

IMPACT OF PREVAILING WAGES ON THE ECONOMY AND COMMUNITIES OF CONNECTICUT

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January 2010

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Executive Summary

1. Construction output in Connecticut has been declining both in value and as a share of the state GDP during the past decade. Construction employment also started declining with the onset of the 2007 recession. This recession has been deeper than any observed during the post-World War II period. Its adverse effects are likely to be a drag on the economy long after it is over, influencing long-term development patterns of the state's construction industry. A large outflow of workers from the industry may lower the stock of experienced, skilled workers in the long-run. If they are not replaced with new cohorts of well-trained workers, long-run productivity would drop and quality of construction would suffer. The recession may also give impetus to the hiring of employees on a contractual basis in the unorganized sector, which currently accounts for three quarters of the blue-collar construction workforce. Growth of contractual employees lowers the labor cost to employers who skimp on training of workers and benefits.
2. The Connecticut prevailing wage law requires contractors to pay workers on government-funded construction projects a wage that is based on local standards. Opponents of the Connecticut law argue that prevailing wage rates are higher than local standards, and therefore inflate public construction costs, constituting a burden on the public purse. Critics claim that savings of "upwards to 30%" would be realized in the absence of the statute. They propose reducing the coverage of the law in the short-run and a moratorium on the law in the longer-run.
3. Against the background of challenges posed by the business cycle, weakening or suspension of the Connecticut wage law is expected to have long-term consequences for the state's construction industry. The objective of this report is to examine the impact of prevailing wage law on Connecticut's construction industry and communities. It will address both the narrower immediate construction cost implications of the law and its wider effects on state income level and tax revenues, apprenticeship training, job site safety, and benefits.

4. Critics who are predicting “upwards to 30%” savings in the absence of prevailing wage laws are essentially asking Connecticut construction workers to work on public jobs for free. In this study we address the cost implications of prevailing wage laws first under the assumption that the wage rate affects neither the contractors’ choice of input mix (more skilled labor, less skilled labor, and capital) nor labor productivity. The Census of Construction data for Connecticut show that the share of total labor costs in construction in Connecticut is around 30% (excluding the purchase of land). Under these conditions, we calculate that a 27% reduction in total construction costs requires the total labor costs to decline by 90%; a 28.5% reduction in total costs is possible if total labor cost declines by 95%. Thus, the hypothetical cost savings estimates of the opponents of Connecticut prevailing wage law are greatly exaggerated. A relatively more plausible 10% decline in wage rates plus benefits would hypothetically create cost savings of 3%.
5. Comparisons across states with and without prevailing wage laws show that, after controlling for other factors that influence costs, the effect of the law on the cost of construction is statistically zero. A hypothetical 3% savings in total public construction costs in response to a 10% reduction in labor costs is based on the assumption that there are no substitution and productivity effects. This assumption is not met in practice. First, if prevailing wages raise the cost of labor, then cost minimizing contractors would substitute relatively cheaper more skilled labor and capital inputs for relatively more expensive less skilled labor. Second, according to economic theory, a better paid labor force has lower turnover, higher morale, and a favorable perception of fairness. These factors raise productivity and lower the average cost. Jointly, the substitution and productivity effects would offset any immediate inflationary effect of prevailing wage laws. A preponderance of econometric evidence examining actual prevailing wage law repeals, suspensions, or adoptions from other states and Canada shows that there is no difference in the cost of public construction before and after these regulations are changed.

6. A moratorium on the prevailing wage law in Connecticut would cost the state \$214 million to \$432 million annually in lost income through lower construction sector earnings and reduced demand for local products and services in workers' communities. In fact, earnings by construction workers alone would be reduced by \$123 million to \$249 million annually (in 2008 dollars).
7. A moratorium on the Connecticut's prevailing wage law would also cost the state \$15 million to \$31 million annually (in 2008 dollars) in lost income tax and sales tax revenues due to the lower incomes of Connecticut construction workers and others in Connecticut who rely upon construction workers to purchase their goods and services.
8. A moratorium that would weaken collective bargaining would discourage apprenticeship training and compromise Connecticut's skilled and safe construction workforce. Between 2000 and 2008, 64% of the incoming construction sector apprentices in Connecticut enrolled in unilateral programs organized in the open-shop sector. In Connecticut, open-shop sector employed about three-quarters of the construction workforce. Thus, the organized sector, relative to its size, trained more apprentices in apprenticeship programs organized jointly by unions and contractors signatory to a collective bargaining agreement. Joint union-management programs also offered apprenticeship training in a wider variety of occupations, while unilateral programs were exclusively organized in electrical and mechanical trades. More importantly, the rate of attrition was substantially higher in unilateral programs (61%) than in joint programs (42%). This finding underscores the disproportionately higher contribution of the unionized sector to the maintenance of a skilled construction workforce in Connecticut.
9. Prevailing wage laws are vital to the creation and maintenance of a diverse, qualified workforce, with ethnic and racial minorities being better represented in joint apprenticeship programs. Minority share in incoming apprentices was 16% in unilateral and 36% in joint programs made possible by prevailing wage. Minority

retention rate was also higher joint programs: 66% of the minorities enrolled in unilateral programs dropped out, while this figure was 47% in joint programs. Joint union-management sponsored programs are strategically critical if the diverse construction workforce of the future is going to be safe, qualified and capable of building the technically advanced infrastructure which will allow Connecticut's other industries to be world-class competitive.

10. The absence of and even the weakening of prevailing wage laws contribute to both increased workplace fatalities and injuries. These in turn lead to increases in workers' compensation costs, increased costs of publicly financed health care, and ultimately a greater burden on the workers themselves, their families, and the taxpayers of Connecticut. Over the 2004-2007 period, in comparison with no-law states, construction sector fatalities were lower in prevailing wage law states by 15%. In states where the laws are more rigorous, the difference was as high as 25%. In states with laws of medium strength (including Connecticut), fatalities were on average 15% lower than no-law states. In states where laws are weak, however, prevailing wage laws did not reduce fatalities. Thus, the repeal of the law is not necessary for the job site safety to decline. Weakening of the law, say by raising the threshold value of the projects covered by the law, could be sufficient for construction fatalities to increase. Prevailing wage laws promote safety in the construction industry; the absence of incentives to train workers and build skill sets results in fatalities and serious injuries.
11. Workers who have health and pension benefits are less likely to become a burden to the State and taxpayers. Construction workers in prevailing wage law states receive substantially higher total benefits, by as much as 60% (including health insurance, pension, payroll), than their peers in no-law states. Nationwide data also show that one-third of nonunion construction workers have no form of health insurance whatsoever, while practically all union workers have health insurance. In effect, prevailing wage laws help to internalize the full costs of construction into the construction industry itself. Without prevailing wage laws, these full costs of

producing and maintaining a world class construction labor force spill over to society at large. At best, this is inefficient and unfair. At worst, this leads to a decline in the local construction industry's ability to provide the infrastructure the rest of the Connecticut economy needs to retain its competitive standing in a global economy.

12. Claims of large public savings from a suspension of Connecticut's prevailing wage law are not supported by the evidence. In contrast, the State of Connecticut will face substantial short- and long-term public costs if there is a moratorium on the prevailing wage law. Connecticut's prevailing wage law contributes to creating and maintaining high-wage, highly-productive and high-quality jobs that benefit workers, the construction industry, and the state. It is beneficial to construction workers and their families, other workers and their families, and taxpayers. Without regulation, competitive pressures force the industry to adopt an inferior equilibrium along a low-wage, low-productivity, and low-quality path.

Chapter 1:

Introduction

1.1 Objectives

The Connecticut prevailing wage law was first adopted in 1933. Similar to other prevailing wage laws that were passed in many states as well as at the federal level, Connecticut's prevailing wage law requires contractors to pay workers on government-funded projects a wage that is based on local standards. The intent of the law is to maintain community standards in terms of earnings and benefits, to maintain a highly skilled workforce, and to promote quality construction on government projects.

Yet these laws have been a subject of controversy. Critics argue that prevailing wage rates are often higher than wages that actually prevail in the area, and consequently lead to higher costs of construction. In the last decade, the Connecticut statute has also come under attack, led by the Connecticut Conference of Municipalities (CCM), as an outdated remnant of the Great Depression (CCM 2006, 2009). The case against the Connecticut law is based on the argument that prevailing wages inflate labor costs and create a burden on the public purse that is eventually borne by the taxpayers. Currently, opponents of the law have called for an immediate limitation of its scope by raising the threshold value of the projects covered by the law. In the longer run, opponents of the law favor a three-year moratorium as a temporary relief from this alleged burden as well as an opportunity to examine the law with an eye towards a more “permanent” solution.

Supporters of prevailing wage recognize that prevailing wage regulations may raise labor costs but dispute the claim that the project cost inflation is substantial on the grounds that substituting capital and skilled labor for less skilled labor and employment of more efficient workforce temper the impact of higher wage. Furthermore, they argue that prevailing wage laws have other beneficial effects that spill over to the community at large, including promotion of training programs, maintaining higher levels of safety on the job site, and reducing the downstream costs of maintenance of public projects. These external effects should be taken into account in assessing the costs and benefits of prevailing wage laws.

The objective of this report is to examine the impact of prevailing wage law on the Connecticut construction industry and the Connecticut economy overall. It will address the narrower immediate construction cost implications of the law, its wider effects on the quality of the construction workforce, and the spillover effects on the state economy.

1.2 General remarks on methodology

There exists a substantial body of empirical research that addresses these questions and this study builds upon them. Examination of the effects of prevailing wage laws requires a comparison of the values of variables of interest (most often the cost of construction, but also earnings, tax revenue, benefits, training, and construction injuries and fatalities) in the presence and absence of the law under conditions where all other factors are identical. Since such ideal conditions are never fully satisfied, economists devise a variety of methods to approximate such conditions by exploiting law and no-law variations over time, across construction projects, and/or across states.

The most direct approach is the “before-and-after” comparisons in states that repealed, passed, or suspended prevailing wage laws. Provided that there is a sufficient number of observations over time, it is possible to investigate whether patterns in the variables of interest observed before and after the legislative change are different, and if so how. Typically, data are available on unit construction costs of similar structures built before and after the regulatory change, and these costs are compared in order to find out whether the prevailing wage law affects construction costs and, if it does, by how much. The advantage of this methodology is the direct measurement of the impact of prevailing wage on costs and other variables of interest. While the number of these natural experiments is relatively few, they provide valuable information to assess the plausibility of the claims of cost savings by the repeal of the statute.

The second direct method of measurement does not rely on variations in regulatory environment. It compares unit construction costs of projects that are covered by prevailing wage laws with comparable private sector projects that are not. A typical example is the comparison of construction costs of public (covered) and private

(uncovered) schools within a prevailing wage jurisdiction, after controlling for scale and other structural characteristics.

The third commonly used method is to compare and contrast the construction costs in prevailing wage law states with non-prevailing wage law states, controlling for other factors that affect construction costs (such as the structure type and materials used). This “with and without-law” approach is especially fruitful in the comparison of a set of states that share certain commonalities such as geographic proximity.

In the case of Connecticut there has not been a regime change and, therefore, “before-and-after” comparisons to assess the impact of prevailing wage law are not possible. Due to data limitations, a comparison of covered and uncovered projects also proved to be infeasible. Nor does Connecticut’s geographic location provide opportunities for “with-and-without- law” comparisons. All public construction in the New England (except New Hampshire) and Mid-Atlantic regions are covered by state prevailing wage laws. Therefore, this report will use other methodologies in assessing effects of the Connecticut prevailing wage law, including construction of counterfactuals and making inferences based on findings from other states where more direct approaches had been feasible.

Specifically, information from direct measurements of the effects of prevailing wage laws elsewhere can be employed to construct counterfactuals for states such as Connecticut that are considering regulatory change. If law and no-law comparisons, for instance, yield substantial cost savings in the absence of law elsewhere, it is plausible to anticipate that Connecticut would benefit from repeal. The percentage savings in costs observed in no-law states can then be used to gauge the size of potential savings after controlling for state-specific factors. In the present study we will evaluate the impact of the Connecticut prevailing wage regulation on construction costs, state income and tax revenues, the training of the Connecticut construction workforce, job site safety, and health plus retirement benefits through such counterfactual analysis. Therefore, inferences from other states are a critical component of the overall evaluation. Not surprisingly, both supporters and opponents of the law try to draw on the experiences of other states to assess the impact of the prevailing wage law on the Connecticut economy.

Our contribution is to bring to this exercise rigorous analytical and statistical tools that will allow for greater precision in measuring the effects of prevailing wage regulations.

1.3 Outline

In this report we will first present in Chapter 2 a brief summary of state and federal prevailing wage laws, the intent behind them, and the criticisms that have been leveled against them. Chapter 3 focuses on the evolution of the Connecticut prevailing wage law, its definition and determination of the prevailing wage rate, coverage, and enforcement. In the fourth chapter we provide a brief description of the output and employment patterns in the Connecticut construction industry over the last decade.

We discuss direct cost implications of the Connecticut prevailing wage law in Chapter 5. We approach the question from two angles. First, we will make an assessment of the potential savings from a prevailing wage moratorium assuming that there are no substitution (of capital and skilled labor for unskilled labor) or improved productivity effects associated with the law's higher wage rate. Substitution effects refer to variations in the mix of inputs in response to changes in prices of inputs. A higher relative price of unskilled labor, for instance, would cause more intensive use of capital and skilled labor and less intensive use of unskilled labor. Productivity effects refer to rising productivity of labor in response to prevailing wages, which may be due factors such as lower turnover, more training, and better working conditions. For this purpose, we will first calculate the labor share in total project cost from the Connecticut Census of Construction, and then estimate hypothetical total cost savings of a moratorium under alternative values of labor cost savings. The thrust of this exercise is to gauge the plausibility of the cost savings figures that are frequently mentioned by the critics of the statute under the most conservative assumptions regarding substitution and productivity effects of the law.

Next, we introduce the substitution and productivity effects that may temper purported cost savings. The fact that there has not been a break in the implementation of law in Connecticut makes it impossible to set up counterfactuals and to evaluate these mitigating factors. Therefore, we introduce evidence from other states and Canada to demonstrate that these substitution and productivity factors are sizeable and important

enough so that prevailing wages do not actually measurably raise the costs of public construction. In short, the presumed savings, which critics allege will emanate from a suspension or repeal of prevailing wage laws, disappear once we consider that higher wage rates attract better workers, encourage contractors to better train, equip and manage their workers and encourage the retention of experienced workers within the otherwise highly volatile construction industry.

In Chapter 6, we present estimates of the impact of the prevailing wage laws on construction and overall state income levels and state tax revenues in Connecticut. For this purpose we first estimate the net income loss from a moratorium on prevailing wages for the construction industry and for the overall Connecticut economy. Next, we calculate the government revenue losses from income and sales taxes.

The repeal of prevailing wage laws weakens the unionized sector of the industry and thereby external social benefits of unionization associated with apprenticeship programs, safety training, pension benefits, and health insurance. Chapters 7 to 9 discuss implications of these factors for the state economy. Chapter 7 focuses on training and compares the relative performance of Connecticut apprenticeship programs organized by union-management joint programs with unilateral programs organized solely by nonunion employers in the open-shop sector. These comparisons are made in terms of enrollment levels, attrition/completion rates, occupational distribution, and ethnic/racial composition of apprentice workforce. Chapter 8 examines implications of prevailing wage laws for safety on the job site. We compare the fatality rates in law and no-law states to determine whether presence of prevailing wage laws are associated with safer job sites. Chapter 9 examines the relationship between prevailing wage regulations, on the one hand, and health insurance and payroll taxes (unemployment insurance, workers' compensation and Social Security) on the other. We inquire whether there are systematic differences between benefit payments across law and no-law states. Chapter 10 summarizes main findings of the report and concludes.

Chapter 2:

Prevailing Wage Laws in the US: History, Intent, and Critiques

2.1 History

Along with the Fair Labor Standards Act, workplace safety laws, unemployment insurance, workers' compensation, immigration laws, and child labor laws, prevailing wage laws at the state and national level have been a component of a body of regulations that set labor standards, protect workers, and establish a level playing field upon which employers compete. The U.S. Congress addressed the issue of grueling twelve-hour working days with the National Eight Hour Day Law in 1868. The idea was to set labor standards, to guide the labor market, moving it away from the expansion of the workday towards competitive behavior that emphasized increased productivity within a limited set of hours. It was felt that the market could not get there by itself. Short run competitive pressures would continually push for the longer 10, 12 and even 16 hour day. Congress felt that through regulation the market could be forced to find its own best self-interest, competition over productivity rather than competition over sweating labor.

The legal doctrine of individual contract in the mid-1800s prevented Congress from directly regulating the market, but Congress could regulate its own contracts. Thus, public works was targeted as a way of indirectly trying to regulate all labor markets. Republican Senator Conness of California in advocating the National Eight Hour Day Law on the floor of Congress in 1868 captured most of these ideas:

[The Eight-Hour Law] is but a very small boon that the working men of America ask from the Congress of the United States, namely: that the example be set by the Government of reducing the number of hours of labor. I know that the passage of this bill cannot control in the labor of the country; but the example to be set by the Government, by the passage of this bill, is due to the laboring men of the country, in my opinion. I know that labor in the main, like every other commodity, must depend upon the demand and supply. But, sir, I for one will be glad, a thousand times glad, when the industry of the country shall become accommodated to a reduced number of hours in the performance of labor. After forty or fifty years of such advance in the production of the world's fabrics by the great improvements that have been made by inventions, and the application of

steam as a power, by which the capital of the world has been aggregated and increased many fold, I think that it is time that the bones and muscles of the country were promised a small percentage of cessation and rest from labor, as a consequence of that great increase in the productive industries of the country (U.S. Congress, 1868).

Prevailing wage regulations were an integral part of the first national eight-hour law. For Congress said that when hours on public works were cut from 12 to 8, the daily wage should not be cut from (say) \$1.20 to 80 cents.¹ Congress said that when hours were cut, the contractor on public works still had to pay the daily wage that was current in the locale in which the work was being done.

Enforcement of the current wage provision proved difficult. On May 19, 1869, President Grant issued the following proclamation:²

that, from and after this date no reduction shall be made in the wages paid by the Government by the day to such laborers, workmen and mechanics on account of any such reduction of hours of labor.

On May 11, 1872 Grant reiterated with greater detail and emphasis in a second proclamation that per diem wages should not be cut with the required shorter hours:³

...I, Ulysses S. Grant, President of the United States, do hereby again call attention to the act of Congress aforesaid, and direct all officers of the executive department of the government having charge of the employment and payment of laborers, workmen and mechanics employed by or on behalf of the government of the United States to make no reduction in the labor wages paid by the day to such laborers, workmen and mechanics on account of the reduction of the hours of labor.

Thus, the principle of a prevailing wage law at the federal level predates the Davis-Bacon Act by fifty years. The purpose of the federal law was to set labor standards regarding hours and wage rates in the public sector presumably with the hope that these standards might spread to the private sector. That the purpose was thwarted in enforcement is indicated by Grant's need to make the same proclamation twice. It was

¹ Construction workers were then paid by the day.

² The Statutes at Large and Proclamations of the United States of America, from December 1869 to March 1871, Vol. XVI, Boston, 1871, p. 1127.

³ The Statutes at Large and Proclamations of the United States of America from March 1871 to March 1873, Vol. XVII, Boston, 1873, pp. 955-56.

also thwarted by legal decisions emphasizing the rights of individuals to contract without government interference.

Frustrated by problems of implementation and court rulings, the Federation of the Organized Trades and Labor Unions of the United States and Canada (henceforth Federation), in its first convention in 1881 stated what it thought the purpose of the law was and complained that it was not being enforced:

Resolved...that the National Eight Hour law is one intended to benefit labor and to relieve it partly of its heavy burdens, that the evasion of its true spirit and intent is contrary to the best interest of the Nation; we therefore demand the enforcement of said law in the spirit of its designers. (Federation of the Organized Trades and Labor Unions of the United States and Canada, 1905, p.3)

Public works were targeted for regulation not so much because construction unions were a particularly powerful interest group but because under legal theories of the time, general governmental regulation of the labor market was viewed as a violation of the individual right to freely make contracts. However, the government was a party to contracts for public construction. Therefore, the government, like any party to a contract, could set conditions under which it was willing to contract for construction services. Proponents of hours and wage regulations on government works hoped these conditions would serve as a model and standard for private work in and out of construction.

The efforts to improve labor conditions was not an exclusively an American affair. In England in 1890, the House of Lords issued the Report of the Sweating Commission. Sweatshop labor conditions, including those in the construction industry, had become a scandal. The system of contracting and subcontracting and lowest bidder acceptance led to a form of competition that was deleterious. To obtain a contract in the short run, contractors would ignore long-term costs of the industry, such as training and worker safety. Having shaved on a bid to win a government contract, contractors attempted to offset their costs through shoddy workmanship. Contractors who won a job would shop it around to laborers to see who would take the biggest pay cut to get the work. In response to these practices, Parliament enacted a prevailing wage law as part of a larger set of reforms designed to reign in sweatshop competitive practices.

Canada followed the English example in 1900. The Canadian Parliament was persuaded that there was a high-wage, high-skill growth path and a low-wage, low-skill growth path opening up before Canada. The high-wage path was seen as preferable because it promoted solid skills and good workmanship on public works, it created middle class citizens and it stimulated demand for local manufactured goods. In the debate, the Canadian Postmaster General stated

The country has no interest in keeping down the price of labour; on the contrary, the country is interested in the advancement of the labour market....It is better for the workingman, for high wages enable him to supply himself with more of the necessaries, more of the comforts, more of the luxuries of life. This is better for the country also, as it stimulates the consumption of manufactured goods of all kinds. Higher wages benefit not only him who receives but him who gives, and they benefit not only the parties directly concerned, but the whole community.

In the U.S., American Federation of Labor (AFL)⁴ turned to states to develop and enforce working hours and prevailing wage legislation. It called for legislative changes to the eight-hour work day, the elimination of child labor, free public schooling, compulsory schooling laws, the elimination of convict labor, and prevailing wages on public works. The objective was to implement regulations, however painful to employers in the short run, supportive of a high-wage, high-skill growth path where children were in school and workers had the skills to justify wages that would allow for a quality family life.

State governments were being asked to set a good example for the private sector, to show that a refreshed labor force could produce in eight hours what a fatigued and bedraggled labor force turned out in ten or twelve hours. The prevailing wage law in its infancy was an attempt to obtain shorter working hours for *all* labor. The AFL paid attention to public works, however, because government at all levels was a major purchaser of construction. The AFL said government should not try to save money by eroding the wages of its citizens.

In February 1891, the Second Annual Convention of the Kansas State Federation of Labor, in Topeka, approved a bill concerning state-paid wages. The bill, which included the prevailing wage section called “for an Eight Hour Law,” stated:

⁴ The Federation of the Organized Trades and Labor Unions of the United States and Canada was renamed as American Federation of Labor in 1886.

That in no case shall any officer, board, or commission, doing or performing any service or furnishing any supplies to the State of Kansas under the provisions of the act be allowed to reduce the daily wages paid to employees engaged with him (or them) in performing such service or furnishing such supplies, on account of the reduction of hours provided for in the act. That in all cases such daily wages shall remain at the minimum rate which was in such cases paid and received prior to the passage of the act.

The eight-hour bill was one of four labor-related bills pending in the legislature: the weekly pay bill, the child-labor bill, and the bill to make the first Monday in September a holiday, which would become known as Labor Day. Kansas Senate passed the eight-hour bill, with the prevailing wage provision, on March 10, 1891. The first prevailing wage law stated:

That not less than the current rate of per diem wages in the locality where the work is performed shall be paid to laborers, workmen, mechanics and other persons so employed by or on behalf of the state of Kansas....⁵

Since then 42 states and the District of Columbia passed their own prevailing wage laws. Vermont was the last state to pass a prevailing wage law in 1998. On March 3, 1931 President Herbert Hoover signed the Federal prevailing wage law, the Davis-Bacon Act, named after its two sponsors Senator James J. Davis (R-Pennsylvania) and Representative Robert L. Bacon (R-New York), into law.

The Davis-Bacon Act required payment of prevailing wages on federally financed construction projects. However, the original language of the law was vague, and prevailing wages generally were not determined before the acceptance of bids. In 1935, Democratic President Roosevelt signed clarifying amendments to the act, which became the basis of the current Davis-Bacon Act.

In 1935, Roosevelt's Secretary of Labor, Francis Perkins, established the original rules for determining the Davis-Bacon prevailing rates. The prevailing wage was said to be the wage paid to the majority, if a majority existed; if not, the 30-percent rule was used. The 30-percent rule means if 30 percent of the workers in an area are paid the same rate, that rate becomes the prevailing rate there. The 30-percent rule often resulted in the

⁵ L. 1891 Ch. 114 p.192-193. The law set hour standards by limiting the workday to eight hours.

union wage being the prevailing wage. If the 30-percent rule did not apply, because at least 30 percent of the workers in a given occupation in the local labor market did not receive the same wage rate, the average wage rate was paid to workers doing the same job. The prevailing wage was determined this way for 50 years.

In 1985, President Reagan changed administration of Davis-Bacon, creating the 50-percent rule. This rule holds that if 50% plus one wage rates for an occupation in a local labor market are the same to the penny, then that wage rate is said to prevail. If no one wage rate accounts for more than 50% of all wage rates for an occupation in a local labor market, then the average wage rate for that occupation prevails. Under the old rules, if union wage rates accounted for more than 30% of all wage rates for an occupation, then the union wage rate prevailed. Under the new rules, union wage rates must represent more than 50% of all wage rates in an occupation before union wage scales prevail under Davis-Bacon.

2.2 Intent

The rationale for prevailing wage laws lies within the government construction contract bidding process and the structure of the construction industry. Government projects are typically contracted to the qualified general contractor who submits the lowest bid. The construction industry is characterized by intense competition within layers of small to medium-sized (and occasionally large) general and subcontractors. General contractors make cost estimates and submit bids for contracts. Once its bid is accepted, the winning general contractor carries out part of the construction work itself and hires specialty trade contractors to carry out specialized pieces of the project. Construction projects are intrinsically temporary and as contractors move from one project to another. Workers are also in a constant flux, moving among job sites and contractors. Thus, in comparison with other industries, the bond between the employer and the employee is much looser. Given the intensity of competition for construction projects and the short-term nature of the work, contractors are pressed to compete over labor costs, putting downward pressure on wages and benefits (as well as an upward pressure on the hidden costs of construction, including change orders, re-interpretation of specifications, efforts to hide substandard work and materials, and utilization of quicker

but unsafe construction methods). Indeed, the original justification of the prevailing wage law was to prevent unscrupulous practices of out-of state contractors who competed with local contractors by hiring low-wage itinerant workers in government contracts. With prevailing wage laws in place, contractors compete on the basis of skill, efficiency, and technology.

The decision to have prevailing wage laws, then, is essentially a decision to encourage a high-wage, high-skill, high-productivity growth and development path for the local construction industry instead of a low-skilled, low-wage, low-productivity growth path made possible by unregulated public works construction. According to the proponents of prevailing wage laws, reliance on reasonably-paid workers encourages career attachment within the construction industry, professionalism on-the-job, and increased apprenticeship training, safer worksites and the accumulation of human capital. It leads to a high-productivity growth path where workers are better trained, more skilled, safer, and more efficient. Prevailing wage laws, according to proponents, would also help to create a solid middle class of local construction workers. The low-wage, low-growth path, in contrast, restrains incentives to provide and acquire training, put the quality of construction at risk, encourages worker movement out of construction industry, relies upon an itinerant workforce, and inhibits the development and maintenance of a highly-skilled local construction workforce.

2.3 Critiques

There has been strong opposition to prevailing wages from the very beginning. A central thrust of these criticisms is that the law is an intervention into the market system that would distort prices and resource allocation. In the original debates on the 1868 National Eight-Hour Day Act, this position was articulated by the Maine Senator Fessendon:

I oppose [this Act] upon principle, and because I believe that no good can come of it, and much evil probably will. The moment we have passed this bill there becomes an excitement throughout the country upon the same subject between the employer and the employed, and the evil example will go forth from this place. Let men make their contracts as they please; let this matter be regulated by the great regulator, demand and supply; and so long as it continues to be, those who are smart capable, and intelligent,

who make themselves skilled workmen, will receive the rewards of their labor, and those who have less capacity and less industry will not be on a level with them, but will receive an adequate reward for their labor (U.S. Congress, 1868).

Specifically, prevailing wage laws have been subject of criticism for inflating the costs of construction and burdening the public purse, creating a non-competitive construction labor market by favoring union workers, and excluding Blacks from the construction workforce. Questions concerning the financing of public projects were especially influential in the public discourse. A main argument used by opponents of the law is that the statute is an unfunded mandate that raises the costs of public construction and benefits a small group of construction workers at a substantial cost to the taxpayers. Beginning in the 1970s, there was a widespread effort to repeal existing prevailing wage laws. In anticipation of substantial savings, nine states repealed their state prevailing wage laws between 1979 and 1988. The Oklahoma law was judicially overturned in 1995 on grounds that the state's prevailing wage survey was unconstitutionally over-reliant on the federal survey.⁶

Much of the literature on the prevailing wage laws examined the immediate effects of prevailing wage laws on the costs of construction. This focus, however, offers too narrow a perspective of prevailing wage laws' impact because it overlooks the law's spillover effects. A comprehensive assessment of the law must compare and contrast construction industries of states with and without prevailing wage laws in other dimensions, including productivity of construction workers, extent of apprenticeship training, workplace safety, and pensions and health insurance, and worker turnover and experience. Thus, the issue becomes, in part, one of a) immediate start-costs of projects at the point of bid, and b) ultimate costs associated with change orders, downstream maintenance costs and the quality of construction and workforce. It also becomes an issue of the ability of local construction workers to earn a decent income, have pension and health benefits, be able to own a home and pay taxes and become contributing members of the local community. These empirical issues will be examined in the subsequent chapters of this report.

⁶ Table 2.1 reports the current status of state prevailing wage laws.

Table 2.1: Prevailing Wage Laws by State, Year Passed, and Repealed

States with prevailing wage laws	Year passed	States without prevailing wage laws		
Alaska	1931	Georgia		
Arkansas	1955	Iowa		
California	1931	Mississippi		
Connecticut	1933	North Carolina		
District of Columbia	1931	North Dakota		
Hawaii	1955	South Carolina		
Illinois	1931	South Dakota		
Indiana	1935	Virginia		
Kentucky	1940			
Maine	1933			
Maryland	1945			
Massachusetts	1914	States that repealed prevailing wage laws	Year passed	Year of repeal
Michigan	1965	Alabama	1941	1980
Minnesota	1973	Arizona	1912	1984
Missouri	1957	Colorado	1933	1985
Montana	1931	Florida	1933	1979
Nebraska	1923	Idaho	1911	1985
Nevada	1937	Kansas	1891	1987
New Jersey	1913	Louisiana	1968	1988
New Mexico	1937	New Hampshire	1941	1985
New York	1894	Oklahoma*	1909	1995
Ohio	1931	Utah	1933	1981
Oregon	1959			
Pennsylvania	1961			
Rhode Island	1935			
Tennessee	1953			
Texas	1933			
Vermont	1998			
Washington	1945			
West Virginia	1933			
Wisconsin	1931			
Wyoming	1967			

*The enforcement of Oklahoma's law was invalidated in 1995 by court decision.

Chapter 3:

Connecticut Prevailing Wage Law

3.1 Introduction

The Connecticut prevailing wage law stipulates that the wages paid to mechanics, laborers, and other workers employed on certain public works construction projects should be the same as the “customary” or “prevailing” rate paid for the same work in the town where the work is being performed. Currently, the law applies to all local and state new public construction projects that cost \$400,000 or more, and alteration and repair jobs that cost \$100,000 or more. The law was first adopted in 1933. Since then, the definition, coverage, and enforcement procedures were revised several times. The current Connecticut prevailing wage law is presented in Appendix 3.A.

3.2 Definition

The original Connecticut law defined the “prevailing” wage narrowly and excluded benefits. In 1961, the definition was expanded to add benefits. The provisions for benefit contributions were spelled out by defining the “employee welfare fund” and “benefits under an employee welfare plan” in 1967.

3.3 Coverage

The first Connecticut state prevailing wage law applied to construction and repair of state building projects. The coverage of the law was expanded to include state highway projects in 1935, town construction work (housing and community development) in 1955, and ultimately all public construction, including alteration and repair projects. After 1973, remodeling, refinishing, rehabilitation, and refurbishing projects were also brought under the law. The current law applies to all local and state construction projects subject to threshold values discussed below.

There were no coverage threshold values in the initial law. A threshold of \$5,000 was established in 1961. In 1979, two thresholds were established: the law applied to new construction projects costing \$50,000 and above, and to remodeling, refinishing,

rehabilitating, refurbishing, alteration, and repair projects costing \$10,000 and above. These respective thresholds increased in 1985 to \$200,000 and \$50,000. In 1991 the respective figures were raised to \$400,000 and \$100,000.

Connecticut Conference of Municipalities (CCM) has long spearheaded the efforts to weaken and/or repeal the state prevailing wage law. Although its current target is a three-year moratorium of the law leading eventually to “permanent” changes, the Conference also calls attention to the fact that the thresholds have not been raised in eighteen years and recommends various amendments as short-run objectives. Proposed amendments include raising the threshold on all public projects to \$1 million, indexing thresholds to inflation, and creating exemptions for local renovation projects related to the installation of alternative sources of energy (CCM, 2009, p.4). Connecticut Council of Small Towns (COST) also joined in this effort.⁷ The Federation of Connecticut Taxpayer Organizations, Inc. supports raising threshold amounts based on the assertion that prevailing wage laws drive up the property taxes (Kniep, 2006).

A wider perspective on thresholds relative to Connecticut's prevailing wage law can be obtained by comparing threshold amounts across states. Currently 32 states plus Washington DC have prevailing wage laws. Among these, the threshold amounts vary widely, and not all have separate amounts for new and remodeling construction.⁸ Connecticut, however, is one of the least stringent states in terms of thresholds: 27 out of 32 states, as well as the Federal Davis Bacon Act, have lower thresholds than Connecticut. Threshold amounts in Indiana, Kentucky, and Wisconsin are higher than that of Connecticut only for remodeling work. Among all the states, only Maryland has a higher new construction threshold value than Connecticut -- \$500,000. Appendix 3.B presents the current threshold amounts of projects covered under state prevailing wage laws.

3.4 Determination

When the Connecticut law was first adopted, prevailing wage rates were determined by the Commissioner of Labor and Factory Inspection. In 1937, a three-

⁷ http://ccst.virtualltownhall.net/pages/CCST_priorities/index (accessed November 30, 2009)

⁸ U.S. Department of Labor, Wage and Hour Division, <http://www.dol.gov/esa/whd/state/dollar.htm>, (accessed Nov. 6, 2009).

person board was established, composed of representatives of labor, contractors, and the state, to hold hearings and determine the prevailing wage rates. The board was abolished in 1951 and the responsibility for determining rates was once again given to the labor commissioner. After 1977, Connecticut Labor Department was permitted either to adopt federal wage rates for Connecticut prevailing wage jobs or hold hearings to determine the wage rates itself. The Connecticut Department of Labor has chosen to use of federal prevailing wage rates on grounds that it is cost-saving and that the federal prevailing wage applies to all federally subsidized project such as most highways, some housing, and some urban development.

According to the federal regulations, the Wage and Hour Division of the U.S. Department of Labor sets prevailing wage rates to be paid on federally funded or assisted construction projects. The U.S. DOL surveys unions, contractors, and government agencies and compiles wage rate information. The prevailing wage is then determined by a switching rule: if a single wage is paid to over 50% of the laborers or mechanics in a particular employment classification on similar projects in the area then that rate becomes the prevailing wage rate. If a single wage is not paid to a majority of workers, the prevailing wage is an average of all wages paid to that occupation in the local area. The local area is defined as the county in which the work is being done.

3.5 Enforcement

Since 1985 the Connecticut prevailing wage law has required the public contracting agency building the public project to declare and certify to the state labor commissioner the total dollar amount of the proposed work to be done and what the pay scale is to be in writing before the award of any contract. Once the contract is awarded, the contractor is required to certify to the labor commissioner, under oath, the pay scale to be used by the contractor and subcontractors for the work to be performed under the contract. After 1993, the law required each employer to file certified payrolls with the contracting agency including employee names, occupations, hours worked, and rates paid.

Contractors who fail to pay workers at least the prevailing wage are subject to civil, criminal, and administrative penalties. When the law was first adopted contractors

who violated the law paid a fine of \$100 per offense. Since 1973, contracting agencies have been authorized to terminate contracts at the contractor's expense for violating the statute. In 1991, fines for violating the law were raised to between \$2,500 and \$5,000 per offense. Since the 1993 amendments of the law, intentionally lying on a certified payroll or filing a false certified payroll is a class D felony for which an employer may be fined up to \$5,000, imprisoned for up to five years, or both. Failing to pay the prevailing wage is crime, which may be a felony depending upon the amount of unpaid wages. The state contract office was also authorized to terminate contracts when contractors violate the statute, withhold payment, and/or administratively debar violators from public works contracts for a period of up to three years.

**Appendix 3A: The Current Connecticut Prevailing Wage Law
(CONN. GEN. STAT. § 31-53, 31-53a)**

Sec. 31-53. Construction, alteration or repair of public works projects by state or political subdivision; wage rates; certified payroll. Penalties for violations. (a) Each contract for the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project by the state or any of its agents, or by any political subdivision of the state or any of its agents, shall contain the following provision: "The wages paid on an hourly basis to any mechanic, laborer or workman employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee welfare fund, as defined in subsection (h) of this section, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public works project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each pay day."

(b) Any person who knowingly or wilfully employs any mechanic, laborer or workman in the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project for or on behalf of the state or any of its agents, or any political subdivision of the state or any of its agents, at a rate of wage on an hourly basis which is less than the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public works project is being constructed, remodeled, refinished, refurbished, rehabilitated, altered or repaired, or who fails to pay the amount of payment or contributions paid or payable on behalf of each such employee to any employee welfare fund, or in lieu thereof to the employee, as provided by subsection (a), shall be fined not less than two thousand five hundred dollars but not more than five thousand dollars for each offense and (1) for the first violation, shall be disqualified from bidding on contracts with the state or any political subdivision until the contractor or subcontractor has made full restitution of the back wages owed to such persons and for an additional six months thereafter and (2) for subsequent violations, shall be disqualified from bidding on contracts with the state or any political subdivision until the contractor or subcontractor has made full restitution of the back wages owed to such persons and for not less than an additional two years thereafter. In addition, if it is found by the contracting officer representing the state or political subdivision thereof that any mechanic, laborer or workman employed by the contractor or any subcontractor directly on the site for the work covered by the contract has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid as required by this section, the state or contracting political subdivision thereof may (A) by written notice to the contractor, terminate such contractor's right to proceed with the work or such part of the work as to which there has been a failure to pay said required wages and to prosecute the work to completion by contract or otherwise, and the contractor and his sureties shall be liable to the state or the contracting political subdivision for any excess costs occasioned the state or the contracting political subdivision thereby or (B) withhold payment of money to the contractor or subcontractor. The contracting department of the state or the political subdivision thereof shall within two days after taking such action notify the Labor Commissioner in writing of the name of the contractor or subcontractor, the project involved, the location of the work, the violations involved, the date the contract was terminated, and steps taken to collect the required wages.

(c) The Labor Commissioner may make complaint to the proper prosecuting authorities for the violation of any provision of subsection (b).

(d) For the purpose of predetermining the prevailing rate of wage on an hourly basis and the amount of payment or contributions paid or payable on behalf of each employee to any employee welfare fund, as defined in subsection (h), in each town where such contract is to be performed, the Labor Commissioner shall (1) hold a hearing at any required time to determine the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of each person to any employee welfare fund, as defined in subsection (h), upon any public work within any specified area, and shall establish classifications of skilled, semiskilled and ordinary labor, or (2) adopt and use such appropriate and applicable prevailing wage rate determinations as have been made by the Secretary of Labor of the United States under the provisions of the Davis-Bacon Act, as amended.

(e) The Labor Commissioner shall determine the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of such employee to any employee welfare fund, as defined in subsection (h), in each locality where any such public work is to be constructed, and the

agent empowered to let such contract shall contact the Labor Commissioner, at least ten but not more than twenty days prior to the date such contracts will be advertised for bid, to ascertain the proper rate of wages and amount of employee welfare fund payments or contributions and shall include such rate of wage on an hourly basis and the amount of payment or contributions paid or payable on behalf of each employee to any employee welfare fund, as defined in subsection (h), or in lieu thereof the amount to be paid directly to each employee for such payment or contributions as provided in subsection (a) for all classifications of labor in the proposal for the contract. The rate of wage on an hourly basis and the amount of payment or contributions to any employee welfare fund, as defined in subsection (h), or cash in lieu thereof, as provided in subsection (a), shall, at all times, be considered as the minimum rate for the classification for which it was established. Prior to the award of any contract subject to the provisions of this section, such agent shall certify in writing to the Labor Commissioner the total dollar amount of work to be done in connection with such public works project, regardless of whether such project consists of one or more contracts. Upon the award of any contract subject to the provisions of this section, the contractor to whom such contract is awarded shall certify, under oath, to the Labor Commissioner the pay scale to be used by such contractor and any of his subcontractors for work to be performed under such contract.

(f) Each employer subject to the provisions of this section or section 31-54 shall (1) keep, maintain and preserve such records relating to the wages and hours worked by each employee and a schedule of the occupation or work classification at which each mechanic, laborer or workman on the project is employed during each work day and week in such manner and form as the Labor Commissioner establishes to assure the proper payments due to such employees or employee welfare funds under this section or section 31-54, and (2) submit monthly to the contracting agency a certified payroll which shall consist of a complete copy of such records accompanied by a statement signed by the employer which indicates that (A) such records are correct; (B) the rate of wages paid to each mechanic, laborer or workman and the amount of payment or contributions paid or payable on behalf of each such employee to any employee welfare fund, as defined in subsection (h) of this section, are not less than the prevailing rate of wages and the amount of payment or contributions paid or payable on behalf of each such employee to any employee welfare fund, as determined by the Labor Commissioner pursuant to subsection (d) of this section, and not less than those required by the contract to be paid; (C) the employer has complied with the provisions of this section and section 31-54; (D) each such employee is covered by a workers' compensation insurance policy for the duration of his employment, which shall be demonstrated by submitting to the contracting agency the name of the workers' compensation insurance carrier covering each such employee, the effective and expiration dates of each policy and each policy number; (E) the employer does not receive kickbacks, as defined in 41 USC 52, from any employee or employee welfare fund; and (F) pursuant to the provisions of section 53a-157a, the employer is aware that filing a certified payroll which he knows to be false is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years, or both. This subsection shall not be construed to prohibit a general contractor from relying on the certification of a lower tier subcontractor, provided the general contractor shall not be exempted from the provisions of section 53a-157a if he knowingly relies upon a subcontractor's false certification. Notwithstanding the provisions of section 1-210, the certified payroll shall be considered a public record and every person shall have the right to inspect and copy such records in accordance with the provisions of section 1-212. The provisions of sections 31-59(a), 31-59(b), 31-66 and 31-69 which are not inconsistent with the provisions of this section or section 31-54 shall apply to this section. Failing to file a certified payroll pursuant to subdivision (2) of this subsection is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years, or both.

(g) The provisions of this section shall not apply where the total cost of all work to be performed by all contractors and subcontractors in connection with new construction of any public works project is less than four hundred thousand dollars or where the total cost of all work to be performed by all contractors and subcontractors in connection with any remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project is less than one hundred thousand dollars.

(h) As used in this section, section 31-54 and section 31-89a, "employee welfare fund" means any trust fund established by one or more employers and one or more labor organizations or one or more other third parties not affiliated with the employers to provide from moneys in the fund, whether through the purchase of insurance or annuity contracts or otherwise, benefits under an employee welfare plan; provided such term shall not include any such fund where the trustee, or all of the trustees, are subject to supervision by the Commissioner of Banking of this state or any other state or the Comptroller of the Currency of the United States or the Board of Governors of the Federal Reserve System, and "benefits under an employee

welfare plan" means one or more benefits or services under any plan established or maintained for employees or their families or dependents, or for both, including, but not limited to, medical, surgical or hospital care benefits; benefits in the event of sickness, accident, disability or death; benefits in the event of unemployment, or retirement benefits.

(1949 Rev., S. 7372; March, 1950, S. 3018d, 3019d; 1961, P.A. 486, S. 1; 1963, P.A. 240, S. 1; 1967, P.A. 494, S. 1; P.A. 73-566, S. 1; P.A. 75-90, S. 1, 2; P.A. 77-442; 77-614, S. 161, 610; P.A. 79-325; P.A. 80-482, S. 200, 348; P.A. 83- 537, S. 2; P.A. 85-355, S. 1-3; P.A. 87-9, S. 2, 3; P.A. 91-74, S. 1; 91-407, S. 40, 42; P.A. 93-392, S. 1; 93-435, S. 65, 95; P.A. 97-263, S. 14.)

History: 1961 act added provisions re political subdivision and employee welfare funds and added Subsecs. (f) and (g) re records and schedules which must be kept and re inapplicability of provisions where total cost of work is less than five thousand dollars; 1963 act substituted "alteration" for "remodeling" and "public works project" for references to public buildings; 1967 act added Subsec. (h) defining "employee welfare fund" and "benefits under an employee welfare plan" and substituted references to Subsec. (h) for references to Sec. 31-78; P.A. 73-566 amended Subsec. (b) to add provisions re termination of contract when discovery is made that employees are being paid less than the amount required under contract; P.A. 75-90 added references to remodeling, refurbishing, refurbishing and rehabilitation of projects in Subsecs. (a), (b) and (g); P.A. 77-442 added Subdiv. (2) in Subsec. (d) requiring commissioner to adopt and use appropriate and applicable prevailing wage rate determinations made by U.S. Secretary of Labor; P.A. 77-614 replaced bank commissioner with banking commissioner within the department of business regulation and made banking department the division of banking within that department, effective January 1, 1979; P.A. 79-325 replaced former provisions of Subsec. (g) which had rendered section inapplicable where total cost of project is less than fifty thousand dollars with provision rendering provisions inapplicable to new construction projects where total cost is less than fifty thousand dollars and to remodeling, refinishing etc. projects where total cost is less than ten thousand dollars; P.A. 80-482 restored banking division as independent department with commissioner as its head following abolition of business regulation department; P.A. 83-537 amended Subsec. (e) to require the local agent to contact the labor commissioner, to ascertain proper wage rates and payment levels, at least ten but not more than twenty days prior to putting the contract out to bid; P.A. 85-355 amended Subsec. (e) to require the agent to certify the total cost of work to be done on the public works project, and to require the contractor to certify the pay scale to be used on the project after having been awarded the contract and amended Subsec. (g) to make the prevailing wage requirements inapplicable to projects costing less than two hundred thousand dollars if new construction, or to projects costing less than fifty thousand dollars if remodeling; pursuant to P.A. 87-9 "banking commissioner" was changed editorially by the Revisors to "commissioner of banking"; P.A. 91-74 made a technical change in Subsec. (a), amended Subsec. (b) to increase fines from one hundred dollars to not less than two thousand five hundred dollars but not more than five thousand dollars and amended Subsec. (g) by changing the cost thresholds from two hundred thousand dollars to four hundred thousand dollars and from fifty thousand dollars to one hundred thousand dollars; P.A. 91-407 changed effective date of P.A. 91-74 from October 1, 1991, to July 1, 1991; P.A. 93-392 deleted reference to Sec. 51-53 in Subsec. (a) and added Subdiv. (2) in Subsec. (f) requiring employers subject to the state prevailing wage laws to file weekly certified payrolls with the contracting public agency and designating such certified payrolls as public records; P.A. 93-435 made technical change in Subsec. (a) to reinstate language in existence prior to amendment made by P.A. 93-392, effective June 28, 1993; P.A. 97-263 amended Subsec. (b) to add Subdivs. (1) and (2) disqualifying bidders from bidding on contracts with the state until certain requirements are met and to add provision permitting the withholding of payment of money to the contractor or subcontractor, amended Subsec. (d) to change "employee" to "person", amended Subsec. (f) to require monthly submission of certified payroll and to make failure to file a certified payroll a class D felony, and amended Subsec. (h) by redefining "employee welfare fund" to include one or more other third parties not affiliated with the employers.

See Sec. 7-112 re applicability of section to construction, remodeling or repair of public buildings by state agencies and political subdivisions of the state.

See Sec. 31-53a re (1) payments to mechanics, laborers and workmen from accrued payments withheld under the terms of a contract terminated pursuant to subsection (b) of this section, and their right of action and intervention, (2) the Labor Commissioner's duty to prepare and distribute lists of persons or firms found to be in violation of this section or barred from federal contracts pursuant to the Davis-Bacon Act, and (3) limitation on awarding of contracts to such persons or firms.

Where an employee is working under a contract which violates the statute or fails to provide for pay at least

equal to the prevailing wages as fixed by the board, the state is in no position to claim that, if he is injured, compensation should not be based on the prevailing wage as so determined. 135 C. 498. Cited. 223 C. 573, 574, 578, 580, 582–587, 591–594. Cited. 36 CA 29, 32, 38–40.

Subsec. (a): Cited. 223 C. 573, 581, 583, 585. Cited. 36 CA 29, 38, 40.

Subsec. (b): Cited. 223 C. 573, 583, 585. Cited. 36 CA 29, 30.

Subsec. (d): Cited. 223 C. 573, 584, 587, 590.

Subsec. (e): Cited. 223 C. 573, 584, 585.

Subsec. (f): Cited. 223 C. 573, 581, 584, 585, 592–594.

Subsec. (h): Cited. 44 CA 397.

Sec. 31-53a. List of violators. Limitation on awarding of contracts. Distribution of accrued payments. Right of action. (a) The State Comptroller or the contracting authority acting pursuant to section 31-53 is hereby authorized and directed to pay to mechanics, laborers and workmen from any accrued payments withheld under the terms of a contract terminated pursuant to subsection (b) of said section 31-53 any wages found to be due such mechanics, laborers and workmen pursuant to said section 31-53. The Labor Commissioner is further authorized and directed to distribute a list to all departments of the state and political subdivisions thereof giving the names of persons or firms whom he has found to have disregarded their obligations under said section 31-53 and section 31-76c to employees and subcontractors on public works projects or to have been barred from federal government contracts in accordance with the provisions of the Davis-Bacon Act, 49 Stat. 1011 (1931), 40 USC 276a-2. No contract shall be awarded by the state or any of its political subdivisions to the persons or firms appearing on this list or to any firm, corporation, partnership, or association in which such persons or firms have an interest until a period of up to three years, as determined by the Labor Commissioner, has elapsed from the date of publication of the list containing the names of such persons or firms.

(b) If the accrued payments withheld under the terms of a contract terminated pursuant to subsection (b) of section 31-53 are insufficient to reimburse all the mechanics, laborers and workmen with respect to whom there has been a failure to pay the wages required pursuant to said section 31-53, such mechanics, laborers and workmen shall have the right of action and of intervention against the contractor and his sureties conferred by law upon persons furnishing labor or materials, and in such proceedings it shall be no defense that such mechanics, laborers and workmen accepted or agreed to accept less than the required wages or that such persons voluntarily made refunds.

(P.A. 73-566, S. 2; P.A. 78-362, S. 1, 3; P.A. 91-74, S. 2; 91-407, S. 40, 42; P.A. 93-392, S. 2; P.A. 97-263, S. 15.)

History: P.A. 78-362 required that list distributed by commissioner to departments of the state and to its political subdivisions contain names of those who have been barred from federal government contracts in accordance with provisions of Davis-Bacon Act in Subsec. (a); P.A. 91-74 amended Subsec. (a) by increasing the period of ineligibility from three years to five years; P.A. 91-407 changed effective date of P.A. 91-74 from October 1, 1991, to July 1, 1991; P.A. 93-392 amended Subsec. (a) to add reference to Sec. 31-76c, to require that list distributed by labor commissioner to departments of the state and to its political subdivisions contain names of those who have violated overtime laws of the state on public works projects and to decrease the period of ineligibility from five to a maximum of three years, as determined by the commissioner; P.A. 97-263 incorporated changes to Sec. 31-53 by reference.

Cited. 223 C. 573, 574, 577, 580–583, 587, 592, 593.

**Appendix 3B: Dollar Threshold Amount for Contract Coverage under State Prevailing Wage Laws
(February 23, 2009)**

State	Threshold Amount
Alaska	\$2,000
Arkansas	75,000
California	1,000
Connecticut	400,000 for new construction 100,000 for remodeling
Delaware	100,000 for new construction 15,000 for remodeling
Hawaii	2,000
Illinois	None
Indiana	150,000
Kentucky	250,000
Maine	50,000
Maryland	500,000
Massachusetts	None
Michigan	None
Minnesota	25,000 where more than one trade is involved 2,500 where a single trade is involved
Missouri	None
Montana	25,000
Nebraska	None
Nevada	100,000
New Jersey	2,000 11,892 if the work is done for municipality
New Mexico	60,000
New York	None
Ohio	73,891 for new construction ¹ 22,166 for remodeling ¹
Oregon	50,000
Pennsylvania	25,000
Rhode Island	1,000
Tennessee	50,000
Texas	None
Vermont	100,000
Washington	None ²

West Virginia	None ³
Wisconsin State and Municipal contracts State highway contracts	234,000 where more than one trade is involved; 48,000 where a single trade is involved None
Wyoming	25,000

Notes:

Source: U.S. Department of Labor (<http://www.dol.gov/whd/state/dollar.htm> , accessed December 5, 2009)

¹Ohio. Beginning January 1, 1996, and every two years thereafter, threshold amounts will be adjusted according to the change in the U.S. Department of Commerce, Bureau of the Census Implicit Price Deflator for Construction, provided that no increase or decrease may exceed 6 percent for the two-year period.

²Washington. A separate law applicable only to State college/university construction provides for a \$25,000 threshold amount.

³West Virginia. A \$50,000 threshold is applicable for projects of the West Virginia Infrastructure and Jobs Development Council.

Chapter 4:

Connecticut Construction Industry: Recent Trends

4.1 Introduction

The construction industry typically accounts for about 5 percent of the total labor force and 10 percent of the male labor force. Construction is also a locomotive sector owing to strong forward and backward economic linkages into other sectors of the economy. Therefore, due to its size and its connections, the construction industry is closely watched by analysts. In this section, we summarize recent trends in construction output and employment in Connecticut, and see how these magnitudes varied with the ebb and flow of the business cycle. Information provided in this Chapter gives both a background for the report and a baseline for simulations measuring the impact of Connecticut's prevailing wage law on earnings and state tax revenues.

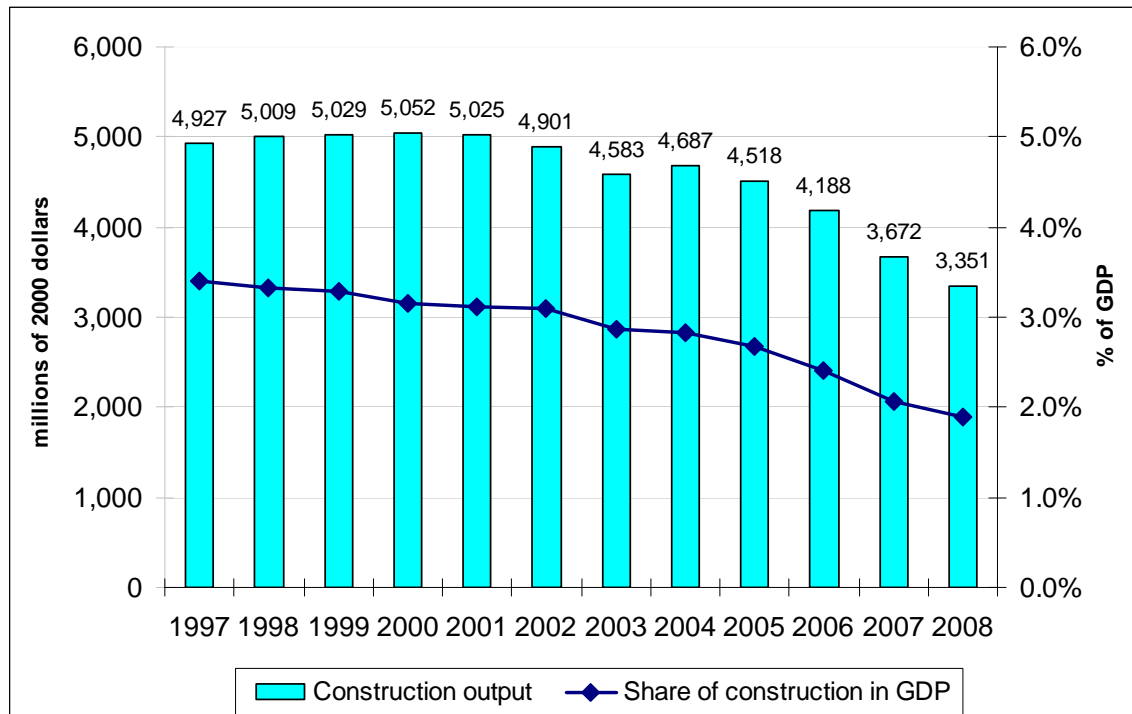
4.2 Output

Over the 1997-2008 period construction accounted for close to 3% of the Connecticut GDP. As shown in Figure 4.1, it peaked in 2000, reaching roughly \$5.1 billion in a \$160.4 billion economy (in 2000 dollars), and started declining afterwards. This decline was precipitous after 2004. The share of construction output in state GDP declined monotonically throughout the period from 3.4% in 1997 to 1.9% in 2008.

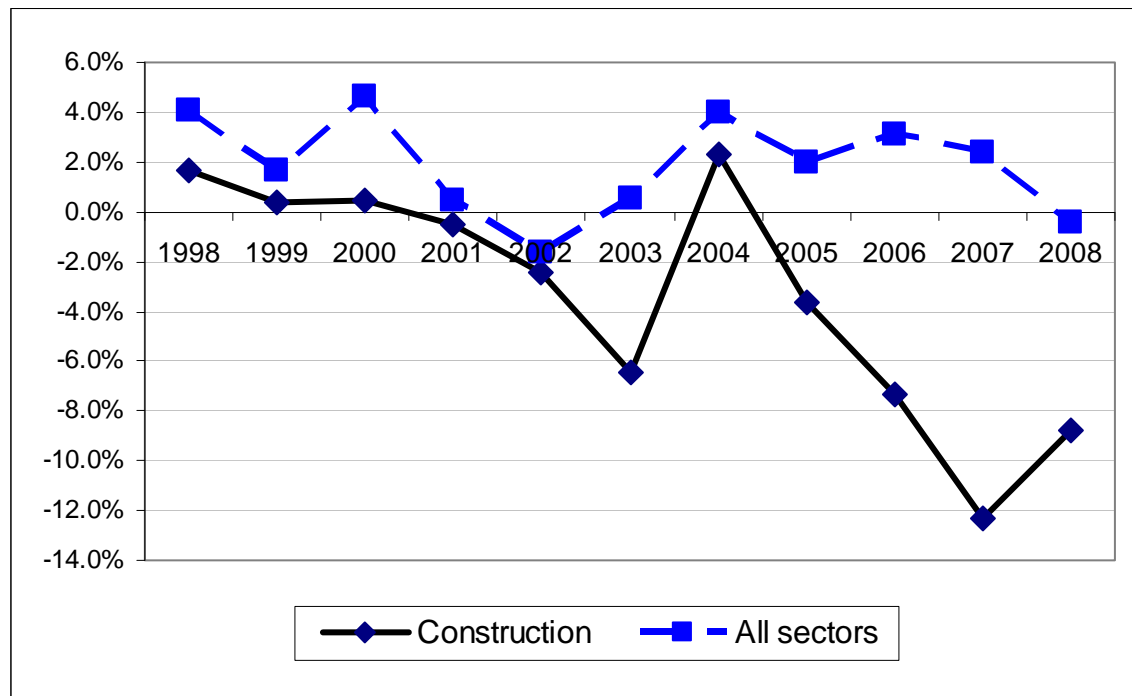
The reduction in the share of construction in the GDP is also observed in Figure 4.2 which illustrates the annual rates of change of state GDP and construction output. Construction was stagnant relative to the overall economy throughout the period, experiencing a lower rate of growth every year. Growth rate differential was in excess of five percentage points during the later years. Construction industry growth rates were negative for much of the period while this was true only in two years for the statewide GDP. In addition, the construction industry was far more unstable than the rest of the economy as witnessed by high variability of the annual growth rates in the latter part of the period. The contraction in construction was especially sharp after 2006, averaging almost -10% per annum. These observations indicate that the Connecticut construction

industry entered a recession far earlier than the rest of the economy in the first decade of the 2000s, and experienced a much stronger contraction than the rest of the economy. Construction is a “boom-and-bust” sector that is known to be more volatile than the rest of the economy and therefore these observations are in concordance with expectations.

Figure: 4.1 Value of Construction Output and Its Share in Connecticut GDP



Source: Department of Commerce, Bureau of Economic Analysis.

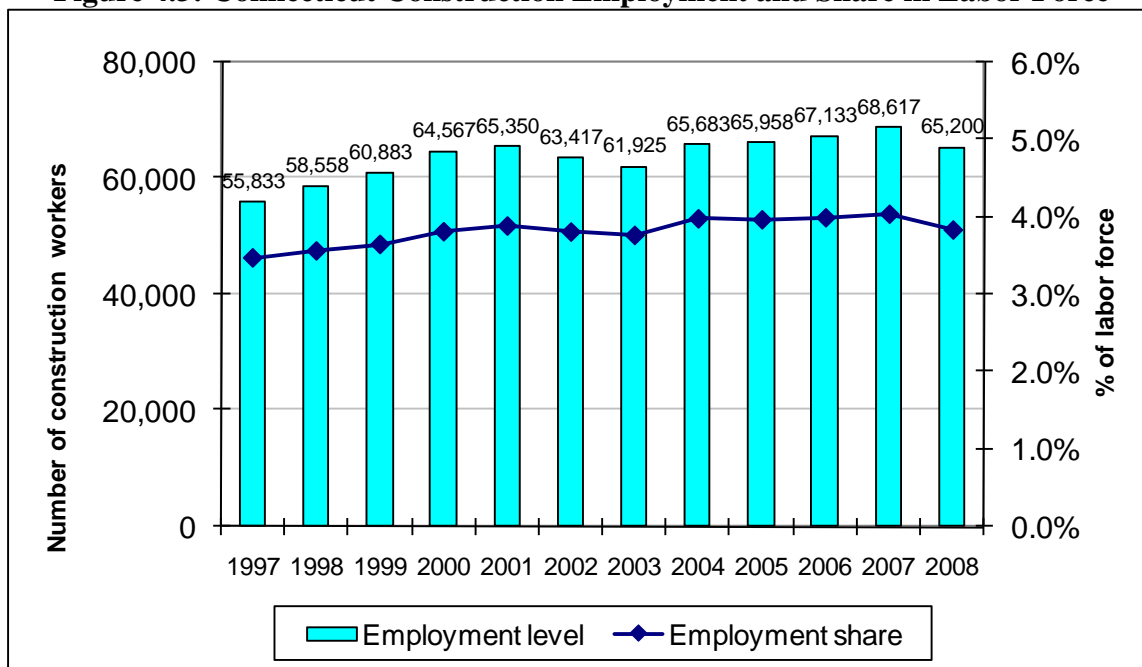
Figure 4.2: Annual Rates of Change of Output in Connecticut

Source: Department of Commerce, Bureau of Economic Analysis.

4.3 Employment

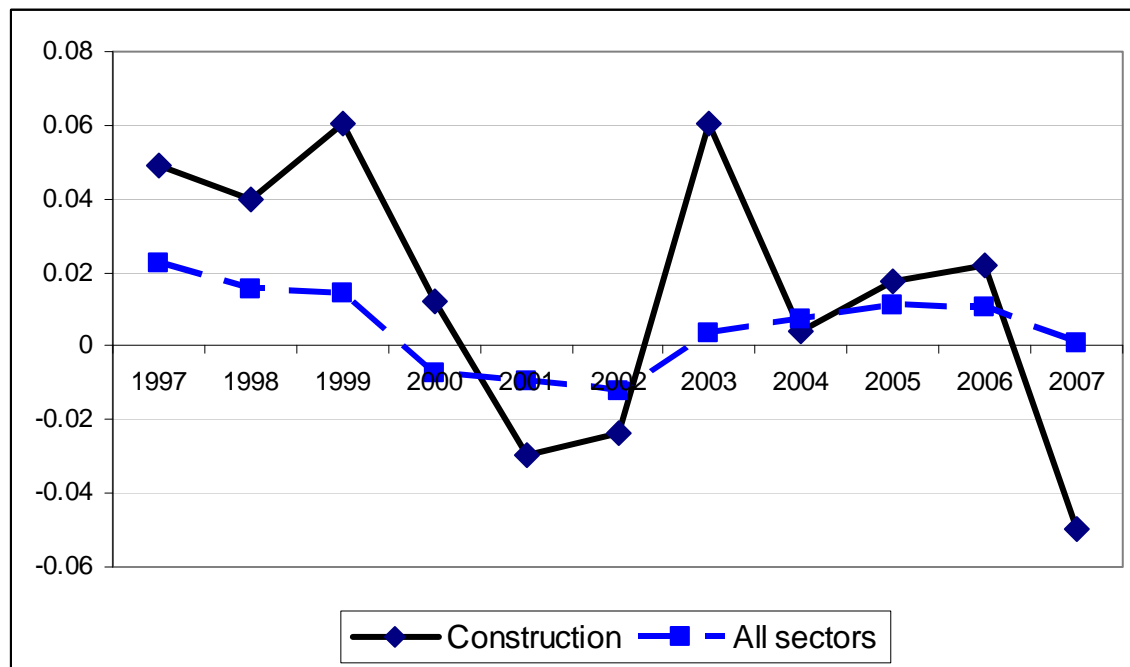
Construction output and employment are anticipated to be closely correlated and this turns out to be the case at least until 2004. Figure 4.3 shows that construction industry employment was on the rise in line with Figure 4.1 during the earlier years, and it shed workers during 2002-2003.⁹ After 2004, however, the correlation broke down, at least temporarily. Although construction output shrank in real terms, the industry continued adding numbers to employment until 2007, reaching a maximum of 68,617 in that year. Only after 2007 did construction employment decline.

⁹ These employment figures include all occupations, including blue- and white-collar workers.

Figure 4.3: Connecticut Construction Employment and Share in Labor Force

Source: Connecticut Department of Labor, Office of Research.

In comparison with the rest of the economy, construction employment was more volatile (Figure 4.4). Construction industry gained relatively more employment as overall employment expanded and lost more jobs when the latter contracted, but the net impact over the whole period was not a wash: the average annual growth rate of construction employment was almost three times higher than the growth rate of the overall employment. This effect may also be observed in the rising trend of the construction employment share (Figure 4.3). It increased from 3.8% in 1997 to 4.0% in 2007, before falling to 3.8% in the crisis year of 2008.

Figure 4.4: Annual Rates of Change of Employment in Connecticut

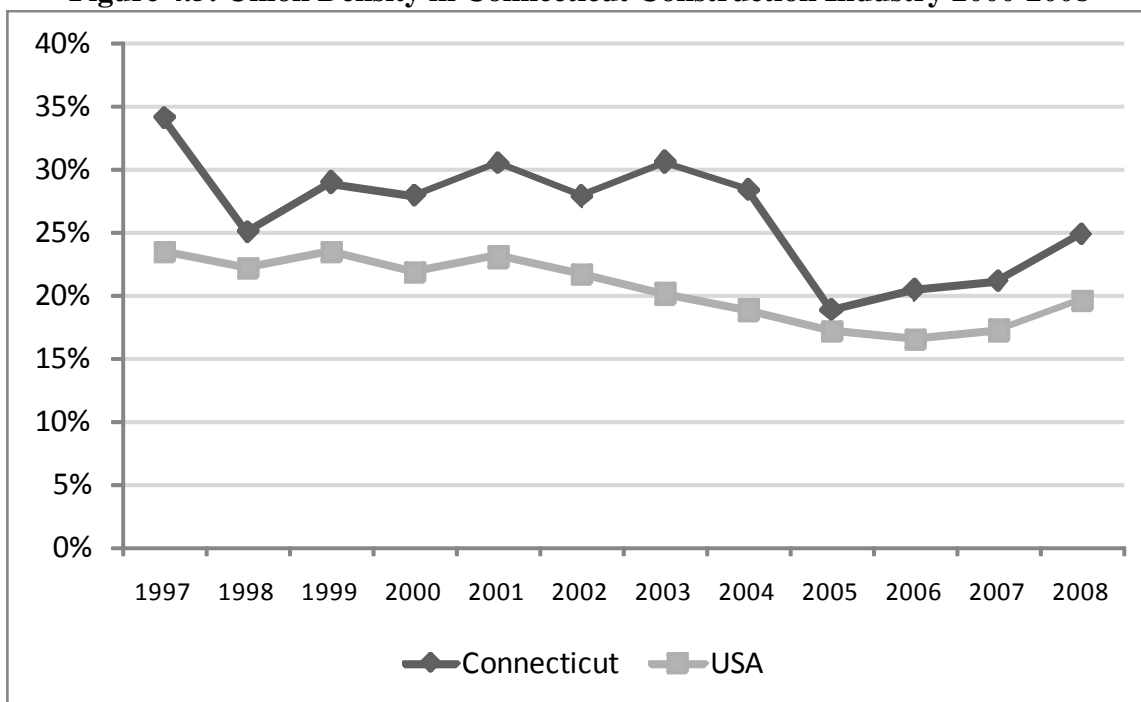
Source: Connecticut Department of Labor, Office of Research.

Comparison of output and employment figures yields two interesting results. First, until 2004, construction employment and output moved together, however, the relationship broke down from 2005 to 2007. Second, average labor productivities (defined as the ratio of the value of output to the number of employed in the overall economy) and construction industry productivities followed divergent trends. In 1997, these figures were very close, at around \$90,000 in the overall economy and \$88,000 in construction (in 2000 dollars). By 2008, average economy-wide productivity increased steadily to \$105,000, while in construction it followed a steep negative trend and dropped to \$51,000. These figures suggest that as the housing boom started collapsing in the mid-2000s, construction output declined precipitously. But employment in the sector responded with a lag and started declining only after 2007. Consequently, there was substantial underemployment in construction industry, especially after 2002. It is likely that most of this underemployment was in the residential construction sector. However as the contraction spread from the housing market to the rest of the economy after 2007, the non-residential market would be expected to be impacted as well.

4.4 Unionization

Figure 4.5 reports annual Connecticut construction industry union density figures from 1997 to 2008. These figures are calculated from Current Population Surveys (CPS) of the U.S. Census Bureau and the U.S. Bureau of Labor Statistics (CPS-ORG files compiled by the Center for Economic and Policy Research). The data cover only blue-collar construction workers, and excludes supervisors, white-collar workers, and office personnel as well as the self-employed. Also, the data do not segregate residential from non-residential construction. Non-residential construction will have a higher unionization rate than shown in Figure 4.5 while residential construction will have a lower unionization rate. An additional limitation of the data is that the state level CPS sample is quite small and therefore high degree of precision at that level cannot be expected from these numbers.

Figure 4.5: Union Density in Connecticut Construction Industry 2000-2008



Source: Current Population Survey – ORG files (authors' calculations from CERN compilations).

With these limitations in mind, two observations can be made. First, overall unionization moved along a downward trend until about 2006. This change is probably due primarily to the changing mix of residential and nonresidential construction over the period. With the post-2000 housing boom, overall average unionization rates fell due to

increased prominence of the relatively less-unionized residential sector. With the housing bubble bust, unionization rates increased with the relative rise in the importance of commercial, industrial and highway construction. Second, on average, one in four workers in construction was a union member over the period. In rough terms, that proportion could be doubled in non-residential construction.

For purposes of comparison, union density in the U.S. construction sector is also plotted in Figure 4.5. Overall construction industry union density was higher in Connecticut than in the U.S. Annual average union density in the U.S. was 20%, six percentage points below the Connecticut average. The changes in the U.S unionization rate follow a smoother pattern but the higher variability observed in Connecticut is likely to be an artifact of the small state sample size. Putting these year-to-year variations aside, the over-time trend in Connecticut parallels the pattern observed in the U.S. overall.

4.5 Conclusion

The Connecticut construction industry underwent a severe contraction in the last decade. Construction output, both in value and as a share of the state GDP has been declining since 2000. Construction employment has been more stable but it has also started shrinking in both absolute and relative terms with the onset of the 2007 recession. These changes present challenges to the construction industry. In a recession as deep as the current one, short-term reductions in workforce may influence long-term development patterns of the industry. A large outflow of workers from the industry may lower the stock of experienced, skilled workers in the long-run. If they are not replaced with new cohorts of well-trained workers, long-run productivity would drop and the quality of construction would suffer.

Furthermore, the recession may give impetus hiring of employees on a contractual basis in the unorganized sector. Contractual employees lower the labor cost to employers who would skimp on training and benefits. From a social perspective, this practice has costs that are borne by the society. When the industry externalizes these costs, the taxpayer ultimately ends up paying for the lower quality construction, higher maintenance of structures, a more hazardous job site, health expenditures of an underinsured workforce, and pensions of retirees.

Chapter 5:

Prevailing Wage Law and Construction Costs

5.1 Introduction

The principal justification for proposals to weaken or repeal prevailing wage laws is the argument that prevailing wage laws raise construction costs of public works projects. The wage regulation purportedly forces contractors to pay above-market wages, inflating construction costs. According to this view, these higher costs are borne by the state or local governments and ultimately by taxpayers. Hence prevailing wage regulations distribute income from the rest of the taxpaying public to a higher-paid segment of the construction workforce.

In the latest iteration of their efforts to weaken prevailing wage laws, CCM made several proposals to the legislature for enactment of a statewide moratorium on what it called the “epitome” of unfunded state mandates -- the prevailing wage law (CCM, 2009, p.20).

This moratorium is proposed:

...as a trial program to allocate savings to finance additional state and local infrastructure programs and to consider permanent structural reforms (CCM, 2009, p.3).

The expected savings reported by the CCM are based on figures from several studies. Below are the frequently mentioned studies by the CCM and their predictions of cost inflation due to the prevailing wage law (CCM, 2006):¹⁰

- 1995 Connecticut Advisory Commission on Intergovernmental Relations: upwards to 21% savings in total construction costs
- 1996 Legislative Program Review and Investigations: 4% to 7%
- Wharton School of Business: upwards to 30%
- Frank Gamrat (Allegheny Institute of Public Policy): 10%

¹⁰ CCM also lists the Kentucky Legislative Research Commission study (Wilson et al., 2001) as the source of 24% increase in the wage cost of state and local projects. This figure appears to be related to this study’s finding that 24% of union contractors reported in a survey that prevailing wages increased construction costs for the firm.

CCM (2006) reports that during the fiscal years 2005-06 and 2006-07, construction-related spending for schools (total bond authorization for school construction) was \$1.23 billion and Local Capital Improvement Program (LoCIP) was \$60 million. Using the savings estimates reported in the sources above, CMM concludes that the total savings from a moratorium on the law would have added up to \$71 to \$387 million over the two fiscal years.

Another local opponent of the statute, Connecticut Council of Small Towns (COST) asserts that the prevailing wage law raises costs by up to 20%.¹¹ Along the same lines, Yankee Institute for Public Policy, a Hartford-based think tank proposes to:

[g]ive school districts the ability to send a few children to private school as an alternative to expensive new school construction. In part due to the state law that requires workers on new schools or additions to be paid the bureaucrat-determined “prevailing wage,” even small Connecticut towns must bond \$30 million and up, simply to accommodate a slight projected increase in student enrollment. In a town of just 4,000 homes, the long term savings from forgoing construction, once interest on the bonding and other factors are taken into account, can top \$100 million (Andrews and Dowd, 2006).

Authors of this last study did not explain how these figures were reached or cite any sources.

Whatever the variations in estimates, CCM statements on the subject regularly conclude that the state and local governments would save upwards of 30% on construction projects if they were freed from the prevailing wage regulation (CCM 2006, 2009). Similar figures are mentioned by opponents of the prevailing wage laws from other states. Gary Johnson, Governor of New Mexico, set the cost-savings at 25% when he asserted in his state-of-the-state address in 1996 that:

“...without the constraint of the Little Davis-Bacon Act, we could build four schools instead of three for the same amount of money.” (State of the State Address, January 16, 1996)

Such arguments have obvious appeal, particularly during difficult fiscal periods. It is theoretically plausible that lower wages would reduce costs of public outlays for construction projects. If government could save significant sums of funds, money could

¹¹ http://ccst.virtualltownhall.net/pages/CCST_priorities/index (accessed November 27, 2009)

be used for more schools, other government programs, or tax cuts. The critical question, however, is what, in reality, is the magnitude of the savings?

In assessing the plausibility of such savings one needs to know the share of labor costs in total construction costs (excluding the purchase of land), the impact of a moratorium on wages, substitutability between more and less-skilled labor and capital, and the responsiveness of labor productivity to a declining wage rate. For instance, a 25% cost saving can be attained if: (1) labor costs constitute half of all construction costs; (2) labor costs decline by 50% in the absence of the prevailing wage law; (3) prevailing wage rates have no effect on the contractor's choice over the alternative techniques of production (that is, or alternative combinations of various grades of labor and capital that can be used on the job site); and (4) prevailing wages have no effect on labor productivity, experience, work ethic, or worker's willingness to assume responsibility for quality work on-the-job. In other words, one has to assume there is no relationship between wages paid and work performed.

Prior to contemplating the plausibility of these purported cost savings for Connecticut, the significance of labor substitution and labor productivity assumptions should be addressed. First, we consider the substitution effect. Standard economic theory based on profit maximizing firm behavior predicts that an increase in the price of a factor of production (any input), all else being constant, will cause substitution away from this factor of production towards other factors of production. Suppose three factors of production are used on a construction site: capital (tools, equipment, and machinery), skilled labor, and less-skilled labor; and suppose a legislative change forces contractors to pay less-skilled workers a higher wage. If the contractor continues using the same combination of capital, skilled and less-skilled labor, the cost of production would increase. However, as long as capital and skilled labor can be substituted for the less-skilled labor, a profit-maximizing or cost-minimizing contractor would find it advantageous to use fewer less-skilled labor, which is now *relatively* more expensive, and more capital and skilled labor, which are now *relatively* cheaper. Substitution of relatively more expensive factors of production with cheaper factors would partially offset the higher cost of production. So the cost of construction would rise, but not by as

much as it would in the absence of substituting more skilled labor and better equipment for less skilled labor.

Now let us consider the productivity effect, which has become prominent in economic theory in the last two decades. Efficiency wage theory points out that higher wages can actually raise the productivity of workers and reduce average costs by creating incentives to work harder or more responsibly or more efficiently (by raising the opportunity cost of losing the job), lowering turnover, creating an atmosphere of fairness, and improving morale. If these considerations are relevant to the construction industry, they would neutralize the cost-raising effect of the higher wage rate imposed on the contractor by statute.

In this Chapter we will focus first on the impact of prevailing wage laws on building costs and follow two threads of analysis to assess the potential cost savings of a moratorium. First, we will make use of data from the Census of Construction to gauge the share of labor in total contractor costs and potential levels of savings from a moratorium on the Connecticut prevailing wage law. In this measurement we will ignore substitution and productivity effects. Thus, the exercise will overstate potential savings from the moratorium on Connecticut prevailing wage law. Second, we will introduce the total cost effect that incorporates substitution and productivity effects. Since Connecticut did not experience a prevailing wage law regime change we cannot carry out this exercise using the state's data. Therefore, we will resort to the experience of other states for which law and no-law comparisons can be made. We will present time-series and cross-section evidence from the literature on the total cost effect of prevailing wage laws.

A caveat is in order on the definition of the total cost. The total cost effect defined above, even after incorporating substitution and productivity effects, is still limited because it does not take into consideration the long-term dynamic impact of prevailing wage legislation. The long-term effects relate to the development path of the construction industry. If low wages lead to higher turnover for the entire industry, lower training, and increasing use of less-experienced or less-skilled workers, higher injury and fatality rates, and lower quality craftsmanship, then prevailing wage laws produce external societal benefits by discouraging a low-wage, low-skill development path. The anticipated consequence of the low-wage, low-skill growth path is deteriorating quality of

construction and cost-overruns, which raise long-term maintenance costs even if the immediate costs of buildings would be lower. If prevailing wage regulations encourage the payment of health insurance and pension benefits in construction, then they reduce the social costs of construction associated with uncompensated care at hospitals and unmet needs of senior citizens. Also, if a local construction industry has difficulty providing technologically advanced infrastructure, then a low-wage development path for construction can also reduce the ability of the local economy to develop technically advanced and globally competitive local industries. In addition, in periods of economic downturn when state and federal public works expenditures are aimed not only at refurbishing public infrastructure but also stimulating local employment, the role of prevailing wage regulations in leveling the playing field for local contractors and local workers relative to contractors and workers coming from outside the area may play a significant role in insuring that government expenditures in fact stimulate local employment and local business activity. Any evaluation of the expected savings from eliminating prevailing wage mandates would not be complete without accounting for these factors. In the later chapters we will focus on these societal costs and benefits, focusing primarily on the relationship between prevailing wage laws and training, safety, and benefits.

5.2 Labor Costs in Connecticut According to the 2002 United States Census of Construction

The estimation of potential cost savings from repealing prevailing wage laws follows several distinct methodologies. The “wage-differential” approach first estimates the hypothetical wage that would be paid if the project were not covered by prevailing wage law. It is assumed the lower wage is fully passed on to the owner of the project as lower contract cost. With this calculation in hand, these studies then estimate the counterfactual construction cost that would exist in the absence of the law and compare it with the actual construction cost under the law. Most studies of this type conclude that the prevailing wage rate is biased upwards toward the union wage, and argue that the prevailing wage law raises the cost of construction. The “upwards to 30%” savings claims of the CCM are based on findings of studies that employ this methodology.

Most of these studies, however, generally suggest savings estimates that are far more modest. The estimated cost inflation attributable to the prevailing wage differential was on the order of 1.5 to 3% of public construction expenditure according to most studies (Gujarati, 1967; GAO, 1979, 1981; Goldfarb and Morrall, 1978, 1981; Gould and Bittlingmayer, 1980; Keller and Hartman, 2001). Few studies estimated more substantial savings figures. Vedder (1999) and Kersey (2007) of the Mackinac Center for Public Policy found a higher estimate of 10% savings for Michigan. Similarly, Glassman et al. (2008) of the Beacon Institute provide a higher estimate of 9.9% savings. In contrast, Bourdon and Levitt (1980) found no upward bias in wages originating from prevailing wages, and Allen (1983) argued that the prevailing wage effect is very weak, raising construction costs merely by 0.3 to 0.4%.

It is instructive to compare these estimates with figures from the report of the Legislative Program Review and Investigations Committee (1996) of the Connecticut General Assembly. First, based on the testimony of the Associated General Contractors and an examination of the Department of Transportation projects, the Committee determined that labor costs in covered projects accounted for 25% of the total cost of construction (excluding supervisory labor cost and independent contractors). Secondly, the Committee collected information on prevailing and non-prevailing wage rates and fringe benefits for 12 job classifications from the Connecticut Department of Labor, bids on state construction projects, collective bargaining agreements, open-shop contractors, and apprenticeship records. Analysis of the data indicated that the hourly differential in total compensation between prevailing and non-prevailing wage law jobs ranged from 20% to 40%. Based on these figures, the Committee estimated that the state prevailing wage law raised public construction cost by 4.2% to 7.1%.

Closer inspection of the studies that adopt the wage-differential method raises questions concerning their methodological adequacy.¹² For our purposes, an extended engagement with such idiosyncratic methodological shortcomings would be missing the forest for the trees.¹³ The more relevant problem is that this approach does not control for

¹² For instance the GAO (1979) and Glassman et al. (2008) studies are based on the argument that construction costs were inflated due to miscalculation of prevailing wage rates. If this is the case, then the fault lies not in the legislation but in its implementation.

¹³ For a critical review of this literature see Mahalia (2008)

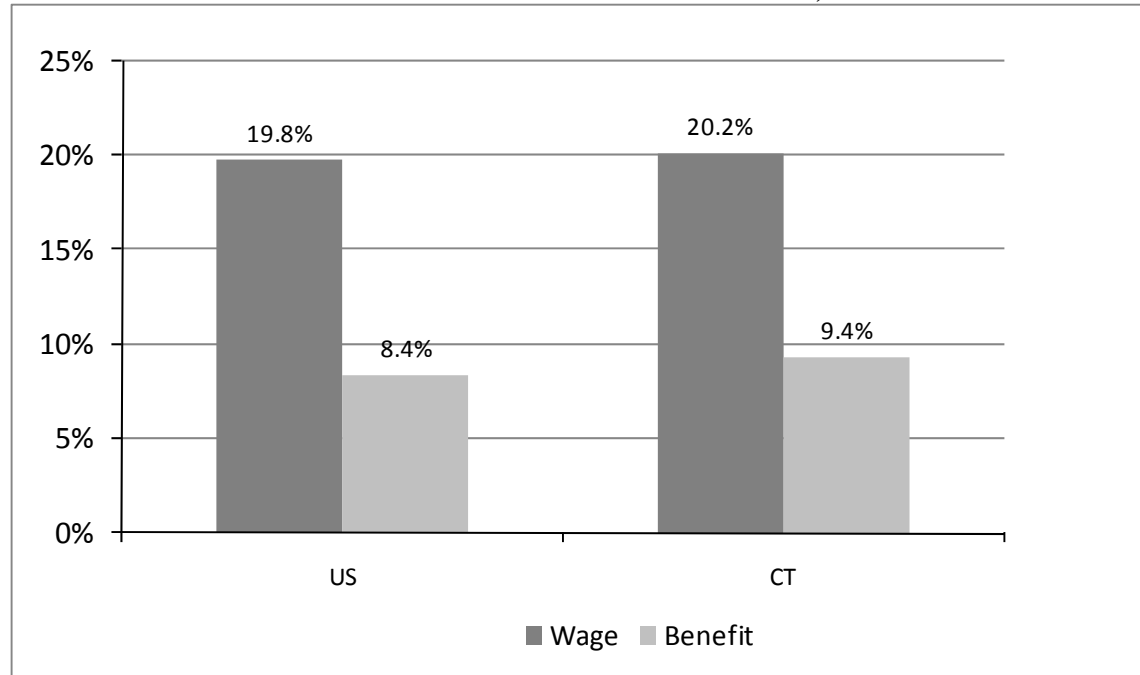
other factors that affect construction costs, including structure types and specifications, substitutability between inputs (e.g. different grades of labor and capital), and variability in productivity levels. In the remainder of this section, however, we will carry out a very simple analysis of potential cost savings of a repeal or moratorium under the conditions that are most favorable to the arguments of opponents of prevailing wage laws by ignoring other factors that affect the total project cost.

The amount of savings that would be attained by a cut in wages depends on the share of labor costs for the total cost of construction. If labor costs, including wages and benefits, constitute a large portion of the total cost, then the potential savings that would be realized by wage/benefit reductions are also going to be higher. In this section we will examine the share of labor costs in the cost of construction in Connecticut as well as the U.S. The data source for this exercise is the U.S. Census of Construction which surveys construction contractors in every state every five years. We will use the results of the 2002 survey, since the results of the most recent 2007 survey have yet to be released.

Figure 5.1 shows labor costs as a percent of total costs (excluding the purchase of land) broken down into wages and benefits in 2002 for the U.S. as a whole and Connecticut. Since we are interested in the potential effects of the repeal of the prevailing wage law we focus on the labor cost of production workers – laborers, mechanics, and workmen. For all construction in Connecticut, the wage cost of production workers, which excludes clerical and office workers, estimators, engineers, and architects, was 20.2%, which is very close to the figure for the overall U.S. construction industry. We cannot get as precise a measure of the share of benefits (including payroll taxes) in the total costs because the Census does not report the benefits for production and non-production workers separately. The share of benefits for all workers in the construction workforce was 9.4% in Connecticut and 8.4% in the U.S. Bearing in mind that the benefits were overstated, the share of labor costs of total production workers was likely to be around 27% of total construction costs if total benefits were one-third of the wages. The corresponding figure for the U.S. was around 26%.¹⁴

¹⁴ We made these calculations using the 2002 Census as well. The numbers were very similar.

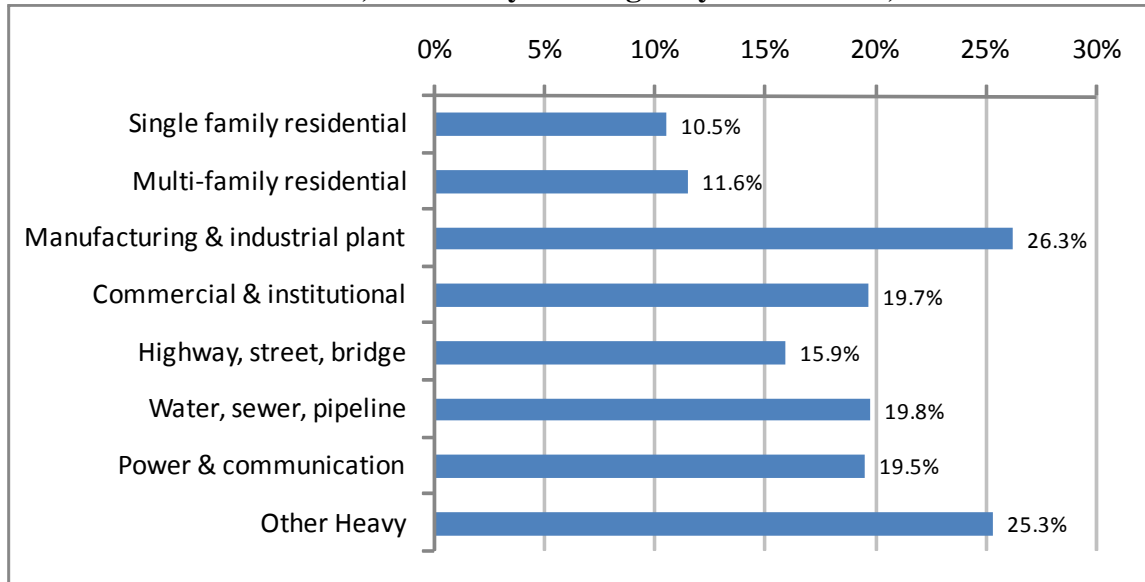
Figure 5.1: Labor Costs as a Percent of Total Costs for All Construction in the US and Connecticut, 2002



Source: U.S. Department of Commerce (2005a, 2005b).

The output of the construction industry is highly heterogeneous, ranging from single-family residences to thermo-electric plants. The technology of these different types of structures also varies widely in terms of both labor-intensity and skill-intensity. These variations cannot be observed in the aggregate shares reported in Figure 5.1. It is possible, however, to calculate the wage costs of production workers by contractor type from the Census of Construction. Figures 5.2 and 5.3 show the share of wage costs in total costs for specific types of general contractors and specialty trade contractors in Connecticut. It should be pointed out, however, that in this breakdown benefit figures are not available. To obtain the total labor cost, estimated benefits (including payroll taxes), which we expect to be approximately a third of the wage share, should be added to the reported figures.

Figure 5.2: Wage Costs as a Percent of Total Costs for Connecticut General Contractors, and Heavy and Highway Contractors, 2002



Source: U.S. Department of Commerce (2005a).

Several types of general contractors are of interest in the context of the prevailing wage discussion because they are more likely to be involved in public works projects. Among these are the highway, street, and bridge contractors. These contractors reported around 16% of their total costs as wage cost, which would imply that total labor costs were approximately 22%.

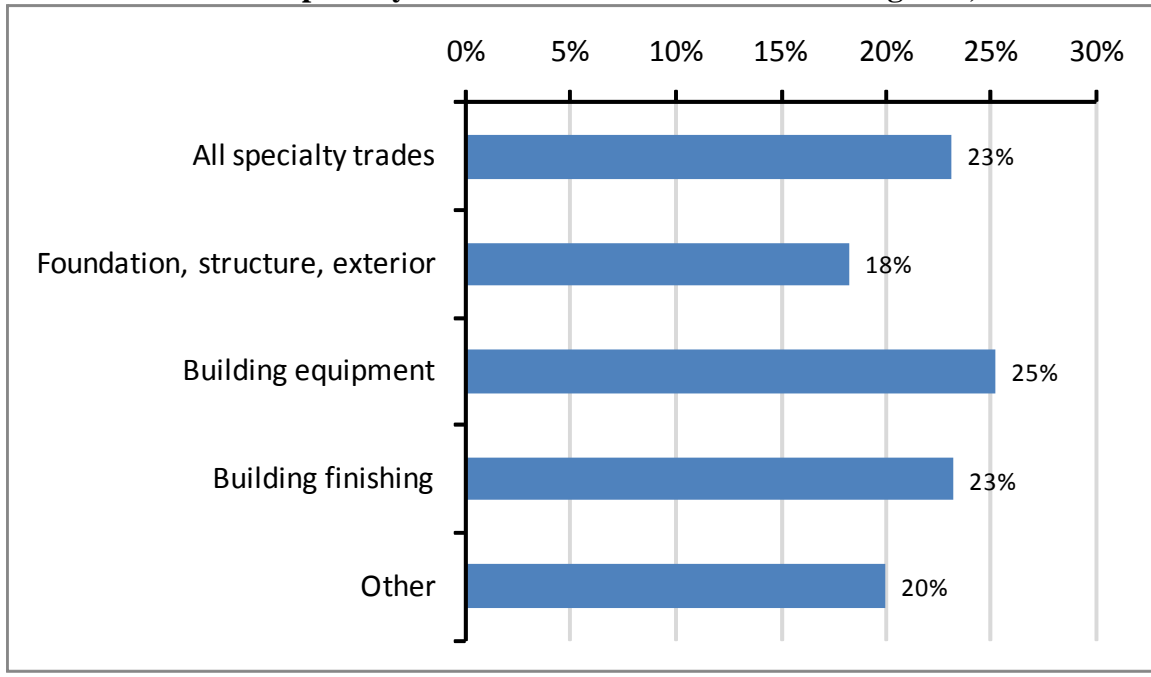
In discussions on prevailing wage, school construction projects have drawn special attention because they constitute the bulk of the public works construction. General contractors building schools are in the class of commercial and institutional general contractors (which also include office building, church, and other non-residential general building). For general contractors, wage costs accounted for 20% of the total cost of construction in 2002. Adding the share of benefits, total labor costs would account for about 27% of the value-added by the light-commercial contractors. The labor cost of the general contractor, however, is only a fraction of the total labor cost incurred in the construction of a school. Commercial and institutional general contractors sub-contract components of construction that require specialized skills to the specialty subcontractors. The share of labor costs in total cost is typically higher for specialty subcontractors. In the case of highway, street, and bridge construction, the reported wage shares reflect the wage cost accurately because they make limited use of subcontractors. However in the

case of school construction it is necessary to consider subcontractors in addition to general contractors.

Figures 5.3 and 5.4 show shares of labor costs in total costs for general categories of Connecticut specialty contractors and selected specialty trade contractors, respectively. Reported figures are based on data from the 2002 Census of Construction. On average (weighted by the net value-added in the trade) wage cost in specialty trades was 23% (which suggests a total labor share of around 31%), a figure that is higher than both highway, street, and bridge contractors, and the commercial/institutional building general contractors. It is not surprising that specialty trade contractors face a higher labor cost share. Extensive use of capital intensive technology raises labor productivity substantially and reduces labor costs in highway, street, bridge, tunnel construction. The use of labor-augmenting equipment that raises labor productivity permits the payment of higher wage rates, while at the same time cutting labor costs as a percent of total costs. A general contractor is more likely to buy materials for a project while a subcontractor may purchase a disproportionately low share of materials. A general contractor also assumes managerial functions and coordinates the construction site. The emphasis of a general contractor's work is focused more on design, bidding and organizing the production process via subcontracting, rather than direct production. Thus, the share of production labor costs in their total costs is expected to be lower.

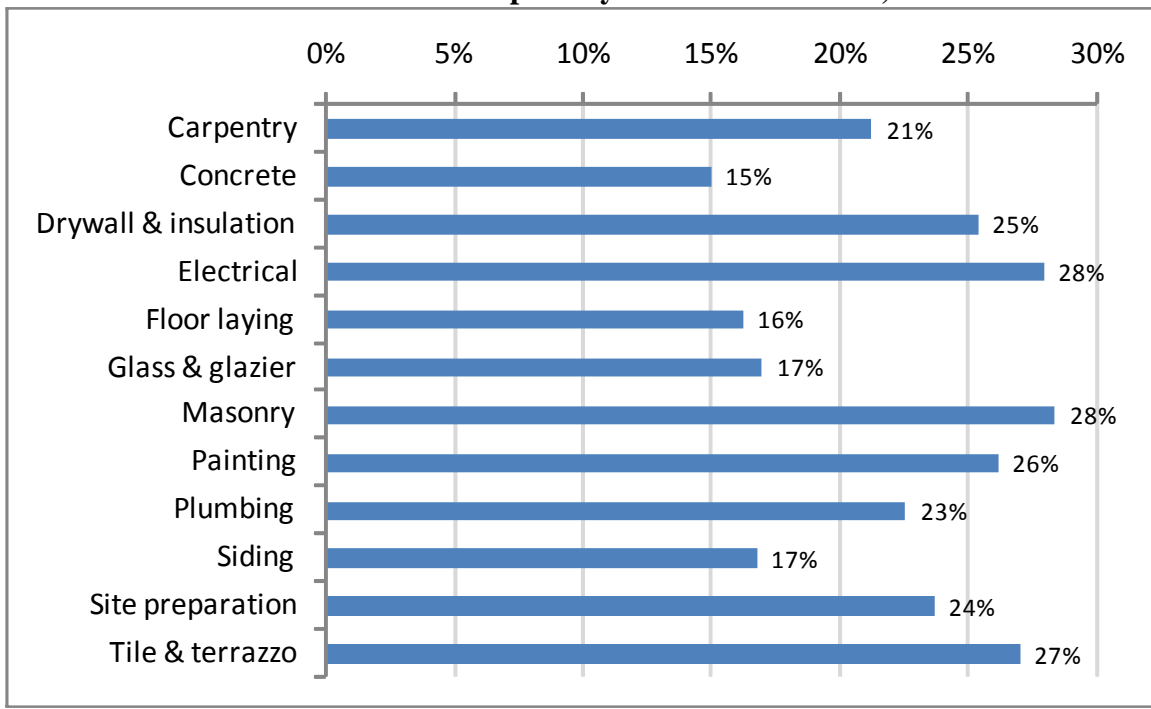
Among specialty trade contractors, labor costs are higher for building equipment (e.g. electrical, plumbing, HVAC) contractors, followed by building finishing (e.g. drywall and insulation, painting, flooring, tile and terrazzo, and finish carpentry) contractors.

Figure 5.3: Wage Costs as a Percent of Total Costs for Connecticut Specialty Trade Contractors – General Categories, 2002



Source: U.S. Department of Commerce (2005a).

Figure 5.4: Wage Costs as a Percent of Total Costs for Connecticut Selected Specialty Trade Contractors, 2002



Source: U.S. Department of Commerce (2005a).

Overall, these figures suggest that the share of production labor costs in total costs on public works projects in Connecticut range from a quarter to a third of the total costs paid by the contractors. To calculate the cost savings under different scenarios we set up Table 5.1. In this exercise we assume that labor costs (including wages and benefits and payroll taxes) account for 30% of total contractor costs (excluding the purchase of land). The first three columns of the Table report the initial cost of the hypothetical covered project (\$10 million) and the distribution of total cost between labor (\$3 million) and other inputs (\$7 million). These are assumed to remain unchanged in this exercise. Columns (D) and (E) list the hypothesized impact of the moratorium on the labor cost in percentage and dollar terms, respectively. In the first line we assume that the moratorium lowers labor cost by 95% or \$0.15 million; in the second line by 90% or \$0.30 million, and so forth. The last two columns list total cost in the absence of the prevailing wage law and cost savings, respectively, corresponding to each hypothesized change in the labor cost. According to the first line, a 95% decline in labor cost reduces the total cost to \$7.15 million (Column (F)) or by 28.5% (Column G)). A 10% decline in labor cost, on the other hand, yields cost savings of 3.0%.

Table 5.1: Hypothetical Effects of Prevailing Wage Law Moratorium on Labor and Total Construction Cost in Connecticut

Project cost (A)	Labor cost (B)	Other cost (C)	Impact of Moratorium			
			Decline in labor cost ¹ (D)	Labor cost ² (E)	Total Cost ³ (F)	Total Cost savings ⁴ (G)
\$10	\$3	\$7	95%	\$0.15	\$7.15	28.5%
\$10	\$3	\$7	90%	\$0.30	\$7.30	27.0%
\$10	\$3	\$7	75%	\$0.75	\$7.75	22.5%
\$10	\$3	\$7	50%	\$1.50	\$8.50	15.0%
\$10	\$3	\$7	25%	\$2.25	\$9.25	7.5%
\$10	\$3	\$7	10%	\$2.70	\$9.70	3.0%
\$10	\$3	\$7	5%	\$2.85	\$9.85	1.5%

Notes: These calculations assume that labor productivity is constant.

¹Hypothetical decline in total labor cost following the moratorium on prevailing wage law.

²B*(D-C).

³C + E.

⁴100*(F/A-1).

Table 5.1 shows that the “upwards to 30%” savings figure often mentioned by the opponents of the Connecticut prevailing wage law would be possible if the moratorium

lowers labor costs in excess of 90%. However much prevailing wage regulations may or may not inflate wages, such a figure is implausible. Total wages and benefits would have to fall by 95% with the suspension of prevailing wage rates in order for total construction costs to fall by 28.5%. To realize the anticipated savings cited by critics of Connecticut's prevailing wage law would essentially require construction workers to work for free. Thus, the expected cost savings reported by the opponents of the prevailing wage law are highly exaggerated.

Calculations based on the Construction Census suggest that savings from a moratorium on the law would be far more modest than opponents claim. A relatively more plausible 10% decline in labor cost, for instance, yields cost savings of 3.0%. Even this figure, however, is an overstatement the cost effect of the prevailing wage law because it is based on an assumption of no substitution between inputs to the production process. As mentioned above, higher wage rates induce contractors to substitute relatively less expensive capital and more-skilled labor for less-skilled labor. These substitutions offset some the costs associated with a higher wage rate. None of this is considered in the table above or in the arguments of prevailing wage critics.

Calculations in Table 5.1 also overlook the efficiency wage argument, which posits that higher wages may directly raise productivity by raising the opportunity cost of losing a job and giving incentives to workers to work harder and smarter. Figure 5.4 indicates substantial differences in wage shares among different trade contractors. These are in part due to the differences in the cost of materials. Another factor, however, is the differences in the levels of productivity. Higher productivity of a well-trained electrician can offset his or her higher wage rate, and consequently reduce labor costs as a percent of total costs. Low wage rates, when they are attributable to a lower level of skills, can result in higher labor costs as a percent of total costs.¹⁵ To explore the scope of these substitution and efficiency effects, we turn to the experience of other states that have altered their prevailing wage policies.

¹⁵ An interesting early study on school construction costs (Olsen 1979) found that in 1972, wage costs were 27.9% of the total contract costs in the Northeast and 27.3% in the South, although the average hourly wage was 48% higher in the Northeast. Olsen suggested that this outcome may be due to regional differences in productivity rates and in relative material costs.

5.3 Evidence on the Impact of Prevailing Wage Laws on Construction Costs from Other States and Canada

In this section we will present evidence from other states and Canada where data availability permits measurement of the direct cost effect of the prevailing wage law. These studies exploit the variations in costs that are attributable to adoption, suspension or repeal of the law in a particular state, or the comparison of costs of similar types of structures covered and not covered by the law within a state or across states. Findings of these experiments provide vital information on the costs and benefits of prevailing wage laws, especially when they filter out structure- and state-level peculiarities, and shed light on common patterns across states.

An earlier such study by Thieblot (1975) took a direct approach to estimate cost savings by taking advantage of President Nixon's temporary suspension of the Federal Davis-Bacon Act in 1971 for 34 days. He compared bid prices of projects tendered but not contracted in this period with their rebid prices in the following period. He concluded that in the absence of Davis-Bacon the lowest bid was lower by 0.63 percent. Later, Thieblot's re-examination of the data led him to the conclusion that savings in construction costs, including administration and wage costs, would be as much as 4.7% if the Davis-Bacon were repealed (Thieblot, 1986).

The primary challenge of law and no-law comparisons is that no two projects are exactly identical. In addition to coverage by the prevailing wage law, they differ in terms of structure type and specifications, scale, owner type, building materials, and location. The state of the local labor market would also cause variations in construction costs over space and time. Each of these confounding factors influences the cost of construction, and their effects should be filtered out in order to determine the cost impact of the law. Econometric analysis is the most widely-used method to isolate the independent effects of different factors that influence the cost of construction. It permits us to quantify the impact of the law on construction costs for projects that are identical in every other observable aspect.

The first econometric analysis of the cost effects of prevailing wages was conducted by Fraundorf et. al (1984). They estimated the impact of the Federal Davis-Bacon Act on total construction cost (controlling for type of structure, technical

characteristics, size, and geographic location) based on data from 215 federal and private construction projects in rural areas built between 1977 and 1978. This study found that the cost of federal projects was 26.1% higher than the private projects, and attributed this difference to the prevailing wage law. Thus, the study concluded, the repeal of the statute would reduce costs substantially. However, the Fraundorf study derived its projected cost savings from a comparison of public and private building costs. It does not necessarily follow that the cost difference is exclusively attributable to the prevailing wage law. For instance, public schools may be built to higher specification than some private schools, or a public courthouse compared to a private office building may differ due to the expected lifespan and quality of materials used in the courthouse. A conclusive result requires controlling for factors which may raise public project costs independently of the prevailing wage.

Prus (1996) addressed this issue by reproducing the Fraundorf study using the F.W. Dodge Corporation data. F.W. Dodge Corporation is the standard service provider of project information in the construction industry. Prus first compared the costs of public and private projects in prevailing wage law states using a methodology very similar to Fraundorf et al., and found that public projects were indeed more expensive than private projects, by 27.6%. Secondly, Prus applied the same analysis to cost differentials on public and private projects in non-prevailing wage law states and found that publicly financed projects were 32% more expensive than private projects. These findings indicate that public-private cost differential is attributable to factors other than the statute. Finally, when Prus pooled the data to estimate the independent effect of the law on construction costs, he found a positive but statistically insignificant impact of the law on public construction costs. Statistically insignificance means that the estimated impact of the law is likely to have occurred by chance. The odds are that if we repeat the analysis using different samples, we are likely to find that the prevailing wage law has *no* effect on school construction costs. If we counted on this estimate in suspending a prevailing wage regulation, we would likely find that the prevailing wage law has no effect on school

construction costs. Thus, Prus concluded the higher costs of public projects are not attributable to the presence of prevailing wage.¹⁶

School construction is the largest outlay of local governments and therefore has attracted much attention in prevailing wage studies. One of the most comprehensive econometric analyses is Philips (2001), which used Dodge information on the accepted bid or start costs of 6,568 school building projects to estimate the impact of the prevailing wage law on construction costs for all states over the years 1991 to 1999. Philips identified school building projects by state, the year and season in which construction started, the square-foot size of the project, the type of project (new construction, addition, alteration or additions and alterations), the number of stories, the type of school (elementary, middle or high school), owner (public or private), and the annual state unemployment rate as a measure of the stage of the local business cycle. This study finds that controlling for all other factors, public schools cost 8.6% more than private schools, but this result cannot be attributed to the effect of the prevailing wage law because it holds for all states, whether they have prevailing wage laws or not. The prevailing wage law itself raises school construction cost by 2.8%. This is a much smaller magnitude than the figures mentioned by the opponents of the law. Furthermore, this finding is not statistically significant, which means that it is likely to have occurred by chance and cannot be counted upon recurring.

Prus's (1999) comparison of public and private school construction costs across Mid-Atlantic States and Maryland counties with and without prevailing wage laws found that public school construction costs are higher regardless of coverage, and controlling for new buildings and renovations, structure types, building material and scale, the cost of construction in schools covered and not covered by the law are statistically the same.

¹⁶ Since the Dodge data are very commonly used in estimating the cost impact of prevailing wages, an important caveat is in order. Dodge data comparisons are based on the accepted-bid figures (the "start" cost) and therefore may suffer from myopia. Dodge data report accepted bids or start costs, not the final cost, and therefore do not include change orders, cost over-runs, or downstream maintenance costs. The bidding structure in public construction awards the contract to the lowest bidder. If the lowest bid is afforded by the contractor who uses inferior workmanship or shoddy materials, and this leads to low quality construction, then the up-front start-cost savings may not result eventually in final cost savings. To the extent that prevailing wage laws support a more skilled workforce and a higher quality construction, the long-run savings may dominate any immediate additional up-front costs.

Azari-Rad et al (2002, 2003) also reached similar results using nationwide samples of school construction data.

Kelsay et al. (2004) also used the Dodge database to compare construction costs on similar projects in the private and public sectors in twelve states of the Great Plains Region. This region includes both prevailing and non-prevailing states, which facilitates estimation of the effect of the law. Their sample includes all types of construction projects, not only schools, over the 1993-2002 period. Similar to Philips, they also used regression analysis to control for factors other than the prevailing wage law that influence costs. These factors included the type of construction, scale of the project in square-footage, and project owner (public or private). The analysis is based on 3,120 construction projects. Kelsay et al. estimated construction costs in public and private sector in separate samples of prevailing wage and non-prevailing wage states and found that public sector construction costs more. The difference in cost of construction was also statistically highly significant. Since this is true for both types of states they concluded that the cost differential is likely to be attributable to factors other than prevailing wage laws. Next they pooled all the states and estimated directly the impact of prevailing wage on construction costs. Similar to findings of Prus and Philips, they found that prevailing wage does not have a statistically significant impact on cost. Thus, they attribute higher public sector costs to the public sector being a more exacting owner than the private sector, requiring higher construction standards, and expecting a longer lifespan for public structures.

Among more recent econometric studies of the cost effect of prevailing wage laws the one exception that found significant cost difference is Dunn et al. (2005), which studied 205 subsidized housing projects across California, 30 of which were not covered by the law. They concluded that cost of covered projects were higher by as much as 19% to 37%. This study remains an outlier and its results are yet to be reproduced. It is not clear whether the results follow from peculiarities of the low-income housing sector, the data, or the methodology. It is worth noting, however, that in light of the discussion of the previous section and Table 5.1, the magnitude of savings found in Dunn et al. appear to be implausible. Also, because the study focused on a peculiar and uncommon type of

public construction, it is not clear that results for low-income housing units are transferable to road or school construction.

Another group of studies exploited overtime variations in a given locality in econometric research instead of across regional variations. These studies estimated how construction costs changed following the implementation of new wage legislation. Repeals of state prevailing wage laws and the enactment of Skills Development and Fair Wage Policy in British Columbia are the focal case studies.

In March 1992, the province of British Columbia, Canada, passed the Skills Development and Fair Wage Policy, which is the Canadian counterpart to the American prevailing wage legislation. This change provides another opportunity to test the impact of wage legislation by comparing construction costs before and after the policy change. Bilginsoy and Philips (2000) used a sample of 56 schools, about half of which were built before and half after the implementation of the law to estimate the impact on final cost. The final square-meter bid costs were higher by 16% in the post-law period. Once confounding factors -- primarily the business cycle, the number of competitors, the type of school, the location, and a time trend reflecting secular changes -- were controlled for, the cost differential declined to 6% and it was not statistically significantly different from zero. Thus, the overwhelming majority of cross-location and over-time econometric studies concluded that, once other factors are controlled for, the impact of prevailing wage legislation on construction cost is statistically zero.

5.4 Evidence on the Impact of Prevailing Wage Laws on Labor

Productivity and Construction Quality from Other States and Canada

The case for prevailing wages laws is built in part on the claim that a better paid workforce is a more productive, higher-quality workforce, with lower rates of turnover, more construction experience, and less absenteeism. In response to implementation of prevailing wages, contractors shift to more capital and/or skilled-labor intensive techniques of production by utilizing relatively more of these factors of production and less of lower-skilled workers. Substitution of capital and/or skilled labor for less skilled workers partially offsets the higher cost of production. Furthermore, payment of higher wages may have a direct positive impact on the productivity of workers, which further

makes up for the higher wages and benefits. Efficiency wage theories in labor economics emphasize that the wage exchange is not a purely technological relationship whereby the employer is guaranteed a certain amount of output per each hour of labor purchased. Productivity of labor and average costs are determined (in addition to the technical aspects of work e.g. employee's skills, and tools and technology in use) by the rate of labor turnover, workers' commitment to the project, incentives to work harder, and sociological considerations such as perception of fairness. Higher wages would induce workers to work harder and lower average cost per unit of output due to a combination of factors including the higher opportunity cost of losing the job and better morale.¹⁷

Measurement of productivity in construction is a challenging task because the final output is intrinsically highly heterogeneous. There have been, however, several creditable attempts. Allen (1984) found that unionized labor in the construction industry is between 44% and 52% more productive than non-union labor, controlling for firm size, geographical differences, education, and age. Allen (1987) found that a unionized workforce has a productivity advantage on large projects, such as office buildings, of at least 30% due to economies of scale, though the differential is not as large on schools and hospitals (0-20%). He also found that the union-nonunion productivity differential was declining over time. In an analysis of value added per employee in construction, Walter (1992) found that construction productivity was 25% higher in states with a prevailing wage law than in states without it.

Duncan, Philips, and Prus (2006) used British Columbia school data to assess the impact of the implementation of the "fair wage" law on the input mix that would raise costs or reduce output. Following the implementation of the fair wage legislation, average efficiency for covered projects initially dropped from 94.6% to 86.6%. After 17 months, the average efficiency of covered projects increased back to 99.8%, and consequently there was no difference in costs between the covered and uncovered projects. These results indicate that in covered projects non-union contractors either shifted to crew mixes that utilized more productive workers or used fair wages as efficiency wages to encourage higher productivity.

¹⁷ In the long-run, a high-wage growth path would also contribute to productivity by maintaining a highly skilled workforce through enhanced training. We address training consequences of prevailing wage laws in Chapter 7.

The evidence on the quality of construction is more mixed. Philips et al. (2005) provide some evidence supporting the claim that prevailing wage improves the quality of construction. In the decade following the repeal of the Utah prevailing wage law, the amount of cost over-runs on state road construction tripled. In Ohio, however, research based on user surveys found no difference in the quality of construction after suspension of the prevailing wage law for school construction (Ohio Legislative Service Commission, 2002). The Kentucky Legislative Research Commission also found no conclusive evidence that higher wages ensure higher quality (Wilson et al. 2001).

5.5 Conclusion

The simple arithmetic of labor costs as a percent of total construction costs handcuffs critics who assert that eliminating prevailing wage regulations will result in substantial, measurable, and tangible savings to the state. This Chapter showed that the “upwards to 30%” savings in total construction costs claim, repeated frequently by the critics of the Connecticut law, is not supported empirically. If labor costs are 30% of the total public works construction cost in Connecticut, and under the extreme assumptions of no substitution and productivity effects (which favors the critics of the law), “upwards of 30%” savings in the absence of law is possible only if labor costs decline in excess of 90%. Specifically, a 27% reduction in total costs requires labor costs to decline by 90%, and a 28.5% reduction in total costs is possible if labor cost is lower by 95%. In other words, to get a 30% savings in total costs from labor whose slice of the total cost pie is about 30%, everyone would have to start working almost for free. A 10% decline in labor costs due to a substantial wage cut and the elimination of health insurance and pension benefits would reduce total cost merely by 3%. Given that construction costs fluctuate with the business cycle, the availability of contractors, the type of project and a host of other factors, after the fact it would be very difficult to know whether these hypothetical savings of 3% associated with a moratorium on prevailing wage regulations were even achieved.

Furthermore, these hypothetical “savings” ignore other factors that offset the higher wage rates created by the prevailing wage law. First, substitution of more skill- and capital-intensive techniques of construction is expected to moderate the cost

inflation. Second, to the extent that workers are more productive in a higher wage regime, the productivity savings associated with more experience, less turnover and a better work ethic can offset higher wage rates. This possibility is often discounted on grounds that if the higher wage regime were more profitable (or cost-minimizing), then contractors would have already adopted it in a competitive market. The flaw in this argument is that it overlooks the possibility of multiple equilibria in the marketplace. Where contractors compete over wages to win public contracts, no single employer can afford to adopt a high-wage, high-productivity, high-quality path. In the rush to the bottom to offer the lowest bid, the industry settles on a low-grade equilibrium. When wages are taken out of the bidding process by the prevailing wage law, however, contractors compete over productivity and quality to reduce costs, and the economy moves to a higher grade equilibrium. In this chapter we gave examples from the relevant literature. There is a preponderance of evidence from comparisons of costs before and after the change of the law and across covered and uncovered projects which confirms that, once other factors are controlled for, cost of construction with and without prevailing wage laws are statistically identical.

Chapter 6:

The Impact of Prevailing Wage Law on the Connecticut State Income Level and Tax Revenue

6.1 Introduction

The objective of this section is to examine how a moratorium on prevailing wage law would affect the annual earnings of Connecticut construction workers, state level income, and state tax revenues. For this purpose, we will establish a baseline for the state construction industry, a representative set of values for annual employment and average earnings in construction, and carry out hypothetical simulations to measure how these baseline values respond to a policy change. This hypothetical exercise requires knowledge of the magnitudes of structural parameters of the economy, including responsiveness of individual construction earnings to a moratorium, the impact of a change in average construction wage on construction employment, and the spillover effect of the change in the total construction income on the rest of the state economy. Given these structural parameters, we will then calculate the impact of moratorium on state income and tax revenues.

In section 6.2 we describe our methodology and how we chose the baseline state economy and the structural parameters of the economy. In section 6.3, we report our calculations of the impact of a prevailing wage law moratorium on construction industry and aggregate income in Connecticut. Section 6.4 reports the estimated effects of the moratorium on state income and sales tax revenues. We summarize findings in section 6.5.

6.2 Methodology

In constructing counterfactuals to estimate the impact of a moratorium, we first need a baseline of construction industry employment and earnings. Our choice of the baseline follows from the trends reported in Chapter 4. In order to isolate the effects of year-to-year fluctuations in the level of economic activity, we chose the average values of employment and earnings over a four-year period (2005-2008) as the baseline. We

obtained employment and earnings figures from the US Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW) data on the Connecticut construction industry workers who were covered by unemployment insurance.¹⁸ The annual average construction industry employment was 66,778. We expressed annual earnings in 2008 prices using the Northeast urban consumer price index (CUUR0100SA0). The baseline annual income in construction was \$57,211.

Estimation of construction income in the absence of prevailing wage law requires information on responses of the earnings and employment level to a moratorium. We consider the impact on earnings first. When the prevailing wage law is no longer effective, the individual income is expected to decline. The literature provides several estimates of the size of this impact based on data from states which repealed their prevailing wage laws. Philips et al. (1995) found an 8% difference between the wages in the strong and weak law states. Kessler and Katz (2001) estimated that construction worker wages declined by 2 to 4% in the long-run after the repeal. Based on average income levels in nine repeal states, Kelsay et al. (2004) reported that average annual earnings of a construction worker declined by 5% after the repeal.

The impact of the repeal on compensation of construction worker income is an important factor in determining the impact on the overall economy. The estimates of the impact on earnings reported above, however, are distributed over a spectrum. Since Connecticut construction industry union density is higher than the U.S average, the income effect of a moratorium is likely to be higher in the state in comparison with the nationwide estimates. Recognizing that there does not exist a commonly agreed upon figure by researchers, we decided to calculate the overall income effects of a hypothetical moratorium under two alternative estimates of the law's impact on compensation. According to the first hypothetical, the repeal of the law lowers annual compensation by 4%; under the alternative, compensation declines by 8%.

The repeal of the law would lower construction wages and, given the employment level, would lower total earnings in the industry. Employment would not, however, remain the same because employers would hire more workers at lower wages, and a higher employment level, in turn, would affect total industry earnings positively. The

¹⁸ See http://www.ctdol.state.ct.us/lmi/202/202state_2008.htm (accessed November 15, 2009).

second parameter we need to know in order to simulate how industry income level would respond to a moratorium is the elasticity of employment with respect to wages. The literature does not provide any estimates of this parameter for the construction industry or for Connecticut economy. However, many studies estimated this figure for the U.S. labor markets.¹⁹ While there is some variation among the findings of these studies, there is agreement that the figure is quite small. It is commonly accepted that a one-percent change in the wage rate raises employment by 0.2%, and this is the figure we will use in our estimations.

6.3 Impact of the Prevailing Wage Law on the State Income Level

The baseline total annual income in construction industry is the product of baseline employment and average earnings. The impact of prevailing wage law on construction sector income is the difference between this baseline figure and the product of the hypothetical no-law industry income calculated from earnings and employment levels based on the parameters presented above.

These calculations are reported in Table 6.1. The first two lines of Table 6.1 state baseline annual employment and earnings. The baseline construction wage bill is \$3,820 million. The first column of the Table is based on the low-end estimate that wages would decline by 4% in the absence of the prevailing wage law. A moratorium would reduce annual earnings per worker by \$2,288 ($\$57,212 \times 0.04$) down to \$54,923, and raise employment by 534 ($66,778 \times 0.04 \times 0.2$) to 67,312. Thus, the wage bill in the absence of law is \$3,697 million ($\$54,923 \times 67,312$). These figures imply that the net income loss to the construction sector would be close to \$214 million or 3.2% of the total baseline construction payroll. Under the high-end estimate of 8%, reported in the second column, individual income declines to \$57,212, and employment rises to 67,847. Total income loss in the construction sector would be \$249 million or 6.5% of the baseline payroll.

¹⁹ See, for instance, Kniesner and Goldsmith (1987) and Belman (1988)

Table 6.1: Estimated Impact of Prevailing Wage Law Moratorium on State Income

	Wage decline following the repeal ¹	
	4%	8%
Baseline construction employment ²	66,778	66,778
Baseline annual income in construction ^{2,3}	\$57,212	\$57,212
Baseline construction income	\$3,820,502,936	\$3,820,502,936
<i>Effects of repeal on construction industry</i>		
Annual income in construction	\$54,923	\$52,635
Construction employment ⁴	67,312	67,847
Construction income	\$3,696,976,976	\$3,571,084,208
Net income loss	\$123,478,091	\$249,401,294
<i>Effects of moratorium on state income level</i>		
Earnings multiplier	1.7314	1.7314
Net state income loss	\$213,789,967	\$431,813,400

Notes:

¹Hypothetical declines in wage following findings of Kessler and Katz (2001) and Philips et al. (1995), respectively.

²Based on annual average over 2005-2008.

³All incomes are in 2008 dollars.

⁴The elasticity of employment with respect to wage is assumed to be 0.2.

The adverse impact of the moratorium on income is not limited to the construction industry. Since construction workers spend their incomes by purchasing goods and services produced in other industries, the decline in construction sector income spills over to other sectors of the state economy as well. The magnitude of this spillover effect is captured by the multiplier effect which measures the impact of a \$1 decline in one sector's income on the overall economy. For this purpose we use regional input-output multipliers (RIMS II) estimated by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce. These multipliers are estimated to evaluate the economic impact of any public or private sector project on a region by taking into account the inter-industry relationships within the region.²⁰ The region can be defined anywhere from a group of counties to the national level, and multipliers can be estimated for any industry or group of counties. For our purposes we defined the region as the state of Connecticut.

The BEA provides two types of multipliers. We use Type II multiplier which accounts for the induced impacts of the spending of earnings within the region. Based on the 2006 annual input-output table for the U.S and 2006 regional data, the BEA estimated the value of the earnings multiplier for the Connecticut construction industry as 1.7314,

²⁰For more information, see <http://www.bea.gov/scb/pdf/regional/perinc/meth/rims2.pdf> (accessed November 22, 2009)

which means that a \$1 decrease in construction earnings lowers total earnings in Connecticut by \$1.7314. This value implies that the \$123 million decline construction sector income, under the low-end estimate of 4%, reduces the total state income by \$214 million once the linkages from construction to the rest of the economy are taken into account. At the high-end estimate, the total decline in Connecticut income is \$432 million.

6.4 Impact on State Tax Revenues

As the state income level declines, so do state tax revenues. In this section we calculate the magnitude of the impact of policy change on state tax revenues. We will estimate the impact on both state income tax revenue and sales tax collections, under the low- and high-end estimates presented in the previous section.

The first column of Table 6.2 reports state tax revenue losses if a moratorium lowers workers' earnings by 4%. The marginal state income tax rate in Connecticut is 5%. Following the findings reported on Table 6.1, the total state income loss of \$213 million would cost the state \$10.7 million in income tax revenue annually. If wages decline by 8% following the moratorium, then the income tax loss would be almost twice as much, \$21.6 million.

Table 6.2: Estimated Impact of Prevailing Wage Law Moratorium on State Tax Revenue

	4%	8%
Net state income loss	\$213,779,967	\$431,813,400
<i>Impact on state income tax revenue</i>		
Income tax rate	5.0%	5.0%
State income tax revenue loss	\$10,689,498	\$21,590,670
<i>Impact on sales tax revenue</i>		
Sales tax rate	6.0%	6.0%
State sales tax base ¹	34.6%	34.6%
State sales tax loss	\$4,438,280	\$8,964,446
Net state income loss	\$15,127,778	\$30,555,116

Notes:

¹As percentage of income.

See also Table 6.1.

Connecticut's sales tax rate is 6%. In order to calculate sales tax loss due to declining income we need to know the state sales tax base for Connecticut. Bruce and

Fox (2000) estimated the 2003 Connecticut state sales tax base as 34.6% of personal income. In the absence of other estimates for sales tax base, we used this figure in estimating state sales tax losses. Under these assumptions, the repeal of the prevailing wage law would reduce sales tax revenue by about \$4.4 million under the low-end estimate of 4% decline in construction earnings. The total decline in state tax revenue, the sum of income and sales tax losses, adds up to \$15.1 million. Under the high-end estimate of 8%, sales tax revenue declines by \$9.0 million and the total state tax revenue declines by \$30.6 million.

6.5 Conclusion

In this Chapter we calculated the impact of the prevailing wage law on Connecticut income levels and tax revenues. It should be kept in mind that the income losses are defined narrowly in this Chapter. Specifically latent effects of prevailing wage laws on building and workforce quality are ignored and only the wage and employment effects are considered. Using Connecticut's annual average construction employment and earnings over the 2005-2008 period as the baseline, we find that in the absence of prevailing wage laws:

- Construction sector earnings will be lower in Connecticut by \$123 to \$249 million (in 2008 dollars), or 3.2% to 6.5% of the construction sector payroll. This is an annually recurring loss which depends on the low- and high-end estimates of wage response to the prevailing wage;
- The above estimate is only the loss of income to Connecticut construction workers. The total income effect for the state is higher because construction workers, in turn, spend much of their income in Connecticut and thus create a demand for the work of others. Taking this induced effect into account, the total lost income to Connecticut workers inside and outside of construction ranges from \$214 to \$432 million annually, again based on the low-and-high-end estimates of wage response to the prevailing wage;
- The state would lose \$10.7 to \$21.6 million in income tax revenue annually;
- The state would lose \$4.4 to \$9.0 million in sales tax revenue annually.

Any hypothetical savings to the taxpayer associated with weakening or eliminating prevailing wage mandates have to be offset by counterbalancing hypothetical losses in state tax revenues as well as hypothetical losses to Connecticut citizens due to lower income. These losses are often ignored by the opponents of prevailing wage laws who focus exclusively on the immediate construction cost savings. In this Chapter we found that those losses in state tax revenue and income are substantial.

Chapter 7:

Connecticut Prevailing Wage Law and Apprenticeship Training

7.1. Introduction

Over the last 30 years, skilled labor shortage has been an ongoing concern for construction industry insiders. Various organizations and research centers, including the Business Roundtable (1982, 1997), Construction Industry Institute (1992a, 1992b), Center of Construction Industry (Tucker et al. 1999), and National Joint Labor-Management Committee on Skill Shortages in Construction Industry (2000), as well as industry trade papers and newsletters such as *Engineering News Record* (1995) and Cockshaw Report (1999) drew attention to the skilled workforce shortage as a worsening problem and the main challenge facing the construction industry. In view of the looming skills shortage problem and low apprentice graduation rates, the Government Accountability Office recently researched apprenticeship program quality and outcomes, and recommended better monitoring and oversight of registered apprenticeship programs by the Department of Labor (GAO, 2005). The quality and extent of training are contested issues in the construction industry. The organized sector, which has historically carried out the task of training new workers through formal apprenticeship programs, accuses the open-shop contractors of not providing bona fide training and poaching on workers trained through collaborative efforts of unions and contractors. The leaders of the open-shop sector, on the other hand, claim that their collective efforts led by contractor associations provide effective training to workers and help in mitigating the crisis.

Economic booms of the 1990s and 2000s obviously expanded the demand for construction services and amplified the skill crisis in construction but they were not the precipitating factors. Skill shortage has been a chronic problem for the last three decades, a period that has witnessed several deep recessions by post-World War II standards. Thus, the problem is not cyclical. Although the recent 2007-2009 contraction may have

alleviated the skill shortage crisis temporarily, structural causes are still in place and will reappear once the current recession passes.

The sources of the skill shortage lie in the underproduction of training in transferable skills in competitive markets (or what economists call “market failure in training”), and the relative expansion of the open-shop sector that has transformed industrial relations in the U.S. construction industry. In the organized sector, collective bargaining provides an institutional structure to coordinate the training activities of contractors and reduce the risk of losing a trained worker to a competitor. Lacking such an institution, training is a far riskier proposition for the individual open shop contractor because its cost would not be recouped when the competing contractor cherry-picks the trained worker. Thus, changes in public policy that discourage collective bargaining in construction adversely affect training and exacerbate skills shortages.

In this chapter we will first describe in Section 7.2 market failure in training in general terms and explain its relevance to apprenticeship training in the U.S. construction industry. The crux of the matter is whether the performance of apprenticeship programs organized by the open-shop employers (henceforth unilateral programs) is comparable to that of the programs organized jointly by unions and management (henceforth joint programs). In Section 7.3 we compare unilateral and joint programs in the Connecticut construction industry in terms of their recruitment efforts and occupational distribution. Section 7.4 compares the two types of programs in terms of attrition and retention rates. We turn our attention to ethnic/racial minorities in Section 7.5. Prevailing wage laws have long been criticized for being an instrument of exclusion of minorities from union construction workforce. In this section we will examine how minority apprentices fare in each type of program in terms of participation and retention and assess the opportunities for minorities to obtain skilled careers through apprenticeships. We summarize our findings in Section 7.6.

7.2 Market Failure in Training and the Construction Industry

A well-known problem in economics is that competitive markets undersupply training when skills are transferable from one firm to another. Training is an investment from the perspective of both the employer, who provides skills, and the trainee. Upon

completion of training, the value of the worker's hourly output would be higher relative to that of the unskilled worker, and this productivity differential is the return due to training. In order for the employer and the worker to participate in training, they must share this return such that both have net gains after recouping their investment costs.

The cost of training for the employer is the output lost due to diverting tools, equipment, material, and human resources from production to training workers. The firm would recover this cost if it can lay claim to a portion of the additional output produced by the trained worker, usually by the trained worker accepting to work for a wage lower than what he or she can command in the marketplace. If the firm is a single-buyer in the labor market or if the worker is bonded to the firm through firm-specificity of skills, financial agreement, legal requirement, or any other means, then the employer collects returns on his or her investment. However, if skills are transferable to other firms, and the worker can leave the firm without penalty, then any competitor may attract the trained worker by offering a higher wage. Under the latter circumstances, the employer has no incentive to finance training and would be willing to deliver training only if the trainee pays for all the costs.

The worker can pay for the costs by accepting lower trainee wages or directly reimbursing the employer. However, unlike higher education, the trainee cannot borrow against future income and is likely to face liquidity constraints. Uncertainty over whether the promised training would be delivered or the trainee would be taken advantage of as cheap labor, provides further disincentives for self-financed training. Thus, the competitive market does not provide sufficient incentives to either side to engage in training, and pushes the economy into a low-skill, low-productivity, and low-wage equilibrium trap.

In the construction industry market failure can hit with a vengeance because temporariness of jobs and projects, as well as the weak bond between the contractor and the employee serve to exacerbate the risks faced by both the provider and the recipient of training. Construction is a "boom-bust" industry in many respects. Specific contractors have to gear up and slow down their operations based on their own particular fortunes at winning construction bids. The industry is also organized along a complicated structure of subcontracting. Subcontracting is a way for a contractor to allow a more expert

subcontractor to handle a specialized part of a project, including requisitioning of workers. It is also a way to shift liability. Training is a long-term process, which is difficult to plan and carry out in a context where much of the thinking is short-term.²¹ The boom-bust, ramp-up/ramp-down, subcontracting structure of construction makes most contractors focus on the short-run. The individual contractor's solution to the skilled labor shortage problem becomes one of bidding craftsmen away from someone else.

The organized sector of the industry circumvents the market failure problem by sponsoring multi-employer apprenticeship programs in which all contractors signatory to collective bargaining agreement fund training, and a joint apprenticeship committee, composed of representatives of the union and employers in equal numbers, administer the program. Apprentices also share the costs of training by accepting lower training wages. The employers' risk of losing on the investment is reduced because they do not train any specific individual but a pool of workers from which any contractor can draw from. The predetermined curriculum and requirements of the program, established mentoring systems, and access to collective bargaining mechanisms, on the other hand, reduce the workers' risk of not receiving the promised training.

A similar structure that alleviates the market failure in training does not exist in the open-shop sector of the industry. While there are attempts to establish multi-employer programs in this sector under the leadership of trade associations, participation in these programs are voluntary.

7.3 Incoming Apprentices in Connecticut, 2000-2008

We use data from Connecticut State Apprenticeship Council over the 2000-2008 period to compare the performance of joint and unilateral programs in recruitment and retention of apprentices. The total numbers of new entrants to apprenticeship training programs in Connecticut between 2000 and 2008 are reported in Figure 7.1. These data are broken down by the apprentices entering joint and unilateral programs. There is a sharp increase in the number of new entrants after 2003. It is likely that this jump is due

²¹ Completion of most construction industry apprenticeship programs require 6,000 to 10,000 hours of on-the-job training.

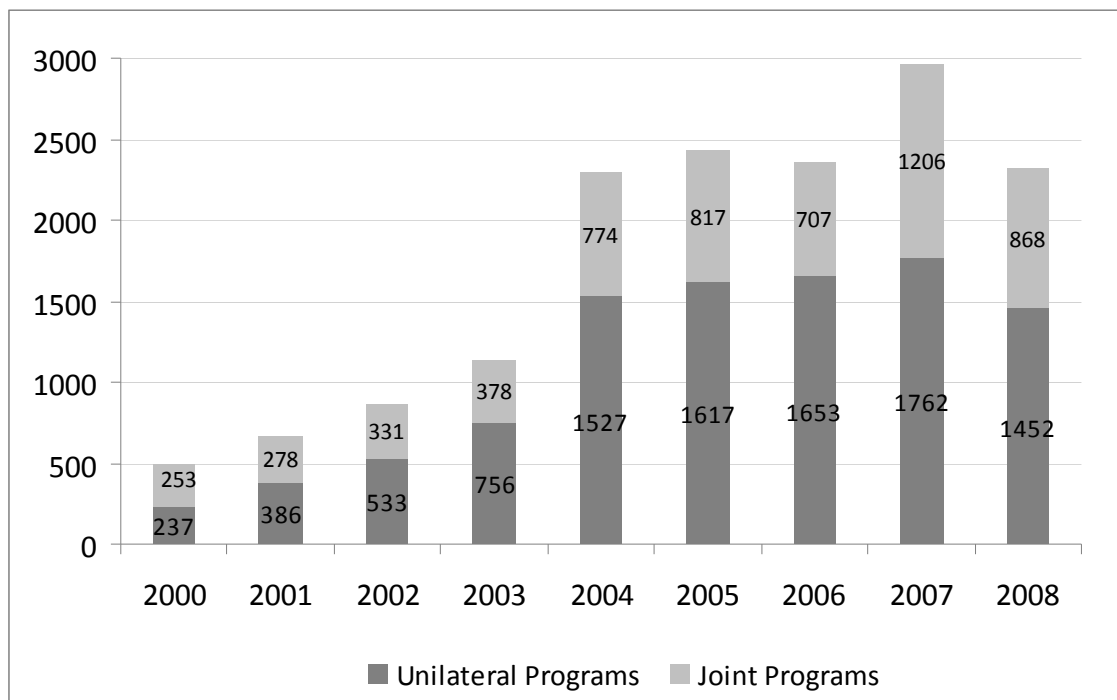
to missing data in the earlier period. This problem notwithstanding, some patterns emerge from these figures.

The majority of the incoming Connecticut apprentices (60%) were enrolled in unilateral employer programs. The fact that most of the new apprentices started training in unilateral programs makes Connecticut very unique in the U.S. According to data from 32 states over the 1989-2003, about 30% of the new apprentices were enrolled in unilateral programs (Bilginsoy, 2005). Other studies on apprenticeship programs from Massachusetts (Argyres and Moir, 2008), Maryland (Johansson and Feinstein, 2005), Oregon (Byrd and Weinstein, 2005), and Kentucky (Londrigan and Wise, 1997) yielded similar results. In neighboring Massachusetts, for instance, between 1997 and 2007, only 25% of apprentices were registered in unilateral programs. This is in part a reflection of the dissimilar skills compositions of the union and open-shop workforces. The average nonunion contractor relies upon a limited number of skilled workers who lead a large number of unskilled workers through the construction process. For example, a skilled nonunion electrician may oversee a set of unskilled wire-pullers. In contrast, unions target creation and maintenance of a homogenous workforce where a worker has skills in all aspects of his or her trade. What appears to make the Connecticut experience different is the state law that restricts electrical and mechanical work to either apprentices or journey-level workers.²² In Connecticut, unskilled workers and “helpers” who are commonly employed as informal trainees in the open-shop sector of the industry cannot be used to pull wire, drill holes for pipe, cut pipe, install fixtures and so forth. Thus, open-shop contractors have no choice but to make extensive use of apprentices in these trades.

In view of Figure 4.5 which suggested that around a quarter of the Connecticut construction workforce was unionized over the period, it is also noteworthy that a disproportionate share of apprenticeship training is carried out by the organized sector of the industry.

²² See <http://www.cga.ct.gov/2009/pub/chap393.htm#Sec20-330.htm>, Sections Sec 20-334 and sec 20-334a(2)(A).

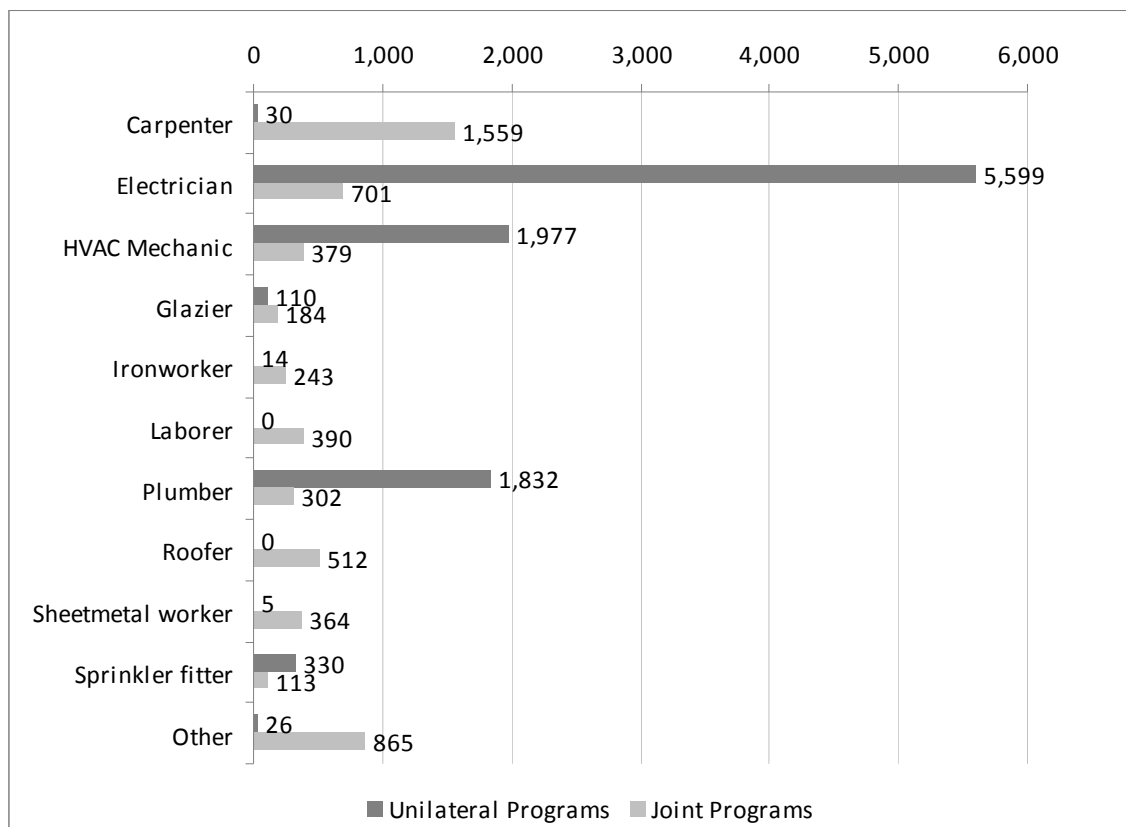
Figure 7.1: New Apprentices Entering Unilateral and Joint Programs in Connecticut, 2000-2008



Source: Connecticut State Apprenticeship Council (authors' calculations).

In order to explore whether the large number of unilateral program apprentices is a reflection of occupational regulations, we report occupational distribution of new apprentices in Connecticut in Figure 7.2. As observed here, electrical, HVAC, plumbing, and sprinkler fitter trades accounted for 98% of all incoming apprentices in unilateral programs. In contrast, only 27% of joint program apprentices were registered in programs in these four occupations. Thus, joint programs train apprentices over a wider range of occupations and contribute to the maintenance of the overall skilled construction workforce. The large number of apprentices in unilateral programs appears as an artifact of licensing requirements in Connecticut. In order to make a more decisive statement on the relative contributions of the organized and open-shop sector on training, however, it is necessary to see how apprentices perform after they enter the program, a question we will turn to in Section 7.4.

Figure 7.2: Distribution of New Apprentices in Connecticut by Occupation, 2000-2008



Source: Connecticut State Apprenticeship Council (authors' calculations).

7.4 Attrition and Retention Rates in Connecticut Apprenticeship Programs

Next, we turn to the relative performance of unilateral and joint programs in terms of attrition and retention of apprentices. Program completion requirements vary by occupation and program type – ranging from 4,000 to 10,000 hours of on-the-job training and 288 to 720 hours of related in-class theoretical instruction. Table 7.1 shows the distribution of apprentices over the 2000-2008 period by selected program length. The modal program length is 8,000 hours. Mean program length is 7,600 in unilateral and 7,400 hours in joint programs, which is an insignificant difference. What is more noteworthy is that the variation of program duration is substantially wider in the joint programs, owing primarily to the wider variety of trades in which joint programs offer

apprenticeship programs. Some joint electrician programs also have a 10,000-hour requirement although the more common length in this occupation is 8,000 hours.

Table 7.1: Distribution of Incoming Connecticut Apprentices by Program Length

Program length ¹	Unilateral Programs	Joint Programs	All Programs
4,000	9.9%	8.8%	9.5%
5,000	0.2	4.3	1.6
6,000	1.4	17.6	7.1
8,000	87.9	43.9	72.5
8,500	0.1	12.6	4.5
9,000	0.0	6.7	2.4
10,000	0.2	5.3	2.0

Notes:

¹Measured in hours of on-the-job training

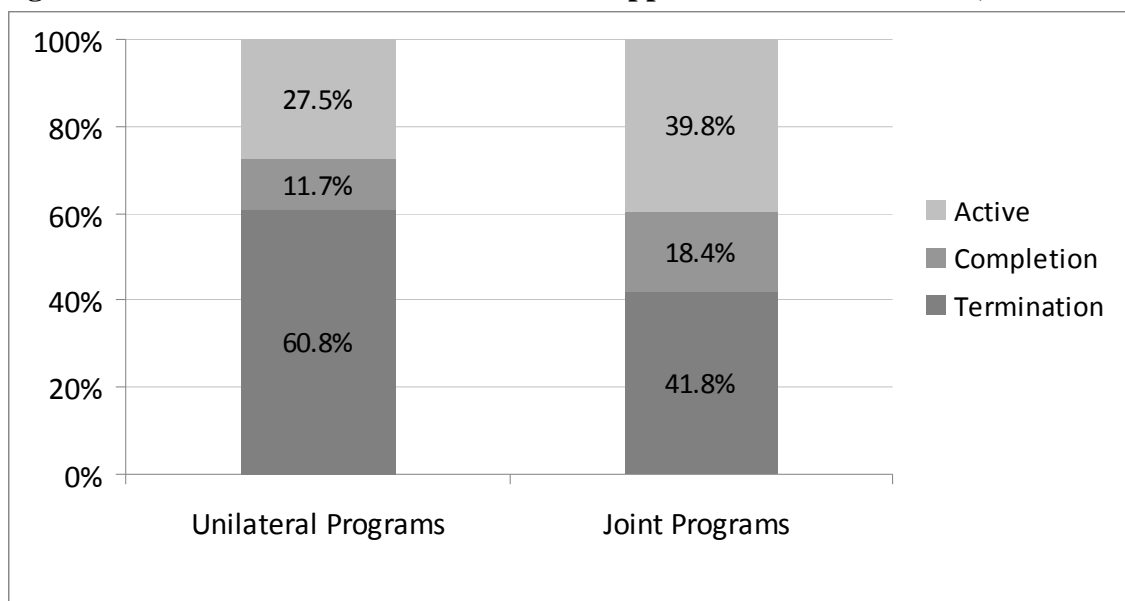
Table 7.1 suggests that an apprentice working full-time (2,000 hours annually) on training jobs can complete training in two to five years, depending on the program length. The full-time work condition is often not satisfied and program completion usually takes a longer period of time. Apprentices with previous experience, on the other hand, can get credit towards completion requirements, which can speed up training. It is clear, however, that the completion of apprenticeship requires commitment from both the apprentice and the program sponsor. It is a challenge to create this mutual commitment in an environment where worker-employer connection is weak. Regulations may force employers to hire apprentices for certain jobs, but once the job is completed, there is little incentive for the individual contractor to continue sponsoring the apprentice. In joint union-management programs it is the program that sponsors the apprentice, not a specific employer. Once a job is completed, the apprentice can continue training at a different job site with a different contractor. Furthermore, the ability to work with multiple contractors at various job sites permits job rotation and facilitates acquisition of expertise in all aspects of the trade.

In the open-shop sector there is no institution comparable to collective bargaining that makes investment in training obligatory. Since the 1970s, however, open-shop contractor associations have strived via their local chapters to promote cooperation and coordination across individual contractors, and have organized multiple-employer

unilateral programs that facilitate internalizing the benefits of training. These programs may be viewed as an effort to meet the training needs of the sector by compelling employers to pool resources and to provide training via greater job opportunities in a wider range of occupations. The most prominent among the providers is the Associated Builders and Contractors (ABC). Training committees of the local chapters carry out the daily tasks of the program, including arrangement of in-class training. Comparison of their performances the U.S. indicates that multi-employer unilateral programs indeed have higher retention rates than single-employer unilateral programs. However, they still do not perform as well as the joint programs in graduating apprentices (Bilginsoy, 2007).

Connecticut apprenticeship data do not permit distinguishing between multi- and single-employer unilateral programs. Thus, the following analysis is limited to the comparison of unilateral programs as a whole with the joint programs.

Figure 7.3 identifies three outcomes for apprentices who started training between 2000 and 2008 as of the last day of data compilation (December 31, 2008). “Active” apprentices are those who are still training in apprenticeship programs as of the last date of data compilation; “Completion” refers to those who completed all requirements and graduated from the training program; and “Termination” refers to those who quit the program.

Figure 7.3: Attrition and Retention Rates of Apprentices in Connecticut, 2000-2008

Source: Connecticut State Apprenticeship Council (authors' calculations).

Figure 7.3 shows that in collectively bargained programs, about 18% of the classes entering in the period from 2000 to 2008 graduated to journeyman status while this is true only for 12% of the apprentices in unilateral programs. These low completion rates are not surprising because a large number of apprentices who entered the programs in recent years were still training towards the completion of the requirements. Nevertheless, there still is a substantial -- seven percentage point -- difference in the completion rates of the two types of programs, indicating that joint programs appear to encourage graduation. However, exclusive focus on completion rates misses the complete picture. The complete picture is revealed by the difference in "Active" apprentices, which is also favorable for joint programs. Forty percent of the new apprentices are still training in joint programs while the corresponding figure is 28% in unilateral programs. Put differently, the residual category of "Termination" underscores the difference between the two types of programs in terms of performance. In joint programs 42% of the apprentices had dropped out. In contrast, well over half -- 61% -- of apprentices in the open shop programs had dropped out. These figures are consistent with observations of programs in other states. Across the U.S., unilateral programs lag behind the joint programs in graduating apprentices (Bilginsoy 2005).

The difference may be explained by the fact that joint program sponsors have more of a vested interest in assuring enrolled apprentices successfully graduate. Contractors signatory to collective bargaining contribute a specified amount of money for every hour of work into an apprenticeship training fund. This fund is used to hire instructors, to buy tools, equipment and materials and to pay for instructional facilities. All apprentices who enter programs maintained by collective bargaining are in effect on scholarships provided by their employers. This means contractors have a stake in the apprentice's training and graduation. In contrast, the apprentice typically must pay a larger share of his or her own training costs in unilateral programs. This may come in the form of tuition payments, lower wages, or both. As a result, the contractors have less of a vested interest in assuring that enrolled apprentices successfully graduate.

7.5 Apprenticeship Training and Minorities in Connecticut

In a *Wall Street Journal* editorial, Hodge (1990) argued against prevailing wage laws on grounds that they are designed to exclude Blacks from construction industry jobs. The line of criticism was picked up by David Bernstein of the Cato Institute who called for an end to this purported remnant of Jim Crow Laws (Bernstein, 1993). Another *Wall Street Journal* op-ed piece tied the argument explicitly to unions:

The Davis-Bacon Act was passed in 1931 when migrant black workers competed with white union labor for scarce jobs. At the urging of unions, like the American Federation of Labor, Congress neutralized black labor competition by requiring that "prevailing wages" be paid on all federal projects. In practice, "prevailing wages" meant union wages. Well-capitalized companies could afford union wages, but their unions usually kept blacks out. Black businesses -- which were often less well capitalized -- could not afford to pay those prohibitive rates on labor. (Brazier, 1994)

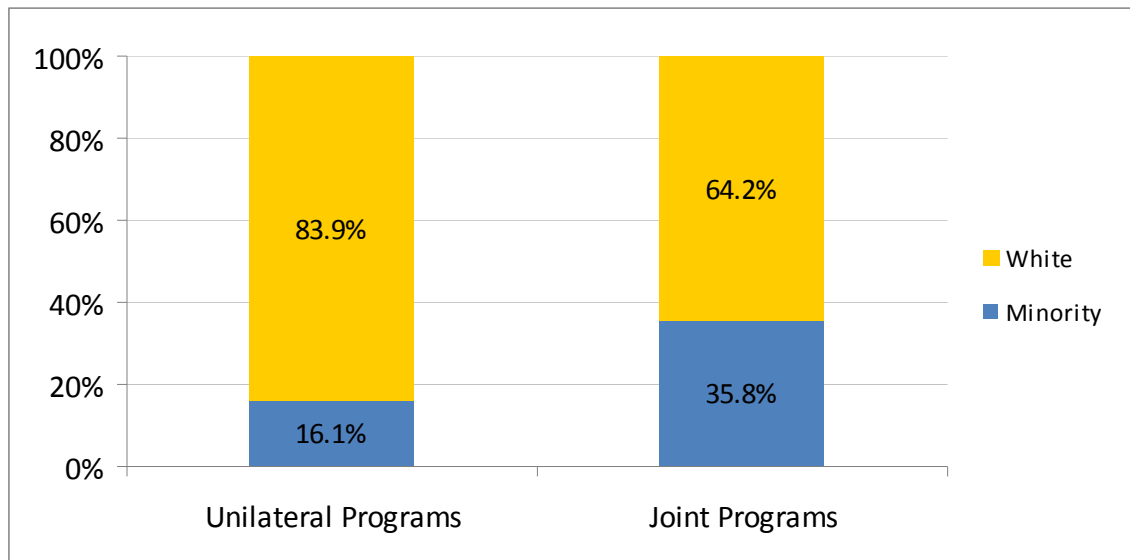
Historically, minorities have been excluded from good construction work. During the 1950s and 1960s, minority leaders fought hard to break down discriminatory barriers in construction. After the passage of the Civil Rights Act, ethnic/racial minorities started entering construction industry in larger numbers.

In this section, we provide an analysis of the racial/ethnic integration of Connecticut construction apprenticeship workforce. Apprenticeship training is the primary port of entry into the high-skill trades. Access to this gateway is probably more

important for minority workers than White male workers because the latter are more likely to be connected to the training and jobs networks through relatives and kin who are already in the industry.

Figure 7.4 shows the minority representation among the incoming apprentices in Connecticut over the 2000-2008 period. Minorities include Blacks, Hispanics, Native-Americans, Asian-Americans, and other non-Whites. In unilateral programs 16% of the new apprentices belonged to a minority group. In contrast, the minority share in joint union-management programs was 36%, more than twice as much. Thus, there is no evidence supporting the argument that the organized apprenticeship workforce, which is proportionately more affected by the prevailing wage projects, is less diverse. On the contrary, the open-shop apprentice workforce has a substantially lower representation of minorities. The largest minority groups were Hispanic and African American workers. Blacks accounted for 17% of apprentices in joint programs and 7% in the unilateral; Hispanics accounted for 16% in joint and 8% in unilateral programs.

Figure 7.4: Minority Representation in Unilateral and Joint Apprenticeship Programs in Connecticut, 2000-2008



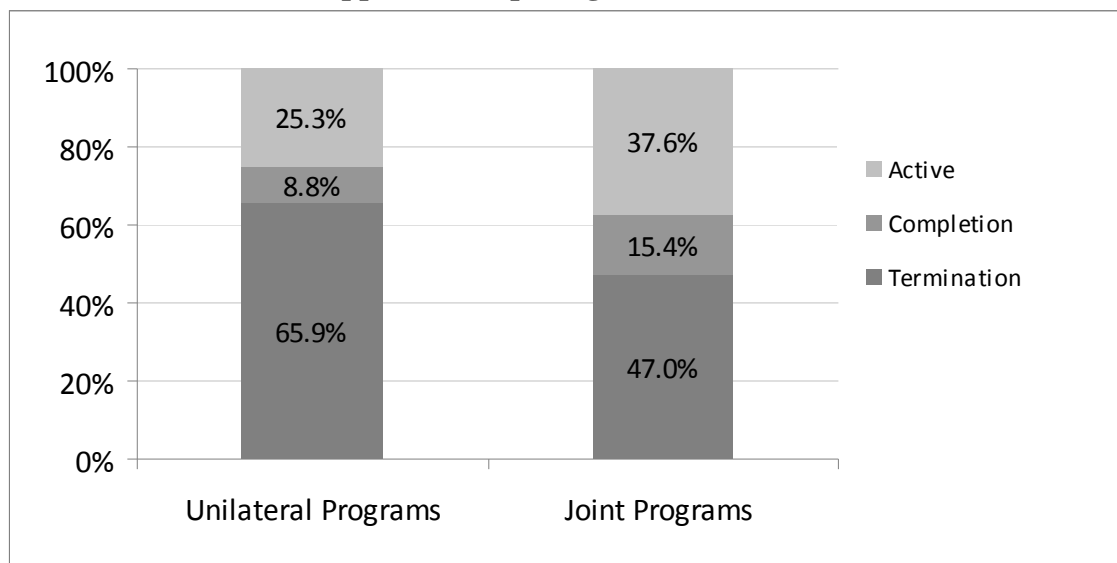
Source: Connecticut State Apprenticeship Council (authors' calculations).

One contributing factor to the higher share of minorities in joint programs could be the closer regulation of construction apprenticeship programs in the last three decades to insure fair admissions procedures. These regulations apply to both joint labor-

management and the unilateral programs. However, affirmative action regulations and oversight apply only to apprenticeship programs with five or more apprentices. This covers virtually all joint union-management programs under collective bargaining because these are multi-employer programs. The median incoming class size in joint programs in the U.S. was 58 between 1995 and 2003 (Bilginsoy, 2005). The corresponding figures were 2 and 33 for single-employer and multi-employer unilateral programs respectively. Thus, affirmative action regulations are likely to be inapplicable in most single-employer unilateral programs. In the case of Connecticut, however, while we know the sponsor type, we do not have any information on the individual sponsor including the program size. Therefore, we do not know how many of these programs are subject to affirmative action regulations and cannot judge how relevant this factor is in explaining low share of minorities in unilateral programs.

Entering an apprenticeship program is not sufficient to acquire skills. Certification as journeyman requires completion of the program. Figure 7.5 shows that a much larger proportion of minority apprentices in unilateral apprenticeship programs dropped out (66%) in comparison with those in joint programs (47%).

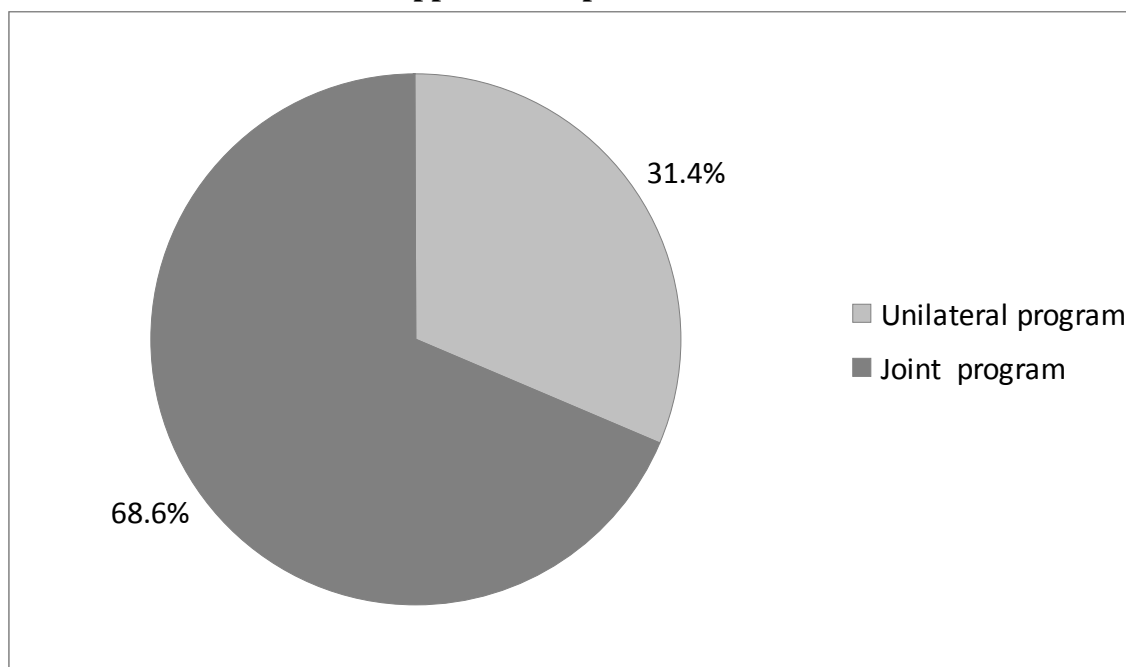
Figure 7.5: Attrition and Retention of Minorities in Connecticut Apprenticeship Programs, 2000-2008



Source: Connecticut State Apprenticeship Council (authors' calculations).

In joint programs, minority apprentice retention rate is higher. The total number of minority apprentices who started training in Connecticut apprenticeship programs in the 2000-2008 period was 3,413. By the end of 2008, 426 (12.5%) completed apprenticeship training successfully, 15% in joint and 9% in unilateral programs. As the last step, we can examine the relative contributions of the two types of programs to the skilled minority workforce of Connecticut, as measured by completed apprenticeships. Figure 7.6 shows that almost 69% of the minority apprentices who received certification as journey-level workers graduated from joint programs; 31% graduated from unilateral programs. This, unionized sector of the industry is the primary force that sustains an ethnically and racially diverse skilled construction workforce in Connecticut, in spite of the fact that it constitutes only a quarter of the total employment.

Figure 7.6: Shares of Unilateral and Joint Programs to Completed Minority Apprenticeships 2000-2008



Source: Connecticut State Apprenticeship Council (authors' calculations).

7.6 Conclusion

The analysis of Connecticut apprenticeship programs shows that 64% of the incoming apprentices between 2000 and 2008 were enrolled in union programs. This is a

higher proportion than what is observed generally in the U.S. However, considering that about three-quarters the Connecticut construction workforce is employed by open-shop contractors, in relative terms, the union sector organizes a larger portion of apprenticeship training. Union-management programs also provide training on a wider set of occupations. The open-shop sector provides training exclusively on electrical and mechanical trades. State regulations require that work in these occupations should be performed by skilled workers and apprentices, and not by helpers, which forces open-shop contractors to organize apprenticeship training. The major difference between the two types of programs is observed in attrition rates. Sixty-one percent of the apprentices in unilateral programs dropped out before the completion of requirements while the corresponding figure was 42% in joint programs. Finally, ethnic/racial minorities were far more strongly represented in joint programs, both in terms of enrollment and retention. The minority apprentice share in joint programs is higher by 20 percentage points, and the attrition rate is lower by 19 percentage points

Harmful effects of repeal of prevailing wage laws on training are documented in the literature. Research by Philips (1998) on fifteen states over the 1973-1990 period showed that in states without prevailing wage law apprenticeship training declined by an additional 26 percentage points in comparison with states with prevailing wage laws. Adverse training outcomes were far more serious for ethnic/racial minorities in these states. Bilginsoy (2005) compared apprentice retention rates in states with and without law and found that apprenticeship completion rates were substantially higher in prevailing wage law states. Public policies that would adversely affect construction apprenticeship training in the face of a critical skills shortage are reckless and self-defeating. A moratorium on Connecticut's prevailing wage law would seriously threaten the ability of the state's construction industry to provide a well-trained workforce to meet the public and private needs for high-quality construction services. The open-shop sector is not likely to fill the void that would be created with the decline in union-management joint apprenticeship programs because in Connecticut unilateral programs have lower retention rates and offer training in a limited number of occupations. Construction apprenticeship programs jointly managed by contractors and unions are one of the best examples of the labor-management cooperation that circumvent market failure in training

and mitigate the maintenance of a productive workforce in the future. One societal benefit of prevailing wage laws is that it encourages and promotes collective bargaining and thereby labor-management cooperation, apprenticeship training, continued training of the journeyworker and the development of a high-skilled labor force in construction.

Chapter 8

Prevailing Wages Laws and Worksite Safety

SHELTON --A trench dug behind a split-level house collapsed late Saturday afternoon burying alive a mason beneath 11 feet of loose earth and rock as he labored with two co-workers who struggled in vain to rescue him...For 20 minutes, Viera's stunned co-workers clawed at the dirt and stone trying to free him from his earthen grave.

“He was digging this trench for a retaining wall, there was no shoring behind it. None whatsoever.”

Assistant Shelton Fire Chief Michael Ullrich.

“He has a wife and three young sons who live in Brazil,” “His boys are real little.”
Tasos Spanos, a painter²³

8.1. Introduction

Construction is dangerous work. In 2007, 9.5% of all nonfatal injuries in the U.S. took place in the construction industry, while the sector accounted for 6.9% of employment.²⁴ More drastically, 21% of all fatalities in this year were in the construction industry.²⁵ In this Chapter we will examine whether fatalities across states vary with prevailing wage laws. If wage regulations promote competition based on better training and if a better-trained and more experienced labor force leads to safer construction, then prevailing wage laws would reduce fatalities. For this purpose we will examine how well the presence of prevailing wage laws in a state predict the number of fatalities in the construction industry.

8.2. Prevailing Wage Laws and Construction Fatalities by State

²³ *Connecticut Post* (Bridgeport, CT) June 19, 2005 Sunday.

²⁴ BLS News, October 23, 2008; <http://www.bls.gov/iif/oshwc/osh/os/osnr0030.pdf> (accessed December 3, 2009).

²⁵ BLS, 2007 Census of Fatal Occupational Injuries (revised data) http://www.bls.gov/iif/oshwc/foi/foi_revised07.pdf (accessed December 5, 2009).

We use Census of Fatal Occupational Injuries data of the U.S. Bureau of Labor Statistics to test the relationship between prevailing wage laws and construction fatality rates for four years from 2004 to 2007.²⁶ The testing methodology consists of estimating by regression analysis the impact of the presence of prevailing wage law on the annual number of fatalities controlling for the scale of the state construction industry. We use two models for this purpose. The first model (Model 1) divides states into two groups as law and no-law states.²⁷ In the second model (Model 2) a more detailed delineation is used: law states are divided into three groups as weak-, medium-, and strong-law states in order to test whether differences in the stringency of the law, its coverage and enforcement affected the fatality rate.²⁸ This delineation follows Thieblot (1995) who ranked state laws based on the level of coverage, the type of worker and work covered, and required wage rates.²⁹ Since the number of fatalities is anticipated to be directly related to the size of the workforce, we also included annual state employment to the explanatory variables in order to control for the scale effect.³⁰

Estimation results are reported in Table 8.1. Overall, adjusted R-squares (coefficients of determination) indicate that the models explain, respectively, 85 and 87 percent of the variation in the number of fatalities across states. These figures suggest that the models “fit” the data well. Not surprisingly, coefficient of the employment variable indicates that the number of fatalities is closely linked to the scale of the state construction industry. A 1% increase in employment raises the fatalities by about 1% -- 0.96% according to Model 1 and 0.98% according to Model 2.

²⁶ U.S. Bureau of Labor Statistics, State Occupational Injuries, Illnesses, and Fatalities, <http://www.bls.gov/iif/oshstate.htm>, (accessed December 5, 2009).

²⁷ See Table 2.1 for law and no-law states. We excluded states for which BLS did not report fatality figures.

²⁸ Weak laws states: KY, ME, MD, MT, NE, TN, and TX. Medium law states: AK, AR, CT, DE, DC, IN, NV, NM, OR, PA, and WI. Strong-law states: CA, HI, IL, MA, MI, MN, MO, NJ, NY, OH, RI, and WA.

²⁹ Weak laws states: KY, ME, MD, MT, NE, TN, and TX. Medium-law states: AK, AR, CT, DE, DC, IN, NV, NM, OR, PA, and WI. Strong-law states: CA, HI, IL, MA, MI, MN, MO, NJ, NY, OH, RI, and WA.

³⁰ Annual state employment figures are the May estimates obtained from the BLS, Occupational Employment Statistics, State Cross-Industry Estimates, http://www.bls.gov/oes/oes_dl.htm (accessed December 5, 2009).

Table 8.1: Fatalities and Prevailing Wage Law, 2004-2007
Regression Results

Dependent variable: $\ln(\text{Fatalities}_{\text{State,Year}})$		
	Model 1	Model 2
Law states	-0.159 (2.89)***	
Weak-law states		0.138 (1.85)*
Medium-law states		-0.157 (2.09)**
Strong-law states		-0.285 (4.84)***
$\ln(\text{Employment}_{\text{State,Year}})$	0.964 (32.01)***	0.982 (32.44)**
Constant	-8.101 (22.22)***	-8.303 (22.71)***
Adjusted R ²	0.85	0.87
Number of observations	187	187

Notes: Both regressions are estimated by least squares weighted by annual state employment.
 *, **, and *** indicate that the estimated coefficient is statistically different from zero at the 10%, 5%, and 1% levels, respectively.

Of greater interest are the coefficients of law variables. Estimates of both models indicate that the regulatory environment plays an important role in the incidence of fatalities. It is more intuitive to interpret the estimated coefficients of law variables reported in Table 8.1 as average percentage deviations from the baseline no-law states.³¹ The first column of Figure 8.1 illustrates the percentage difference between with law and no-law states based on the estimate of Model 1 of Table 8.1. Overall, fatalities were 15% lower in law states than in no-law states. This result is not only substantial but is also statistically highly significant (at the 1% level), which indicates that it would hold in repeated estimations with different samples.

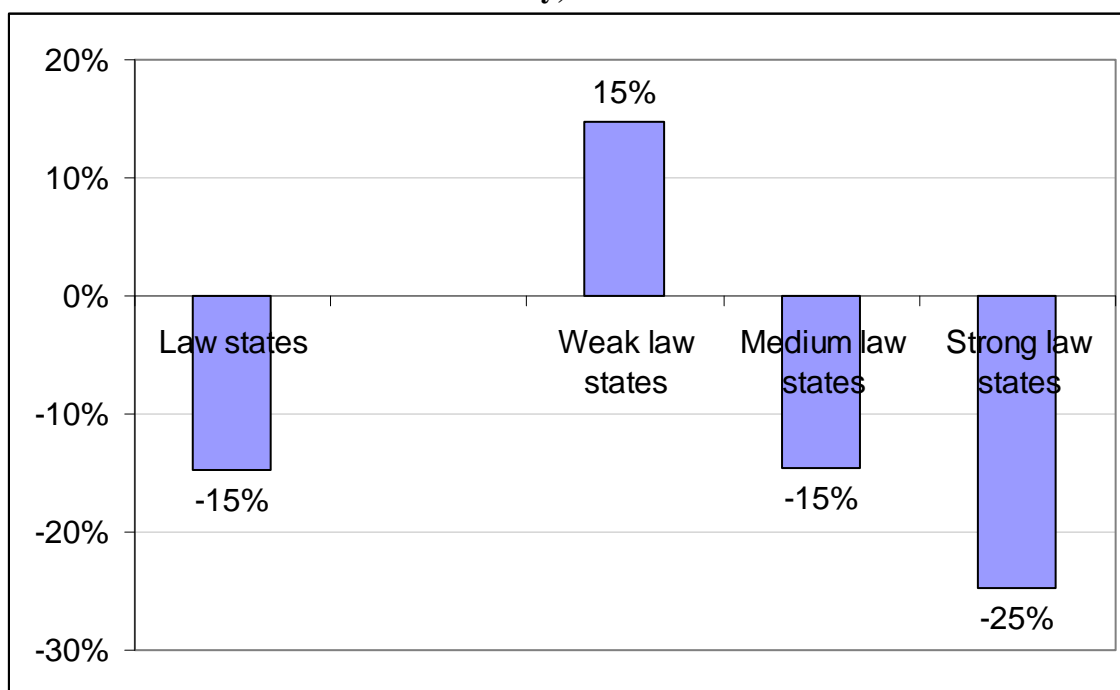
Model 2 provides more detailed and nuanced findings. As shown by the other three columns of Figure 8.1, in comparison with the no-law states, fatalities were lowest in the strong-law states, by 25%. This result was also highly statistically significant. In medium-law states, fatalities were also lower but the difference is not as large as that

³¹ This can be done by transforming the estimates using the formula:
 $\% \text{ difference from no-law state} = 100 * (\exp(\text{estimated coefficient}) - 1)$.

found in strong-law states. In these states, on average, fatalities are lower than the no-law states by 15%.

The case of weak-law states, however, breaks the pattern established by other types of law states. Weak-law states on average experienced higher number of fatalities than the no-law states, by as much as 15%. This finding is statistically significant at the 7% level, which indicates that although it has a lower level of statistical significance than other results, cannot be attributed to totally to chance.

Figure 8.1: Impact of Prevailing Wage Laws on Fatalities in the Construction Industry, 2004-2007



Notes: Base is no-law states.

Source: BLS, Occupational Employment Statistics, State Cross-Industry Estimates.

These results strongly indicate that prevailing wage regulations improve job site safety and reduce fatalities provided that they have wide coverage.

8.3 Conclusion

MILFORD -- A three-story scaffold collapsed at a house under construction...injuring three roofers who crashed 25 feet to the ground...The three roofers, described as Hispanic immigrants, suffered head, neck and back trauma...The accident follows a fatal workplace accident Saturday in Shelton. In that case, an illegal immigrant from Brazil was killed after the trench he was working in collapsed, burying him alive.

[Fire Dept. Capt. Harold] Streit said the scaffold lacked enough brackets to keep it attached to the house's wood frame while supporting the weight of the workers, a factor that led to the collapse. The scaffold also lacked adequate plywood bracing to keep it stable, he said. In general, scaffolds made of wood, not metal, are more prone to mishaps, he said.³²

One societal benefit of prevailing wage regulations is discouraging the tendency to bid on public projects using strategies focusing on cheap, inexperienced, untrained and uninformed labor. In the absence of prevailing wage regulations some contractors adopt strategies based on cutting corners where safety is concerned. Prevailing wage regulations reduce the incentive to cheat on safety by emphasizing competition based on training, skill, and management organization rather than competition based on “cheap” “pliant” and even “disposable” labor.

In this Chapter we used across state data over the 2004-2007 period and showed first that prevailing wage laws reduced fatalities by 15%. Second, we found that this beneficial effect of prevailing wage law was driven by the experience of states where implementation of the prevailing wage law ranged from moderate to strong. In strong law states fatalities declined by as much as 25%, relative to no-law states. In moderate-law states fatalities were lower by 15%. It is important, however, to note that in weak-law states prevailing wage laws did not reduce fatalities. One important lesson to be learned from this exercise is that the repeal of the law is not necessary for the job site safety to decline. Weakening of the law, say by raising coverage threshold levels, could be sufficient for fatalities to increase.

³² *Connecticut Post* (Bridgeport, CT) June 22, 2005, Sunday.

Chapter 9

Prevailing Wage Regulations, Health Insurance, and Payroll Taxes

9.1. Introduction

In this chapter we turn our attention to the relationship between prevailing wage laws and associated benefits, including health insurance, pension coverage, payroll taxes (Social Security and unemployment insurance), and workers' compensation premiums. Prevailing wage regulation debates focus mostly on wage rates, but the real impact on workers' lives and standard of living comes in the absence of worker health insurance, pension coverage, and payroll taxes for unemployment insurance and workers' compensation premiums. Construction workers have families, they get old and retire, they become unemployed periodically, and they run the risk of getting hurt. Quality benefits to manage such issues are crucial to an effective and humane construction industry. The construction industry is composed of small contractors. According to the 2002 Census of Construction, the average construction establishment had 10 employees (Department of Commerce, 2005b). A median-sized firm, with the value of \$250,000 to \$499,000 worth of business done in a year, employed 4.1 workers. Corresponding figures for Connecticut in 2002 were 8.3 workers for an average- and 3.4 workers for a median-sized establishment (Department of Commerce, 2005a). In relative terms, the average cost of provisioning of benefits for small sized contractors is higher than it is for larger contractors because the latter can spread the cost across a larger pool of workers. Against the backdrop of small establishment size, the transitory nature of construction work and the continuous movement of workers among projects and contractors, the main concern of both workers and employers can easily become the current compensation at the expense of benefits.

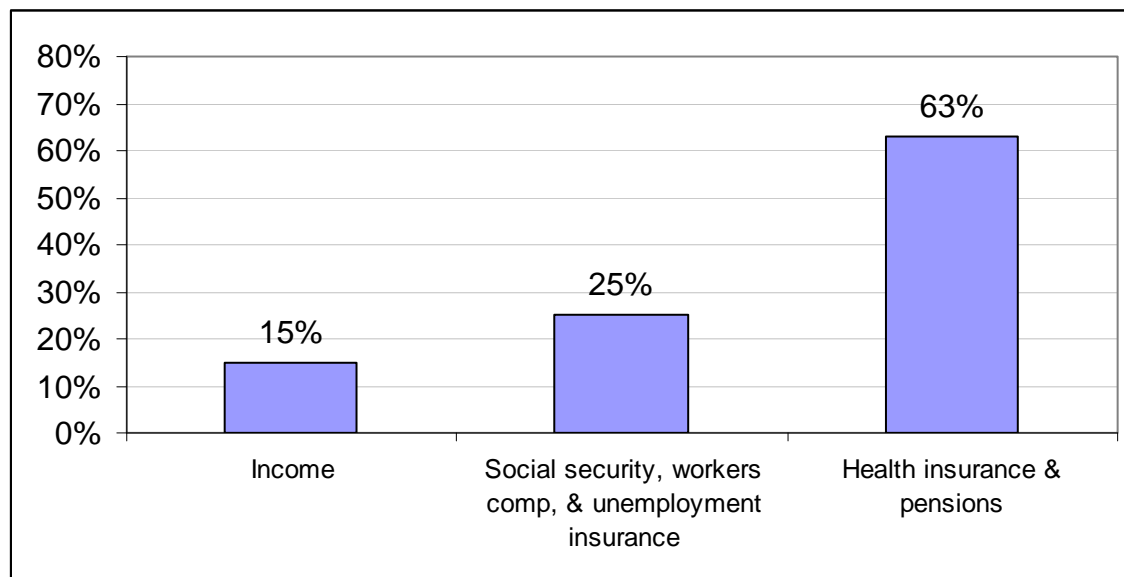
In this chapter we will compare law and no-law states and union and nonunion contractors in terms of health insurance and other benefits. In section 9.2 we will use income paid as a benchmark and show that states with prevailing wage laws pay relatively more in pension and health coverage and other voluntary benefits compared to

states that do not have prevailing wage laws. In section 9.3, we will argue that collective bargaining and prevailing wage regulation promote the provisioning of health insurance. The failure of some contractors to provide health insurance, in turn, creates costs that are borne by taxpayers and by society in general. In section 9.4, we discuss how prevailing wage regulations also prevent evasion of payroll taxes by unscrupulous contractors. In short, prevailing wage laws help internalize the costs of construction into the construction industry. Without prevailing wage laws, some contractors engage in free rider strategies which do not contain the health care or retirement costs of construction workers within the industry, but rather load these costs onto the taxpayer and society as a whole.

9.2 Benefits in Law and No-law States

Prevailing wage laws take benefits out of competition and provide incentives for non-union employers to invest in health insurance. It is true that blue-collar construction workers' income on average is higher in prevailing wage states than in non-prevailing wage states. But the greater difference lies in benefits. We used the 2002 Census of construction to calculate the percentage differences in income and benefits between law and no-law states. As Figure 9.1 shows, average income was higher by 15% in prevailing wage law states. However, this difference is dwarfed by the gaps observed in benefit payments. Legally mandated per-worker payments into workers' compensation, unemployment insurance, and Social Security are higher in states with prevailing wage laws by 25%. Employer contributions to health insurance for construction workers and their families plus pension coverage are higher by a full 65% in law states.

Figure 9.1: Percentage Income and Benefits Differences between Law- and No-law States - 2002



Source: U.S. Department of Commerce (2005b).

Figure 9.1 indicates that while wages are lower in the absence of prevailing wage laws, the relatively much larger adverse impact was observed in terms of benefits. The loss of benefits, in turn has important implications from a public policy perspective. If the industry does not pay for the health, safety and retirement costs of construction workers, the taxpayer can be left with the bill.

9.2 Health Insurance and Public Health Costs

According to the Medical Expenditure Panel Survey, in 2008, 39.7% of U.S construction establishments (in combination with agriculture, fishing, and forestry establishments) provided health insurance for workers.³³ Dedicated data on construction are not available, and this figure may be an underestimate of the extent of provisioning of health insurance. Still, when compared with 69.7% of establishments providing health care in manufacturing and mining, 52.3% in retail, and 56.4% in the overall economy, it suggests that construction industry provides less insurance than major sectors of the

³³ These and the following data come from the Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, http://www.meps.ahrq.gov/mepsweb/data_stats/summ_tables/insr/state/series_5/2008/tva2.pdf (accessed December 7, 2009). In these statistics construction is grouped with agriculture, fisheries and forestry. All three of these industries share similar problems regarding paying health insurance—small firms, seasonal work and considerable movement of workers from employer to employer.

economy. In Connecticut, health insurance provisioning figures are higher than the nationwide average. Among the construction (plus agriculture, fishing, and forestry) establishments, 53.7% provide health insurance. The corresponding figures are 83.2% in manufacture and mining, 50.9% in retail and other services, and 63.6% in the overall state economy.

Prevailing wage regulations require that contractors not only pay better wages but also provide benefits. Almost all union contractors and most high-wage nonunion contractors provide health insurance, but many low-wage nonunion contractors do not. According to the data from the 1996-2000 Panel of the Survey of Income Program Participants, one-third of nonunion construction workers have no form of health insurance, whatsoever.³⁴ In contrast, only 4% of union construction workers have no health insurance at all. The latter are, for the most part, those newly hired and on a waiting period prior to qualifying for insurance. Within a local area, union workers can go from contractor to contractor and retain their health insurance. Typically, nonunion workers lose their insurance, if they have any, when they switch contractors. The primary reason union workers have health insurance is because collective bargaining requires that union contractors put into all their bids the hourly cost of health insurance contributions. One reason some nonunion workers have health insurance is because prevailing wage jobs require that all contractors put the cost of health insurance into their bids on public works projects. Some high-wage nonunion contractors that do a lot of public works projects have very good health insurance programs.

Studies also found that prevailing wage laws increased pensions and health benefits more than they increased income. Using cross-state data, Petersen and Godtland (2005) assessed the impact of prevailing wage on both overall construction wages and the share of benefits in compensation packages. They found that following the repeal of prevailing wage laws while total compensation declined by about 20%, the share of benefits in total compensation declined by 61%. This decline, however, was not immediate. Total benefits started to decline after three years and the full impact of the decline took as much as five years. This is most immediately a problem for those

³⁴ The sample includes 789 employed construction workers.

employees who have lost their benefits. However, the socialization of costs is also likely to become a problem for the community.

Whether or not the contractors pay health insurance, workers will need health care. Hospital visits of the uninsured will be paid by the public either in the form of higher health care prices or higher taxes. Waddoups (2005) provided evidence on how much the construction industry's failure to pay health insurance could cost to the taxpayer. In the Las Vegas area (Clark County), Nevada, construction workers formed a disproportionate share of patients receiving uncompensated care from public hospitals. Controlling for the relative size of the construction industry, uninsured construction workers and their dependents were 88% more likely to receive uncompensated health care than workers in other sectors of the economy. Waddoups estimated that for the 1998-2000 period, uncompensated health care costs attributable to uninsured employed construction workers in Clark County added up to \$6.3 million. Total uncompensated care costs for the workers and their dependents were over \$37 million.

Establishing prevailing wage regulations will raise construction wages, benefits and health insurance coverage. The construction work force will become better able to take care of themselves and their families, and less in need of a social safety net paid for by taxpayers. Prevailing wage regulation will mean that construction workers will put less pressure on a public health care system that is already struggling to meet the needs of others.

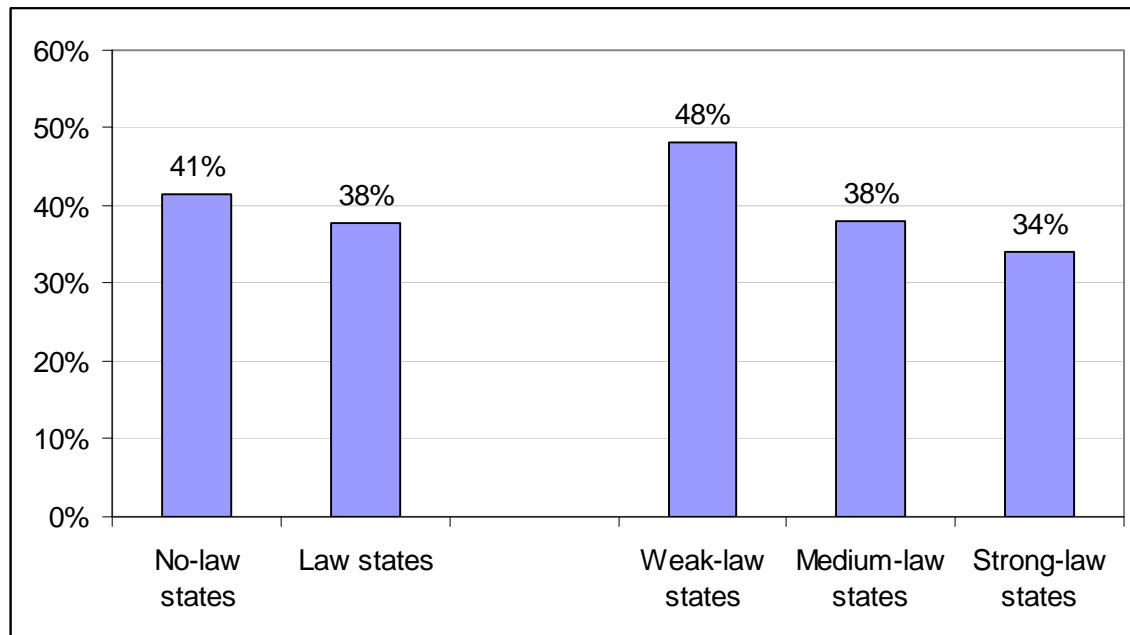
9.3 Payroll Taxes

Payroll taxes provide funds for Social Security, workers' compensation, and unemployment insurance. In their effort to win contracts, small contractors have an incentive to look for ways to evade these taxes. One method that is common, but hard to document, is avoiding all payroll taxes including Social Security by simply paying workers cash under-the-table. Although such practices can be prevalent in a competitive environment where there is high turnover among small contractors, illegality of the black market or under-the-table payments make them hard to capture with government statistics. Another common, and measurable, means of dodging payroll taxes is contractors declaring their workers to be "independent subcontractors."

Construction has many legitimate owner-operator contracting firms with no employees. They are very common in residential maintenance and home improvement construction. However, the line between payroll workers who work for a wage and qualify for benefits as a part of their total compensation, and independent contractors who have to pay these funds out of their own pockets can be very vague from the outside. It is easy for unscrupulous contractors to avoid payroll taxes by creating non-bona fide independent subcontractors. Often it is as easy as passing out 1099 forms instead of W-2 forms to members of the work crew. This scheme is expected to be observed more commonly among the low-wage contractors hiring low-wage workers who are unlikely to put up resistance if Social Security contributions or workers' compensation contributions are not paid. Union contractors cannot resort to avoiding taxes in this fashion because the union would not let them. Nor could the high-wage nonunion contractors do it because their skilled work force would not stand for it.

While such practices are expected to be encountered in any state, government data suggest that there is an excess of "independent contractors" in states where there are no prevailing wage laws, over-and-above what you would expect just by counting up the home repairmen, remodelers and handymen. The left panel of Figure 9.2 shows the percent of "independent contractors" (i.e. construction contractors with no employees) relative to blue-collar construction workers in 2002. In states without prevailing wage laws, for every 100 blue-collar construction workers, there were 41 independent contractors (with no employees). In the 31 states that do have prevailing wage laws, there were 38 independent contractors for every 100 construction workers. The difference may well be more because these government data only include those "independent contractors" who actually file Social Security tax returns. Many do not.

Figure 9.2: Independent Contractors as Percent of Blue-collar Employees in Construction, 2002



Sources: U.S. Census of Construction (2005b), US Census Bureau 2002 Economic Census Nonemployer Statistics.

Perhaps the variation in the shares of independent contractors among the states with prevailing wage laws is of greater interest. Weak-law states, as observed in the previous chapter, remain an anomalous case. The share of independent contractors in these states was substantially higher than that in the no-law states. However, in states with medium and strong prevailing wage laws the ratios were below the 41% level observed in no-law states. Independent contractors were only 34% of the blue collar construction workers in strong and 38% in medium-law states.

In all likelihood, fraudulent “independent contractors” are the tip of an iceberg of under-the-table cash payments, a hidden problem that threatens to diminish funds of state workers’ compensation programs, the unemployment insurance system, and public health services to the uninsured. Public benefits of prevailing wage laws include means to prevent such deceptive practices. First, the obligation of providing certified payrolls and the prospect of inspection or getting reported make cheating harder. Second, prevailing wage laws discourage cheaters from bidding on a job in the first place. Prevailing wage regulations encourage competition in the context of better management practices, highly skilled and experienced crews, better technologies, and better project scheduling and

coordination; pure wage competition is discouraged. Consequently, shaving wages by paying workers under-the-table or making workers so-called “independent contractors” is discouraged. Contractors, who rely on cheating as their competitive advantage, typically are at a disadvantage competing along these other lines, and so they just don’t bid.

It will be noticed that there is also a public good aspect of this beneficial aspect of prevailing wage laws. Since deceptive practices tend to run across the board, and enforcement of prevailing wage regulation can prevent a variety of these in one swift stroke. On prevailing wage jobs, contractors are less likely to cheat simultaneously on payroll taxes, safety regulations, and prevailing wages.

9.4 Conclusion

Prevailing wage laws have a disproportionately large positive effect on benefits. In states with prevailing wage laws average income of workers is higher by 15%; Social Security, workers’ compensation and unemployment insurance payments are higher by 25% and health insurance and pensions are higher by 63%. Thus, a moratorium on prevailing wage law would imply a substantial loss in benefits. What the construction industry does not pay, in turn, has important implications for the society at large. If the industry does not pay for the health, safety and retirement costs of construction workers, the taxpayer can be left with the bill.

Workers in prevailing wage law states receive substantially higher total benefits (including health insurance, pension, payroll) than their peers in no-law states. These higher benefits reduce current and long-term costs to the taxpayers. Workers who have health and pension benefits are less likely to become a burden to the State and taxpayers. In effect, prevailing wage laws help to internalize the full costs of construction into the construction industry itself. With prevailing wage laws, on public works and spilling over into the private sector, each bid price includes the training of the next generation of construction workers, the family friendly benefits needed to retain experienced and skilled workers within the industry for this generation of construction workers, and the retirement costs of the last generation of construction workers. Without prevailing wage laws, these full costs of producing and maintaining a world class construction labor force go unpaid by construction employers and spill over to society at large.

Chapter 10

Summary and Conclusion

In this report, we examined the argument that large cost savings can be realized from a moratorium placed on the Connecticut prevailing wage law. Our discussion focused on the direct cost implications of the statute, its impact on state income and tax revenues, and its larger societal benefits. First, we assessed potential savings from a moratorium on the basis of hypothetical reductions in total labor costs. We also presented evidence from research on other states and Canada, where the law was adopted or repealed, to assess the cost impact. Second, we estimated empirically the direct and indirect effects of a moratorium on the Connecticut prevailing wage on state income and tax revenues. Finally, we discussed the societal benefits of prevailing wage laws concerning training, safety, and benefits.

The main findings of this study are as follows:

- The hypothetical cost savings estimates of the opponents of the Connecticut prevailing wage law are greatly exaggerated. Information from the 2002 Census of Construction for Connecticut indicates that total labor costs constitute 30% of the total cost of construction (excluding the purchase of land). Even when substitution (among less skilled labor, more skilled labor, and capital) and productivity effects are not taken into account, a 27% reduction in total construction costs would require the labor costs to decline by 90%; a 28.5% reduction in total costs is possible if labor costs decline by 95%. So reformers who are predicting “upwards to 30%” savings in the absence of prevailing wage laws are essentially asking Connecticut construction workers to work on public jobs for free. A relatively more plausible 10% decline in wage rates plus benefits would hypothetically create cost savings of 3%.
- This hypothetical 3% savings in total public construction costs is based on the assumption that prevailing wage laws do not have any substitution and productivity effects that promote the use of more efficient inputs, enhance labor productivity, and thereby offset any fiscal burden prevailing wage laws may create. The substitution effect refers to contractors’ preference for more skill- and

capital-intensive methods of construction as less-skilled labor becomes relatively more expensive after implementation of the prevailing wage law. The productivity effect refers to favorable effects of a better paid workforce on labor productivity through reductions in labor turnover, maintenance of experienced workers, and improved morale and perception of fairness. Jointly, substitution and productivity effects reduce average cost. A preponderance of evidence examining actual prevailing wage law repeals, suspensions, or adoptions shows that there is no difference in the cost of public construction before and after these regulations are changed. Across-state comparisons also indicate that, after controlling for other factors that influence costs, the effect of prevailing wage laws on the cost of construction is statistically zero.

- A moratorium on the prevailing wage law in Connecticut would reduce construction sector income by \$123 million to \$249 million annually (in 2008 dollars). Total cost to the state would be \$214 million to \$432 million annually in lost income, including lower incomes of Connecticut construction workers and the corresponding reduction in the demand for local products and services in their communities.
- A moratorium on the prevailing wage law in Connecticut would also cost the state \$15 million to \$31 million annually (in 2008 dollars) in lost income tax and sales tax revenues due to the lower incomes of Connecticut construction workers and others in Connecticut who rely upon their purchases.
- Prevailing wage statutes promote apprenticeship training, which is critical to mitigate the long-anticipated skills shortage crisis over the coming decades. Between 2000 and 2008, 64% of the apprentices in Connecticut started training in unilateral programs organized in the open-shop sector. Open-shop sector accounts for three-quarters of the Connecticut construction sector employment. Thus, the organized sector, relative to its size, trained more workers in apprenticeship programs organized jointly by unions and contractors signatory to a collective bargaining agreement. Joint union-management programs also offered apprenticeship training in a wider variety of occupations whereas unilateral programs were organized exclusively in electrical and mechanical trades. More

- importantly, the rate of attrition was substantially higher in unilateral programs, by almost 20 percentage points, which underscores the disproportionately higher contribution of the unionized sector to the maintenance of a skilled construction workforce in Connecticut. A moratorium that would weaken collective bargaining would discourage apprenticeship training and set hurdles to the maintenance of a skilled and safe workforce.
- Relative to their peers in unilateral programs, ethnic and racial minorities were also better represented in joint apprenticeship programs – their share was higher by 20 percentage points. Their attrition rate in joint programs was also lower by 19 percentage points. Thus, apprenticeship programs organized jointly by unions and contractors signatory to a collective bargaining agreement are strategically critical if the diverse construction workforce of the future is going to be a safe workforce that is qualified and capable of building the technically advanced infrastructure which, in turn, will allow Connecticut's other industries to be world-class competitive.
 - Prevailing wage laws promote safety in the construction industry. The absence of incentives to train workers and build skill sets results in serious injuries. It also leads to increases in workers' compensation costs, increased costs of publicly-financed health care, and ultimately a greater burden on the workers themselves, their families, and the residents of Connecticut. Over the 2004-2007 period, in comparison with no-law states, fatalities were lower in prevailing wage law states by 15%. In states where the laws were more rigorous, fatalities were 25% lower than no-law states. In states with laws with medium effectiveness, fatalities were lower by 15%. In states where laws are weak, however, there was no reduction in fatalities. Thus, the repeal of the law is not necessary for the job site safety to decline. Weakening of the law, say by raising the threshold values of the projects covered by the law, could be sufficient for fatalities to increase.
 - Workers in prevailing wage law states receive substantially higher total benefits (including health insurance, pension, payroll) than their peers in no-law states, by as much as 60%. These higher benefits reduce current and long-term costs to the taxpayers. Workers who have health and pension benefits are less likely to

become a burden the State and taxpayers. In effect, prevailing wage laws help to internalize the full costs of construction into the construction industry itself. With prevailing wage laws on public works, and spilling over into the private sector, each bid price includes the cost of training of the next generation of construction workers, the family friendly benefits needed to retain experienced and skilled workers within the industry for this generation of construction workers, and the retirement costs of the last generation of construction workers. Without prevailing wage laws, these full costs of producing and maintaining a world class construction labor force spill over to society at large. At best, this is inefficient and unfair. At worst, this leads to a decline in the local construction industry's ability to provide the infrastructure the rest of the Connecticut economy needs to retain its competitive standing in a global economy.

In summary, the prevailing wage law in Connecticut creates a high-wage, high-productivity and high-quality development path that benefits construction workers and their families, other Connecticut workers and their families, as well as the state of Connecticut's coffers. Without regulation, competitive pressures force the industry to adopt an inferior equilibrium along a low-wage, low-productivity, and low-quality path. Claims of large public savings from a suspension of Connecticut's prevailing wage law are not supported by the evidence. In contrast, the State of Connecticut will face substantial short- and long-term public costs if there is a moratorium of the prevailing wage law.

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