Degree Only	2.372	-0.0694	0.229	0.211	-0.0786
	(2.261)	(0.239)	(0.282)	(1.191)	(0.283)
Frac. of Lower Rep.	0.940	-0.00739	-0.0732	-0.0656	0.00862
	(0.631)	(0.0743)	(0.148)	(0.191)	(0.0695)
Maximum Temperature	0.0700	0.00569	0.00272	-0.0300	0.00905**
	(0.0445)	(0.00357)	(0.00546)	(0.0383)	(0.00438)
Monthly Precipitation	0.224	0.00237	-0.00842	-0.0308	0.0152
	(0.149)	(0.0133)	(0.0165)	(0.0611)	(0.0211)
Constant	-18.88**	-10.93***	-11.36***	-10.53*	-11.96***
	(7.470)	(0.783)	(0.931)	(5.539)	(1.013)
N	1350	941	941	941	941
r2	0.433	0.888	0.824	0.410	0.866

Robust standard errors are clustered at the state level.

Independent variable of interest in the unemployment rate.

For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 41: Retail Trade Industry Results: Model 2

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
con_recession	-0.768**	-0.158***	-0.137**	-0.156	-0.143***
	(0.334)	(0.0399)	(0.0577)	(0.122)	(0.0468)
con_expansion	-0.701**	-0.135***	-0.114**	-0.145	-0.124***
	(0.282)	(0.0358)	(0.0536)	(0.119)	(0.0417)
Inspection Rate	14.03	-0.829	-0.672	-0.324	-0.110
	(10.11)	(0.956)	(1.185)	(3.245)	(0.923)
Age 25-34	-5.193**	-0.152	-0.659	-1.572	0.179
	(2.529)	(0.376)	(0.461)	(1.125)	(0.450)
Age 35-44	-6.130**	-0.320	-0.229	-2.364	-0.391
	(2.531)	(0.319)	(0.415)	(1.420)	(0.379)
Age 45-54	-6.679**	-0.973**	-1.092**	-3.187**	-1.071**
	(3.121)	(0.393)	(0.490)	(1.376)	(0.494)
Age 55-64	-4.786	0.351	0.197	2.108	0.521
	(4.069)	(0.472)	(0.518)	(2.399)	(0.621)
Male	1.531	0.561	0.140	4.225	0.921**
	(3.272)	(0.380)	(0.488)	(3.436)	(0.426)
White	2.185	-0.120	0.00474	-1.987	-0.497
	(4.097)	(0.419)	(0.563)	(1.280)	(0.576)
Black	4.144	1.538**	1.139	2.340*	1.441**
	(5.179)	(0.579)	(0.796)	(1.313)	(0.696)
Asian	-3.501*	-0.0266	-0.151	-1.135	-0.192
	(2.067)	(0.293)	(0.288)	(0.717)	(0.531)
Single	0.508	-0.0222	0.0410	-0.395	0.0818
	(2.139)	(0.340)	(0.417)	(1.021)	(0.415)
HS Degree Only	2.437	-0.0487	0.250	0.221	-0.0616
	(2.290)	(0.242)	(0.284)	(1.181)	(0.285)
Frac. of Lower Rep.	0.937	-0.0115	-0.0774	-0.0676	0.00521
	(0.637)	(0.0736)	(0.148)	(0.192)	(0.0674)
Maximum Temperature	0.0706	0.00562	0.00265	-0.0300	0.00899**
	(0.0444)	(0.00360)	(0.00535)	(0.0384)	(0.00444)
Monthly Precipitation	0.219	0.00243	-0.00836	-0.0308	0.0152
	(0.149)	(0.0126)	(0.0159)	(0.0611)	(0.0207)
Constant	-19.28**	-11.07***	-11.50***	-10.60*	-12.07***
	(7.389)	(0.803)	(0.934)	(5.637)	(1.031)
N	1350	941	941	941	941
r2	0.434	0.890	0.826	0.410	0.867
F_diff	0.754	11.26	8.157	0.167	4.303
p_diff	0.389	0.00166	0.00658	0.685	0.0441

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 2. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 42: Retail Trade Industry Results: Model 4

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
GDP Decrease for 2 quarters	-0.985**	-0.0823*	-0.0912	0.0732	-0.0467
	(0.413)	(0.0434)	(0.0728)	(0.139)	(0.0570)
Not Recession	-1.077**	-0.0869**	-0.0935	-0.0166	-0.0465
	(0.423)	(0.0423)	(0.0747)	(0.132)	(0.0554)
Inspection Rate	4.494	-0.301	0.240	-1.125	0.0621
	(8.324)	(0.870)	(1.090)	(1.591)	(0.935)
Age 25-34	-5.495	-0.167	-0.502	1.215	0.0422
	(4.539)	(0.507)	(0.628)	(1.599)	(0.625)
Age 35-44	-9.831**	-0.0454	0.388	0.893	-0.419
	(3.979)	(0.380)	(0.582)	(1.914)	(0.492)
Age 45-54	-11.76**	-0.662	-0.567	0.286	-1.125
	(5.082)	(0.508)	(0.634)	(2.095)	(0.717)
Age 55-64	-9.067	-0.177	-0.156	4.157	-0.561
	(7.135)	(0.702)	(0.783)	(3.825)	(0.942)
Male	-0.0839	0.337	0.145	-0.394	0.824
	(5.445)	(0.566)	(0.689)	(2.692)	(0.702)
White	3.975	0.486	1.117	1.484	-0.818
	(6.888)	(0.509)	(0.856)	(1.099)	(0.741)
Black	3.036	0.717	1.167	2.215	-0.646
	(6.985)	(0.916)	(1.254)	(1.766)	(1.272)
Asian	14.06	0.186	0.540	4.048**	-1.303
	(10.15)	(0.694)	(0.845)	(1.816)	(1.252)
Single	0.200	0.00590	0.180	0.810	-0.206
	(3.233)	(0.436)	(0.554)	(1.457)	(0.575)
HS Degree Only	3.396	-0.171	0.304	-0.104	-0.248
	(2.933)	(0.410)	(0.517)	(1.345)	(0.447)
Frac. of Lower Rep.	0.511	-0.0660	-0.0984	-0.129	-0.0895
	(0.460)	(0.0689)	(0.167)	(0.109)	(0.0908)
Maximum Temperature	0.0373	0.00610	0.00250	-0.0192	0.0108*
	(0.0845)	(0.00434)	(0.00715)	(0.0362)	(0.00565)
Monthly Precipitation	-0.100	-0.0150	-0.0309	-0.0478	-0.000261
	(0.192)	(0.0186)	(0.0255)	(0.0726)	(0.0295)
Constant	-13.91	-11.66***	-13.14***	-12.59***	-11.66***
	(10.49)	(1.093)	(1.324)	(3.889)	(1.398)
N	700	577	577	577	577
r2	0.461	0.848	0.735	0.459	0.820
F_diff	1.119	0.280	0.0409	1.937	0.000227
p_diff	0.295	0.599	0.841	0.171	0.988

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 4. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 43: Transportation and Warehousing Industry Results: Model 1

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
Unemployment	-0.0490	0.0193	-0.0186	0.316	0.0237
	(0.156)	(0.0210)	(0.0290)	(0.198)	(0.0231)
Inspection Rate	-21.09**	-0.304	0.263	-2.072	0.319
	(8.168)	(0.686)	(0.807)	(3.476)	(1.080)
Age 25-34	-4.928	-0.719**	-0.581	-3.979*	-0.933**
	(5.340)	(0.317)	(0.377)	(2.340)	(0.420)
Age 35-44	-2.371	-0.507	-0.373	-4.255*	-0.925*
	(4.083)	(0.342)	(0.372)	(2.401)	(0.481)
Age 45-54	-4.220	-0.782**	-0.594	-3.535*	-1.116**
	(4.983)	(0.383)	(0.500)	(1.972)	(0.427)
Age 55-64	-3.014	-0.592	-0.223	-4.554*	-0.804
	(4.656)	(0.408)	(0.446)	(2.450)	(0.518)
Male	1.743	0.219	0.306	-0.535	0.135
	(1.443)	(0.206)	(0.277)	(0.654)	(0.275)
White	5.952*	0.328	0.0675	2.853	-0.282
	(3.149)	(0.336)	(0.379)	(2.482)	(0.423)
Black	2.857	0.457	0.148	3.219	-0.0732
	(2.753)	(0.461)	(0.477)	(2.695)	(0.576)
Asian	-3.566**	-0.620***	-0.911***	-2.204	-0.940***
	(1.549)	(0.204)	(0.256)	(1.623)	(0.230)
Single	-0.238	-0.154	0.0319	-0.807	-0.452
	(2.385)	(0.267)	(0.303)	(1.029)	(0.357)
HS Degree Only	-2.210	0.384*	0.525**	-0.965	0.180
	(1.448)	(0.195)	(0.239)	(0.748)	(0.339)
Frac. of Lower Rep.	-0.600	-0.0381	-0.111	-0.00620	0.0486
	(0.934)	(0.0446)	(0.0686)	(0.295)	(0.0637)
Maximum Temperature	0.0422	-0.00529	-0.00892*	0.00529	-0.00646
	(0.0326)	(0.00334)	(0.00443)	(0.0258)	(0.00391)
Monthly Precipitation	-0.0396	-0.00498	-0.0104	-0.00810	-0.00146
	(0.118)	(0.0179)	(0.0194)	(0.0484)	(0.0257)
Constant	-12.88*	-9.099***	-9.757***	-9.146*	-8.827***
	(6.469)	(0.622)	(0.743)	(4.736)	(0.843)
N	1350	936	934	934	936
r2	0.546	0.777	0.704	0.394	0.771

Robust standard errors are clustered at the state level.

Independent variable of interest in the unemployment rate.

For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 44: Transportation and Warehousing Industry Results: Model 2

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
tran_recession	0.0965	0.0126	-0.00253	0.319	0.00841
	(0.213)	(0.0224)	(0.0321)	(0.253)	(0.0309)
tran_expansion	0.0412	0.0150	-0.00827	0.318	0.0139
	(0.186)	(0.0213)	(0.0304)	(0.232)	(0.0268)
Inspection Rate	-20.81**	-0.318	0.295	-2.067	0.288
	(7.912)	(0.692)	(0.804)	(3.469)	(1.110)
Age 25-34	-4.914	-0.718**	-0.583	-3.979*	-0.931**
	(5.297)	(0.317)	(0.377)	(2.344)	(0.420)
Age 35-44	-2.331	-0.503	-0.383	-4.257*	-0.916*
	(4.035)	(0.344)	(0.371)	(2.424)	(0.486)
Age 45-54	-4.258	-0.779**	-0.602	-3.537*	-1.109**
	(4.970)	(0.385)	(0.496)	(1.976)	(0.431)
Age 55-64	-2.931	-0.591	-0.224	-4.555*	-0.803
	(4.615)	(0.408)	(0.445)	(2.454)	(0.516)
Male	1.704	0.221	0.302	-0.536	0.139
	(1.435)	(0.205)	(0.278)	(0.642)	(0.274)
White	6.050*	0.320	0.0851	2.856	-0.299
	(3.177)	(0.334)	(0.370)	(2.444)	(0.419)
Black	2.964	0.452	0.162	3.221	-0.0860
	(2.731)	(0.460)	(0.474)	(2.663)	(0.572)
Asian	-3.550**	-0.618***	-0.915***	-2.205	-0.935***
	(1.504)	(0.202)	(0.257)	(1.637)	(0.234)
Single	-0.273	-0.151	0.0227	-0.809	-0.443
	(2.388)	(0.267)	(0.304)	(1.029)	(0.357)
HS Degree Only	-2.201	0.385*	0.521**	-0.966	0.184
	(1.463)	(0.196)	(0.239)	(0.754)	(0.343)
Frac. of Lower Rep.	-0.599	-0.0393	-0.108	-0.00574	0.0459
	(0.935)	(0.0446)	(0.0682)	(0.291)	(0.0638)
Maximum Temperature	0.0409	-0.00529	-0.00894**	0.00529	-0.00646
	(0.0327)	(0.00336)	(0.00441)	(0.0258)	(0.00392)
Monthly Precipitation	-0.0489	-0.00472	-0.0110	-0.00820	-0.000875
	(0.117)	(0.0181)	(0.0195)	(0.0490)	(0.0259)
Constant	-12.38*	-9.115***	-9.717***	-9.139*	-8.864***
	(6.692)	(0.632)	(0.737)	(4.876)	(0.869)
N	1350	936	934	934	936
r2	0.546	0.777	0.705	0.394	0.771
F_diff	1.615	0.375	1.670	0.00127	0.606
p_diff	0.210	0.543	0.203	0.972	0.440

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 2. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 45: Transportation and Warehousing Industry Results: Model 4

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
GDP Decrease for 2 quarters	-0.0153	0.0290	-0.0149	0.435*	0.0727**
	(0.277)	(0.0296)	(0.0359)	(0.251)	(0.0321)
Not Recession	-0.0711	0.0286	-0.0144	0.428*	0.0672*
	(0.288)	(0.0282)	(0.0351)	(0.238)	(0.0335)
Inspection Rate	-32.21***	-0.0896	0.604	-3.118	0.653
	(10.73)	(0.703)	(0.868)	(2.854)	(1.296)
Age 25-34	-6.940	-0.385	-0.157	-2.649	-0.467
	(4.911)	(0.320)	(0.358)	(2.100)	(0.396)
Age 35-44	-2.033	-0.216	0.0492	-2.773	-0.917*
	(4.392)	(0.339)	(0.540)	(1.982)	(0.461)
Age 45-54	-2.847	-0.442	-0.279	-0.347	-0.512
	(4.462)	(0.305)	(0.487)	(1.368)	(0.419)
Age 55-64	-3.525	-0.325	0.205	-3.147*	-0.556
	(6.122)	(0.418)	(0.484)	(1.871)	(0.564)
Male	1.571	0.265	0.309	-0.755	0.191
	(3.098)	(0.195)	(0.271)	(0.920)	(0.272)
White	2.786	0.278	-0.0781	4.637	-0.407
	(3.908)	(0.443)	(0.473)	(3.664)	(0.516)
Black	0.744	0.257	-0.272	4.452	-0.303
	(4.098)	(0.538)	(0.607)	(3.666)	(0.576)
Asian	-3.006	-0.991	-1.770**	2.807	-1.604**
	(5.725)	(0.722)	(0.699)	(2.999)	(0.791)
Single	-0.0592	-0.0490	0.101	0.0195	-0.459
	(2.791)	(0.266)	(0.315)	(1.528)	(0.349)
HS Degree Only	-3.695*	0.308	0.482	-0.604	-0.00589
	(1.990)	(0.283)	(0.303)	(1.181)	(0.423)
Frac. of Lower Rep.	-0.204	-0.0752	-0.195**	0.190	-0.0163
	(1.471)	(0.0498)	(0.0845)	(0.243)	(0.0555)
Maximum Temperature	0.0328	-0.00107	-0.00552	0.0102	-0.00291
	(0.0508)	(0.00391)	(0.00464)	(0.0191)	(0.00524)
Monthly Precipitation	-0.0867	-0.00947	-0.0161	-0.0519	-0.00718
	(0.224)	(0.0249)	(0.0277)	(0.0634)	(0.0345)
Constant	-8.344	-10.12***	-10.66***	-12.65*	-9.674***
	(7.234)	(0.676)	(0.765)	(6.331)	(0.955)
N	700	575	573	573	575
r2	0.538	0.713	0.590	0.404	0.726
F_diff	1.005	0.00244	0.00228	0.102	0.243
p_diff	0.321	0.961	0.962	0.751	0.625

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 4. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 46: Financial Activities Industry Results: Model 1

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
Unemployment	0.0647	0.0165	-0.0633	-0.106**	0.0210
	(0.102)	(0.0177)	(0.0472)	(0.0519)	(0.0266)
Inspection Rate	-8.762	-2.530	-8.438	-16.93	0.442
	(8.768)	(4.156)	(6.026)	(11.66)	(3.088)
Age 25-34	-2.123	-0.206	0.263	3.000	0.621
	(3.709)	(0.645)	(1.981)	(2.293)	(0.876)
Age 35-44	-1.841	-0.221	0.320	-0.919	0.500
	(3.914)	(0.995)	(2.081)	(2.685)	(1.020)
Age 45-54	-1.772	0.202	2.987	3.745	1.649
	(4.370)	(0.839)	(2.629)	(2.811)	(1.155)
Age 55-64	-1.378	0.836	2.151	3.552	1.320
	(4.736)	(0.824)	(3.386)	(3.820)	(1.395)
Male	0.297	-0.102	1.626	-3.280*	-0.117
	(3.265)	(0.510)	(1.490)	(1.919)	(0.795)
White	2.761	1.071	3.295	2.064	0.0987
	(4.035)	(1.278)	(2.717)	(3.028)	(1.181)
Black	8.159	1.790	4.635*	6.190	0.0192
	(5.083)	(1.518)	(2.611)	(4.576)	(1.393)
Asian	-1.031	1.581**	4.265**	5.301*	1.492*
	(4.430)	(0.647)	(1.977)	(2.866)	(0.795)
Single	-1.217	0.626	1.919	-0.614	2.300*
	(3.508)	(0.419)	(1.525)	(2.085)	(1.173)
HS Degree Only	-3.134	-0.443	-1.062	-2.921	-0.0298
	(2.629)	(0.633)	(1.041)	(1.753)	(0.786)
Frac. of Lower Rep.	-0.299	-0.224	-0.369	0.500	-0.345*
	(0.389)	(0.158)	(0.420)	(0.341)	(0.182)
Maximum Temperature	0.0372	-0.00822	-0.00645	-0.00945	-0.0181
	(0.0308)	(0.0101)	(0.0144)	(0.0328)	(0.0120)
Monthly Precipitation	0.314*	0.00305	-0.00460	0.0391	-0.00104
	(0.171)	(0.0215)	(0.0438)	(0.114)	(0.0346)
Constant	-21.11***	-11.09***	-16.88***	-15.75***	-10.59***
	(7.283)	(1.487)	(3.503)	(5.134)	(1.911)
N	1350	912	907	903	909
r2	0.375	0.498	0.434	0.551	0.390

Robust standard errors are clustered at the state level.

Independent variable of interest in the unemployment rate.

For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 47: Financial Activities Industry Results: Model 2

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
fin_recession	-0.0312	0.00447	-0.0539	-0.0772	0.0223
	(0.134)	(0.0137)	(0.0598)	(0.0943)	(0.0362)
fin_expansion	0.0194	0.0113	-0.0592	-0.0935	0.0216
	(0.112)	(0.0145)	(0.0470)	(0.0667)	(0.0273)
Inspection Rate	-8.852	-2.536	-8.430	-16.92	0.443
	(8.703)	(4.133)	(6.047)	(11.72)	(3.092)
Age 25-34	-2.208	-0.220	0.276	3.034	0.623
	(3.707)	(0.648)	(2.019)	(2.290)	(0.886)
Age 35-44	-1.852	-0.229	0.327	-0.902	0.501
	(3.938)	(0.997)	(2.082)	(2.680)	(1.021)
Age 45-54	-1.784	0.198	2.990	3.753	1.649
	(4.401)	(0.847)	(2.634)	(2.816)	(1.156)
Age 55-64	-1.386	0.831	2.158	3.564	1.320
	(4.742)	(0.821)	(3.397)	(3.834)	(1.396)
Male	0.104	-0.129	1.648	-3.210*	-0.114
	(3.311)	(0.523)	(1.545)	(1.907)	(0.815)
White	2.671	1.087	3.285	2.021	0.0969
	(4.056)	(1.290)	(2.725)	(3.079)	(1.162)
Black	8.072	1.810	4.620*	6.139	0.0169
	(5.055)	(1.532)	(2.606)	(4.579)	(1.381)
Asian	-1.164	1.579**	4.265**	5.298*	1.493*
	(4.436)	(0.647)	(1.978)	(2.864)	(0.797)
Single	-1.316	0.601	1.940	-0.547	2.302*
	(3.509)	(0.408)	(1.588)	(2.130)	(1.194)
HS Degree Only	-3.120	-0.440	-1.065	-2.930	-0.0302
	(2.625)	(0.632)	(1.041)	(1.767)	(0.781)
Frac. of Lower Rep.	-0.312	-0.224	-0.369	0.500	-0.345*
	(0.389)	(0.159)	(0.420)	(0.341)	(0.182)
Maximum Temperature	0.0385	-0.00811	-0.00654	-0.00968	-0.0181
	(0.0309)	(0.00996)	(0.0143)	(0.0330)	(0.0119)
Monthly Precipitation	0.315*	0.00355	-0.00501	0.0378	-0.00110
	(0.170)	(0.0216)	(0.0439)	(0.114)	(0.0346)
Constant	-21.36***	-11.13***	-16.85***	-15.65***	-10.59***
	(7.234)	(1.478)	(3.476)	(5.207)	(1.848)
N	1350	912	907	903	909
r2	0.376	0.499	0.434	0.551	0.390
F_diff	0.858	0.558	0.0395	0.174	0.00205
p_diff	0.359	0.459	0.843	0.679	0.964

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 2. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 48: Financial Activities Industry Results: Model 4

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
GDP Decrease for 2 quarters	0.143	0.0133	-0.0983	-0.120**	0.0243
	(0.119)	(0.0256)	(0.0995)	(0.0501)	(0.0335)
Not Recession	0.227	0.00730	-0.0959	-0.0595	-0.00218
	(0.151)	(0.0275)	(0.0980)	(0.0763)	(0.0385)
Inspection Rate	-26.41*	0.189	-8.074	-13.03	5.448*
	(13.29)	(2.958)	(7.243)	(15.16)	(2.794)
Age 25-34	-7.580	-0.230	1.844	3.632	1.129
	(6.231)	(1.071)	(3.714)	(2.973)	(1.610)
Age 35-44	-9.383	-0.640	2.334	0.101	0.0969
	(7.135)	(1.816)	(3.266)	(3.768)	(1.964)
Age 45-54	-5.850	0.204	4.960	8.368*	1.170
	(7.051)	(1.386)	(3.749)	(4.291)	(2.004)
Age 55-64	-11.85*	0.550	5.532	8.466*	1.448
	(6.140)	(1.433)	(4.989)	(4.963)	(2.232)
Male	1.395	0.391	2.939	-2.135	-0.669
	(5.482)	(0.576)	(1.976)	(2.435)	(1.282)
White	14.52*	-0.555	3.765	6.183	-3.025
	(8.425)	(1.679)	(5.799)	(6.588)	(2.907)
Black	18.41*	0.552	6.392	8.416	-1.777
	(9.755)	(2.021)	(5.583)	(7.490)	(3.133)
Asian	13.19	0.534	7.005	4.618	-1.612
	(11.07)	(1.612)	(7.131)	(8.223)	(2.819)
Single	4.158	0.607	1.952*	-1.932	2.216
	(4.377)	(0.506)	(1.146)	(2.726)	(1.530)
HS Degree Only	-3.192	-0.0872	-0.545	-3.716	-0.112
	(4.474)	(0.645)	(1.899)	(2.328)	(1.285)
Frac. of Lower Rep.	-0.505	-0.229	-0.519	0.706	-0.480
	(0.605)	(0.192)	(0.513)	(0.505)	(0.297)
Maximum Temperature	0.107*	-0.00471	-0.00796	0.0238	-0.0357
	(0.0635)	(0.00834)	(0.0250)	(0.0469)	(0.0215)
Monthly Precipitation	0.494**	-0.00147	0.0244	0.194	-0.0781*
	(0.237)	(0.0238)	(0.0898)	(0.147)	(0.0463)
Constant	-35.52***	-10.74***	-20.79**	-26.00***	-6.040*
	(11.13)	(2.463)	(8.520)	(9.020)	(3.433)
N	700	552	547	543	549
r2	0.367	0.438	0.463	0.578	0.292
F_diff	0.758	0.215	0.00244	1.191	1.456
p_diff	0.388	0.645	0.961	0.281	0.234

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 4. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 49: Service Industry Results: Model 1

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
Unemployment	0.422	-0.0349	-0.0184	-0.123	-0.0442
	(0.485)	(0.0295)	(0.0358)	(0.0822)	(0.0397)
Inspection Rate	5.943	-0.271	-0.362	-2.529*	0.232
	(8.041)	(0.416)	(0.542)	(1.387)	(0.526)
Age 25-34	-2.610	-1.343***	-1.295**	-2.129	-1.544***
	(9.010)	(0.397)	(0.508)	(1.357)	(0.425)
Age 35-44	-3.722	-1.492***	-0.975	-2.743*	-1.848***
	(9.320)	(0.491)	(0.625)	(1.531)	(0.644)
Age 45-54	3.235	-1.738***	-1.031	-3.319*	-2.325***
	(9.544)	(0.572)	(0.871)	(1.941)	(0.793)
Age 55-64	4.453	-0.263	0.804	-0.782	-0.811
	(9.827)	(0.606)	(0.722)	(1.383)	(0.883)
Male	4.266	0.0900	0.479	1.182	-0.310
	(4.887)	(0.329)	(0.492)	(0.742)	(0.485)
White	1.332	0.168	-1.195***	-0.430	0.878
	(4.322)	(0.499)	(0.394)	(0.996)	(0.775)
Black	0.392	0.315	-0.841	-0.0570	1.011
	(6.186)	(0.587)	(0.643)	(1.392)	(0.859)
Asian	-2.258	0.572**	0.263	-0.172	0.917**
	(4.821)	(0.246)	(0.246)	(0.693)	(0.421)
Single	-2.163	-0.725**	-0.774*	-2.831*	-0.507
	(5.543)	(0.341)	(0.433)	(1.445)	(0.509)
HS Degree Only	-3.598	-0.00446	-0.470	0.418	0.326
	(3.233)	(0.352)	(0.396)	(1.181)	(0.428)
Frac. of Lower Rep.	-0.0853	-0.0660**	-0.104	-0.0261	-0.0339
	(0.923)	(0.0264)	(0.0683)	(0.100)	(0.0369)
Maximum Temperature	0.0558	0.0000247	-0.000318	-0.00256	-0.00181
	(0.0376)	(0.00290)	(0.00225)	(0.0115)	(0.00394)
Monthly Precipitation	0.150	-0.000483	-0.00888	-0.0125	0.00330
	(0.115)	(0.00926)	(0.00737)	(0.0224)	(0.0103)
Constant	-14.51	-9.450***	-9.547***	-10.22***	-10.37***
	(9.651)	(0.735)	(0.750)	(2.585)	(1.090)
N	1350	913	907	909	910
r2	0.486	0.876	0.894	0.808	0.808

Robust standard errors are clustered at the state level.

Independent variable of interest in the unemployment rate.

For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 50: Service Industry Results: Model 2

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
serv_recession	0.310	-0.0460	-0.0451	-0.142	-0.0410
	(0.536)	(0.0356)	(0.0421)	(0.0850)	(0.0461)
serv_expansion	0.342	-0.0428	-0.0374	-0.137	-0.0420
	(0.516)	(0.0336)	(0.0399)	(0.0837)	(0.0437)
Inspection Rate	6.066	-0.266	-0.349	-2.520*	0.230
	(8.032)	(0.411)	(0.529)	(1.382)	(0.526)
Age 25-34	-2.594	-1.317***	-1.234**	-2.085	-1.552***
	(8.974)	(0.394)	(0.510)	(1.383)	(0.418)
Age 35-44	-3.752	-1.489***	-0.966	-2.737*	-1.849***
	(9.313)	(0.491)	(0.618)	(1.533)	(0.643)
Age 45-54	3.365	-1.712***	-0.968	-3.274	-2.332***
	(9.518)	(0.571)	(0.886)	(1.969)	(0.786)
Age 55-64	4.426	-0.258	0.813	-0.776	-0.812
	(9.799)	(0.603)	(0.712)	(1.393)	(0.883)
Male	4.300	0.0904	0.481	1.183	-0.310
	(4.889)	(0.330)	(0.493)	(0.744)	(0.486)
White	1.401	0.173	-1.183***	-0.422	0.877
	(4.368)	(0.500)	(0.401)	(0.998)	(0.775)
Black	0.380	0.319	-0.836	-0.0545	1.010
	(6.198)	(0.587)	(0.644)	(1.391)	(0.860)
Asian	-2.154	0.589**	0.305	-0.142	0.912**
	(4.877)	(0.258)	(0.253)	(0.695)	(0.427)
Single	-2.135	-0.727**	-0.778*	-2.834*	-0.506
	(5.549)	(0.342)	(0.439)	(1.441)	(0.509)
HS Degree Only	-3.536	-0.00817	-0.479	0.412	0.328
	(3.233)	(0.351)	(0.393)	(1.181)	(0.430)
Frac. of Lower Rep.	-0.0893	-0.0662**	-0.104	-0.0265	-0.0338
	(0.917)	(0.0265)	(0.0683)	(0.100)	(0.0369)
Maximum Temperature	0.0560	-0.000000713	-0.000380	-0.00261	-0.00180
	(0.0377)	(0.00294)	(0.00234)	(0.0115)	(0.00395)
Monthly Precipitation	0.151	-0.000440	-0.00877	-0.0124	0.00329
	(0.115)	(0.00928)	(0.00741)	(0.0225)	(0.0103)
Constant	-14.99	-9.493***	-9.652***	-10.29***	-10.36***
	(9.760)	(0.730)	(0.771)	(2.627)	(1.085)
N	1350	913	907	909	910
r2	0.486	0.876	0.894	0.808	0.808
F_diff	0.444	0.905	4.058	0.742	0.0398
p_diff	0.509	0.347	0.0502	0.394	0.843

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 2. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 51: Service Industry Results: Model 4

	(1) Fatal	(2) All Nonfatal	(3) Lost Workday	(4) Job Restriction/Transfer	(5) Other Nonfatal
GDP Decrease for 2 quarters	0.909	0.0216	0.0182	0.183**	-0.0101
	(0.580)	(0.0369)	(0.0572)	(0.0683)	(0.0543)
Not Recession	0.915	0.0232	0.0163	0.194***	-0.00582
	(0.597)	(0.0368)	(0.0560)	(0.0681)	(0.0552)
Inspection Rate	8.427	0.125	0.272	-0.174	0.302
	(7.759)	(0.272)	(0.341)	(0.451)	(0.389)
Age 25-34	-4.641	-0.776	0.139	-1.431	-1.152**
	(12.47)	(0.503)	(0.672)	(1.051)	(0.540)
Age 35-44	-11.91	-0.0927	0.899	-1.544	-0.375
	(12.99)	(0.558)	(0.783)	(1.409)	(0.704)
Age 45-54	-22.75*	-0.224	1.392	-1.340	-0.855
	(11.81)	(0.780)	(1.027)	(1.456)	(0.964)
Age 55-64	-14.53	-0.0960	1.615*	-2.558**	-0.721
	(17.00)	(0.759)	(0.897)	(1.184)	(1.075)
Male	4.675	-0.264	0.0438	1.508	-0.761
	(7.687)	(0.499)	(0.483)	(1.056)	(0.644)
White	-8.311	-0.0534	-0.987	-0.379	0.160
	(16.96)	(0.400)	(0.647)	(1.557)	(0.703)
Black	1.533	-0.141	-0.859	-0.288	-0.0141
	(21.74)	(0.703)	(0.992)	(1.803)	(1.020)
Asian	-24.37	1.314**	1.276	0.784	1.203
	(18.79)	(0.508)	(0.804)	(2.291)	(0.723)
Single	-27.46***	-0.394	-0.392	-1.731**	-0.352
	(9.176)	(0.390)	(0.494)	(0.822)	(0.537)
HS Degree Only	-0.110	-0.683**	-0.664	-1.927**	-0.507
	(6.105)	(0.307)	(0.496)	(0.739)	(0.360)
Frac. of Lower Rep.	0.514	-0.0586*	-0.0961	0.0259	-0.0333
	(1.524)	(0.0330)	(0.0849)	(0.0881)	(0.0424)
Maximum Temperature	-0.0269	0.00412*	0.000457	0.0176***	0.00311
	(0.0481)	(0.00214)	(0.00272)	(0.00443)	(0.00288)
Monthly Precipitation	-0.208	-0.00614	-0.0257**	0.0341	-0.00432
	(0.177)	(0.0105)	(0.0102)	(0.0254)	(0.0117)
Constant	16.03	-10.06***	-11.32***	-10.97***	-10.40***
	(23.09)	(0.637)	(1.072)	(1.935)	(0.949)
N	700	554	548	550	551
r2	0.503	0.876	0.897	0.901	0.828
F_diff	0.00248	0.168	0.0618	0.670	0.858
p_diff	0.960	0.684	0.805	0.418	0.359

Robust standard errors are clustered at the state level.

Independent variable of interest is the unemployment rate split into two separate variables as in equation 4. For a description of each control variable, see Table 2.

Column (1) represents all fatal workplace injuries. Column (2) represents all nonfatal workplace injuries. Column (3) represents nonfatal workplace injuries which resulted in days away from work. Column (4) represents nonfatal injuries which did not result in days away from work but did result in job restriction or job transfer. Column (5) represents all nonfatal injuries which did not result in days away from work, job restriction, or job transfer.

F_diff and p_diff are the F statistic and p-value for the null hypothesis of if the two estimate outcomes of interest are equal.

Differences in n's between column (1) and the remaining occurs because there is not full participation from states for reporting nonfatal injury counts. See table **??** for a list of excluded states-years.

Table 52: Fatal Injury Results

	(1) All	(2) Private	(3) Public	(4) Construction	(5) Manufacturing	(6) Whole Sale	(7) Retail	(8) Transportation	(9) Finance	(10) Service
Unemployment	-0.132**	-0.157**	-1.337	-0.899**	-1.656	1.088	0.250	0.479	1.315	3.059
	(0.0593)	(0.0629)	(1.483)	(0.417)	(1.307)	(1.205)	(1.241)	(0.743)	(2.393)	(2.439)
N	1350	1350	1282	1226	1025	805	959	1195	434	1144
r2	0.863	0.855	0.466	0.566	0.744	0.600	0.519	0.672	0.663	0.444
Recession (UNEMP+)	-0.134**	-0.168**	-1.305	-0.954**	-1.758	1.229	0.208	0.512	1.905	2.938
	(0.0655)	(0.0683)	(1.512)	(0.432)	(1.320)	(1.221)	(1.196)	(0.748)	(2.453)	(2.420)
Expansion (UNEMP-)	-0.133**	-0.164**	-1.110	-1.436**	-2.416	1.961	0.126	0.672	3.851	2.463
	(0.0631)	(0.0662)	(2.049)	(0.614)	(1.566)	(1.596)	(1.228)	(0.983)	(3.386)	(2.481)
N	1350	1350	1282	1226	1025	805	959	1195	434	1144
r2	0.863	0.855	0.466	0.568	0.744	0.600	0.519	0.672	0.664	0.444
F_diff	0.0153	0.453	0.0315	3.174	0.834	0.810	0.0337	0.0805	1.388	0.591
p_diff	0.902	0.504	0.860	0.0810	0.366	0.373	0.855	0.778	0.245	0.446
Recession (Julius Shiskin)	-0.213***	-0.212**	1.293	-1.558**	-2.518*	0.815	-1.216	0.585	0.712	3.996
	(0.0761)	(0.0852)	(2.052)	(0.628)	(1.479)	(2.103)	(1.801)	(1.261)	(3.569)	(3.375)
Expansion	-0.217***	-0.222***	-1.396	-1.219**	-2.863*	1.107	-0.739	1.037	2.556	2.733
	(0.0726)	(0.0807)	(2.177)	(0.568)	(1.545)	(1.666)	(1.934)	(0.887)	(3.689)	(3.337)
N	700	700	661	633	502	419	471	628	254	600
r2	0.868	0.861	0.407	0.578	0.664	0.613	0.436	0.690	0.634	0.401
F_diff	0.147	1.007	2.313	0.849	0.310	0.0272	0.438	0.359	2.498	1.236
p_diff	0.703	0.321	0.135	0.361	0.580	0.870	0.511	0.552	0.121	0.272

Robustness Check. Using missing values instead of zeros.

Table 53: eq3 Comparison Robustness

	(1) all_lnfatalr	(2) all_lnnon_totr	(3) all_lnnon_awayr	(4) all_lnnon_tranr	(5) all_lnnon_othr
Recession (SCI Decreased, quarterly)	-0.114*	-0.178***	-0.187***	-0.229***	-0.160***
	(0.0622)	(0.0410)	(0.0419)	(0.0575)	(0.0544)
Expansion (SCI Increased, quarterly)	-0.129**	-0.178***	-0.191***	-0.227***	-0.159***
	(0.0595)	(0.0406)	(0.0406)	(0.0558)	(0.0547)
N	1350	943	943	943	943
r2	0.863	0.947	0.949	0.944	0.926
F_diff	3.053	0.00205	0.904	0.0866	0.102
p_diff	0.0869	0.964	0.347	0.770	0.750
Recession (SCI Decreased, yearly)	-0.125*	-0.189***	-0.193***	-0.240***	-0.170***
	(0.0639)	(0.0437)	(0.0451)	(0.0651)	(0.0579)
Expansion (SCI Increased, yearly)	-0.130**	-0.182***	-0.193***	-0.231***	-0.163***
	(0.0604)	(0.0414)	(0.0418)	(0.0587)	(0.0558)
N	1350	943	943	943	943
r2	0.863	0.948	0.949	0.944	0.926
F_diff	0.206	1.663	0.00132	1.084	1.515
p_diff	0.652	0.204	0.971	0.304	0.225

Robustness Check. Using yearly SCI changes instead of quarterly