

How Weakening Wisconsin's Prevailing Wage Policy Would Affect Public Construction Costs and Economic Activity.

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Executive Summary

The State of Wisconsin has three prevailing wage laws that cover construction projects negotiated by local governments, state agencies, and the state department of transportation.¹ According to the Wisconsin Department of Workforce Development, the purpose of these laws is to protect state and local economies from problems associated with publicly funded construction. Specifically;

“These laws were enacted to discourage the awarding of public works contracts to employers who frequently underbid local employers by paying their workers substantially less than normally received by workers in an area. Governmental agencies were precluded from awarding contracts exclusively to local employers because various bid laws required that most public works contracts be awarded to the lowest responsible bidder. As wages were the most controllable factor in the bidding process, workers were put in the precarious position of having their wages manipulated by their employer. This problem created instability in the local construction industry. Prevailing wage rate laws were enacted to provide a partial solution to this problem.”²

By mandating that workers employed on publicly funded construction receive wages that are representative of the hourly compensation normally paid to workers on similar private and public projects in an area, Wisconsin’s prevailing wage laws allow all contractors to compete on a “level playing field.” Prevailing wages not only protect local wage standards, but also reduce or prevent the leakage of public tax funding from regional economies when public projects are awarded to contractors from other areas. The leakage of tax funding reduces economic activity in the region where the public work is completed. Prevailing wages promote the use of local tax dollars to employ local companies and workers.

It is not a question of whether prevailing wage rates are too high or too low. To perform their important economic function, prevailing wages must be representative of the type of work completed in an area. During the 2015 session, the Wisconsin State Legislature is considering changes to the state’s prevailing wage policy. These deliberations are motivated by the belief that lower construction worker wages will result in lower public construction costs.³ A recent report by the Wisconsin Taxpayers Alliance claims that current prevailing wages are too high and that reducing them would save taxpayers almost \$300 million on public construction.⁴ The methods used in the Alliance report have been criticized by Professor Peter Philips and his more detailed examination indicates that current prevailing wages are representative of the type of

¹ For a complete description see Wisconsin’s Prevailing Wage Rate Laws, Labor Standards Information Series, Department of Workforce Development, Equal Rights Division, State of Wisconsin. Accessed at: http://dwd.wisconsin.gov/er/prevailing_wage_rate/pw_pdf/erd_8371_p.pdf.

² See Wisconsin Department of Workforce Development, Prevailing Wage Laws 2012. Accessed at: http://dwd.wisconsin.gov/er/prevailing_wage_rate/publication_erd_8731_p.htm#3%20What.

³ For an example see: <http://www.jsonline.com/news/statepolitics/effort-to-repeal-prevailing-wage-law-likely-to-fail-in-committee-today-b99495801z1-302900931.html>.

⁴ See Wisconsin Taxpayers Alliance report, “Evaluating Wisconsin’s Approach to Determining Prevailing Wages.” March 2015.

construction conducted in Wisconsin.⁵ Rather than savings for taxpayers, Wisconsin will pay a price of reduced economic activity by arbitrarily lowering the state's prevailing wage rates.

To provide policy makers and the public with a more complete understanding of the effect of changes in prevailing wage rates and the costs of public construction, we provide a review of the research on this topic in the first part of this report. In the second section of this study, we illustrate how the proposed changes in the prevailing wage policy will affect the level of economic activity in Wisconsin.

Summary of Part 1: Prevailing Wages and Public Construction Costs

The belief that reducing wages will reduce costs is based on a simple and incomplete understanding of the construction industry. A fundamental problem with this assertion is that labor costs are a low percent of total construction costs. For the types of projects covered by Wisconsin's prevailing wage standard, labor costs and benefits are approximately 20% of total costs.⁶ Therefore, it is not possible to obtain substantial savings from a cost component that is such a low percent of the total. Research that is summarized in this report indicates that the use of skilled construction labor is very sensitive to wage rates. As wages decrease, less productive employees replace more skilled craft workers. As wages decrease, manual labor is used instead of productivity-enhancing capital equipment. In a comparison of states with weak or no prevailing wage laws to states that have strong or average laws, value added per construction worker is 11% higher in those states with adequate wage policies. We also find that material and fuel costs are lower in these states. When prevailing wages are reduced, a variety of other changes occur that tend to offset, or cancel out the savings associated with cutting wage rates. These findings are consistent with the overwhelming majority of research indicating that the costs of building public structures such as schools, highways, and street and sewer projects, etc. are unaffected by the presence of municipal, state, or federal prevailing wage laws.

Summary of Part 2: The Impact on Wisconsin's Economy of Weakening Prevailing Wages

Of greater importance to Wisconsin taxpayers is the economic impact of weakening the state's prevailing wage law. This economic impact is based on the following two questions:

1. How would spending in the state's construction industry change if Wisconsin were to switch from the characteristics of states with average/strong prevailing wage laws to the attributes of those states with weak/no prevailing wages?
2. How would these spending changes ripple through the Wisconsin economy?

To answer the first question, we use data from the *Economic Census of Construction* (2012 and 2007) to compare differences in construction cost components, worker productivity, and the use of out-of-state contractors in 25 states with strong or average prevailing wage laws to 25 states with weak or no construction wage policy. We use the IMPLAN economic impact software to measure the effect of construction industry spending changes on the Wisconsin economy.

⁵ See Peter Philips, "A Flawed Evaluation of the Department of Workforce Development's Prevailing Wage Survey." Accessed at: http://www.wisconsincontractorcoalition.com/application/files/2014/2746/5431/Wisconsin_taxpayer_alliance_report_reviewed_Philips.pdf.

⁶ According to data from the most recent *Economic Census of Construction* (2012), labor costs for highway, street, and bridge construction in Wisconsin are 20.8% of total construction costs. Labor costs are 19.1% of total costs of building institutional structures. The method and data used to calculate these figures is described below.

IMPLAN reports changes in overall economic activity, employment, state and local tax revenue, as well as industry-level impacts. The industry-level impacts allow us to illustrate the effect of changes in prevailing wages on industries that are unrelated to construction.

Our economic impact method is straight-forward, data-driven, and applicable to other states considering prevailing wage policy changes. We have used this method to illustrate the economic benefit of California’s prevailing wage policy.⁷ Results from that study indicate that the prevailing wage policy adds \$1.4 billion and 17,500 jobs per year to the California economy. Those interested in applying our economic impact method to other states are encouraged to contact the authors.

A change in prevailing wage rates will alter spending in the construction industry that will significantly reduce economic activity, employment, and tax revenue. Our analysis indicates that states, like Wisconsin, with strong or average prevailing wage laws have higher worker productivity, labor costs and worker benefits, use more in-state contractors, and have lower material costs and contractor profits. Weakening the prevailing wage law would result in the leakage of public tax funds and private construction expenditures from the Wisconsin economy as more contractors and construction workers from other states are employed. A policy change would shift income and spending from workers and benefits to material suppliers and contractor profits. While there are winners and losers with this shift, the net effect is a reduction in state-wide economic activity. The effect of these changes in Wisconsin’s construction industry would ripple throughout the economy and affect industries that are not directly related to construction. The dollar value of these shifts in spending are reported in Table E-1.

Table E-1. Total Construction Industry Spending Changes Associated with Weakening Wisconsin’s Prevailing Wage Law.

Category	Spending Change
Use of Out-of-State Contractors	–\$500 Million
Reduced Construction Worker Income, Health, and Retirement Benefits	–\$756 Million
Increased Materials and Fuels Use	\$613 Million
Increase Proprietor (Contractor) Income	\$175 Million
Total	– \$468 Million

Source: *Economic Census of Construction* (2007 and 2012).

With a weaker prevailing wage law, approximately one-half billion dollars in construction value would be completed by out-of-state contractors. Construction worker income and benefits would decrease by about three-quarters of a billion dollars. Worker productivity is 11% lower in states with weak or no prevailing wage law. Employment of less skilled and productive workers is associated with increased materials and fuels use and costs. This inefficiency would have a positive effect on economic activity as spending on materials and fuels would increase by about \$613 million. Economic activity due to inefficiency is undesirable socially and economically. We include materials costs in the overall impact as this spending is associated with a change in

⁷ See Kevin Duncan and Alex Lantsberg, “Building the Golden State: The Economic Impacts of California’s Prevailing Wage Policy.” Accessed at: <http://www.smartcitiesprevail.org/study-prevailing-wage/>.

prevailing wage policy. Finally, proprietor (contractor) profit income would increase by approximately \$175 million with a weaker prevailing wage law. There would be winners and losers associated with a change in the state's prevailing wage law. The combined effect of all of these spending changes is –\$468 million. The impact of this spending change on Wisconsin is measured by the IMPLAN economic impact software.

Economic impact results are reported in Table E-2. A spending reduction of \$468 million would result in a \$1.2 billion reduction in economic activity in Wisconsin.⁸ This impact is 0.4% of 2013 state GDP.⁹ The multiplier of 2.47 (reported in Table E-2) indicates that for every dollar reduction in spending, due to a weaker prevailing wage law, economic activity in Wisconsin will decrease by \$2.47. The timing of this impact would depend on how long it would take the Wisconsin construction industry to transition to the characteristics of the typical state with weaker prevailing wages. However, once this adjustment occurs, the reduction in economic activity would be experienced every year. A \$1.2 billion reduction in economic activity would be associated with the loss of approximately 9,000 jobs. This represents approximately 0.3% of current, nonfarm employment in Wisconsin.¹⁰ The employment multiplier of 3.28 (reported in Table E-2) indicates that for every job lost because of weaker prevailing wages, total job loss in the state will increase by 3.28 jobs.

Table E-2. Economic Impact of Weakening Wisconsin's Prevailing Wage Law

Impact Category (2015 dollars)	Direct Effect	Multiplier	Total Economic Impact
Construction Industry Spending Change	– \$486 Million	2.47	– \$1.2 Billion
Employment	– 2,660 Jobs	3.28	– 8,730 Jobs
Sales Taxes Revenue	–	–	–\$9.4 Million
Property Tax Revenue*	–	–	–\$12.4 Million
Income Tax Revenue	–	–	–\$12.2 Million
Other State and Local Tax Revenue**	–	–	–\$5.6 Million
Total Tax Revenue Change	–	–	–\$39.4 Million

Source: IMPLAN. * Includes business and residential property taxes. ** Includes taxes on motor vehicle registrations, fishing and hunting licenses, severance taxes, etc.

⁸ This impact is comparable to the impact of California's prevailing wage policy. The effect of out-of-state contractors was not included in the California study. See Kevin Duncan and Alex Lantsberg, "Building the Golden State: The Economic Impacts of California's Prevailing Wage Policy." Accessed at: <http://www.smartcitiesprevail.org/study-prevailing-wage/>.

⁹ GDP for Wisconsin is reported by the U.S. Bureau of Economic Analysis. 2013 is the most recent data available. Accessed at: <http://bea.gov/>.

¹⁰ See data for Wisconsin for March 2015 at "Economy at a Glance." Accessed at: <http://www.bls.gov/regions/midwest/wisconsin.htm#eag>.

State and local tax revenue will decrease with the reduction in economic activity. Sales tax revenue would decrease by over \$9 million. Property taxes collected by local governments and income taxes collected by the state would each decrease by over \$12 million. The total decrease in state and local tax revenue would exceed \$39 million. Similar to the economic impact, the tax effects would occur yearly.

The total economic impact is the sum of all industry-level impacts reported by IMPLAN. To illustrate the effect of weakening Wisconsin's prevailing wage laws on industries in the state, we report the impact for the top twenty affected sectors. The impacts, reported in Table E-3 are sorted by employment loss with the corresponding decrease in business revenue. With a weaker prevailing wage law and the increased use of out-of-state contractors, Wisconsin's construction industry would experience reduced business activity. This would affect residential, nonresidential, road, and maintenance construction. The reduction in construction worker employment, income, and benefits would affect industries that are not related to the construction industry. Of the total loss of 8,700 jobs, about 1,800 of these jobs would be lost in hospitals and in the offices of physicians and dentists. The combined revenue loss of these businesses would be approximately \$250 million. With a decrease in construction worker health and retirement benefits, insurance carriers would lose \$68 million in revenue and about 200 jobs. The retailers and restaurants included in the top twenty most affected industries would lose a combined 1,200 jobs and \$130 million in revenue.

In addition to the information reported in Table E-3, the reduction in economic activity associated with weakening the prevailing wage law would also depress housing values. This reduction is measured by the imputed income if property owners were to rent their homes. This impact is – \$66 million. Lower levels of economic activity would be associated with less revenue for real estate establishments. These Wisconsin businesses would experience a decrease in revenue of approximately \$24 million.

Table E-3. Top Twenty Wisconsin Industries Negatively Affected by A Weakening of the State's Prevailing Wage Law.

Industry Category	Employment Change (Jobs)	Revenue Change (Millions)
Total	-8,731	-\$1,200
Hospitals	-931	-\$123
Offices of physicians	-689	-\$105
Construction of other new nonresidential structures	-355	-\$79
Construction of other new residential structures	-301	-\$99
Retail - Nonstore retailers	-281	-\$28
Construction of new power and communication structures	-271	-\$61
Construction of new single-family residential structures	-250	-\$47
Maintenance and repair construction of nonresidential structures	-242	-\$59
Construction of new highways and streets	-240	-\$79
Full-service restaurants	-235	-\$10
Maintenance and repair construction of highways, streets, bridges, and tunnels	-217	-\$79
Retail - Miscellaneous store retailers	-203	-\$67
Home health care services	-201	-\$9
Limited-service restaurants	-198	-\$11
Insurance carriers	-196	-\$68
* Employment and payroll of local govt, education	-178	-\$14
Retail - Clothing and clothing accessories stores	-177	-\$12
Retail - General merchandise stores	-173	-\$11
Offices of dentists	-152	-\$20
Employment services	-139	-\$6

Source: IMPLAN

Some industries would benefit from a weakening of the state's prevailing wage law. With the use of less productive construction workers, materials and fuels costs would be higher. Therefore, businesses that are involved in, or related to the production of construction materials would experience increased revenue. These industries are reported in Table E-4. Businesses involved in the manufacture of cement and wood materials, and in the mining of aggregate materials are among those industries that benefit from weak prevailing wage laws. However, the employment and revenue gains of these industries are very small compared to the losses experienced by those industries that are harmed by weak prevailing wage laws.

Table E-4. Top Ten Wisconsin Industries Positively Affected by A Weakening of the State's Prevailing Wage Law.

Industry Category	Employment Change (Jobs)	Revenue Change (Millions)
Wholesale trade	327	\$68
Ready-mix concrete manufacturing	138	\$46
Other concrete product manufacturing	39	\$8
Wood windows and door manufacturing	30.	\$5
Prefabricated wood building manufacturing	20	\$3
Other millwork, including flooring	18	\$
Sand and gravel mining	16	\$4
Machine shops	12	\$2
Sawmills	11	\$3
Commercial and industrial machinery and equipment rental and leasing	9	\$2

Source: IMPLAN

The economic impact results illustrate the benefits of Wisconsin's prevailing wage law. This policy is not solely of interest to the construction industry. Rather, it is directly related to the state's business and economic development. For example, under Wisconsin's current policy, more state tax funds and private construction expenditures are used to employ Wisconsin contractors and construction workers. The spending of these parties ripples through the economy generating additional economic activity in other industries and generates more tax revenue in Wisconsin.

The results of this report indicate that weakening Wisconsin's prevailing wage law is not in the best interest of taxpayers. Weakening prevailing wages will not reduce the cost of public construction, but will reduce the level of economic activity and state tax revenue. A weaker law with no effect on construction costs, along with a constitutional requirement for a balanced budget, and less tax revenue means the state will have to either reduce capital construction budgets or reduce funding for other budget priorities.

Introduction

The State of Wisconsin has three prevailing wage laws that cover construction projects negotiated by local governments, state agencies, and the Wisconsin Department of Transportation.¹¹ These laws mandate that workers employed on publicly funded construction must receive wages that are representative of the hourly compensation normally paid to workers on similar private and public projects in an area. Prevailing wage laws are enacted to protect local construction labor markets and economies from distortions caused by publicly funded capital construction. Large government projects may attract contractors from other areas where construction worker earnings are lower. These contractors may underbid local employers. Since wages are the most controllable factor in the bidding process, public works construction puts local workers in the precarious position of having their wages reduced. This problem creates instability in the local construction industry. Laws requiring project awards to the lowest bidder precluded government agencies from directly addressing this problem by granting contracts to local contractors. Prevailing wage rate laws are an alternative solution that allows all contractors to compete evenly without distorting local wage rates. Under the wage policy, it is more likely that more of the work on public projects will be completed by local contractors and construction workers. The spending of these parties benefits local industries, such as service providers and retailers that are not directly related to the construction industry.

During the 2015 session, the Wisconsin State Legislature discussed changing the state's prevailing wage policy. These discussions are motivated by the belief that lower construction

¹¹ For a more complete description see Wisconsin's Prevailing Wage Rate Laws, Labor Standards Information Series, Department of Workforce Development, Equal Rights Division, State of Wisconsin. Accessed at: http://dwd.wisconsin.gov/er/prevailing_wage_rate/pw_pdf/erd_8371_p.pdf.

worker wages will result in lower public construction costs.¹² The purpose of this study is to address the implications of weakening prevailing wage rates. For example, the preponderance of research indicates that reducing construction worker wages is not associated with savings for taxpayers. This report illustrates how wage reductions set off a series of other changes that cancel out savings in wage rates. For example, when wages decrease, less productive workers are employed. Lower worker productivity is associated with increased materials use and costs. Also, labor costs are a low percent of total construction costs. For the types of projects covered by Wisconsin's prevailing wage standard, labor costs are approximately 20% of total costs.¹³ Consequently, it is very difficult to obtain significant costs savings by reducing wage rates.

While Wisconsin legislators opposing prevailing wages focus on construction costs, there has been no analysis of the impact of weakening the policy on the state's economy. Research indicates that a change in a state's prevailing wage law status alters spending in the construction industry in ways that ripple through the rest of the economy. For example, in states with average or strong prevailing wage laws, labor costs, benefits, worker productivity, and the percent of construction work completed by in-state contractors are all higher while material costs and contractor profits are lower. Weakening Wisconsin's prevailing wage laws would not just simply reduce wage rates. A policy change would be associated with the increased use of out-of-state contractors that would reduce economic activity as state tax funds would leak for Wisconsin's economy. Lower construction wages are associated with decreased spending in

¹² See <http://www.jsonline.com/news/statepolitics/effort-to-repeal-prevailing-wage-law-likely-to-fail-in-committee-today-b99495801z1-302900931.html> .

¹³ According to data from the most recent Economic Census of Construction for 2012 labor costs for highway, street, and bridge construction in Wisconsin are 20.8% of total construction costs. Labor costs are 19.1% of total costs of building institutional structures. The method and data used to calculate these figures is described below.

Wisconsin service and retail industries. Consequently, weakening prevailing wages in the state would affect industries that are not directly related to the construction industry.

The remainder of this report is organized into two sections. Part 1 includes a review of the academic research on the effect of prevailing wages on construction costs. This section focuses on those studies that specifically address changes in prevailing wage rates and building costs. Part 2 of the report examines the economic impact of weakening Wisconsin's prevailing wage law. This section includes a description of economic impact analysis and software. This section also includes a detailed description of the differences in cost components and in the use of in-state contractors between states with and without adequate prevailing wage laws. These data are the basis of the economic impact analysis and are used to show that when prevailing wage laws change, spending in the industry is altered in ways that reduce economic activity.

Part 1: Prevailing Wages and Construction Costs

It may be useful to consider the general relationships between wages, costs, and labor productivity before addressing the specifics of prevailing wages and the construction industry. Followers of the financial news are aware that, for the U.S. economy as a whole, labor costs can be a good indicator of inflation. This is because labor costs are, on average, two-thirds of all production costs.¹⁴ This provides evidence for the intuitive understanding that as wages increase, so do production costs and prices. However, increases in labor costs that are also accompanied by increases in labor productivity are associated with stable production costs and prices. There are important similarities and differences between the construction industry and

¹⁴ For an example, see Anirvan Banerji at: <http://www.bls.gov/opub/mlr/cwc/the-relationship-between-labor-costs-and-inflation-a-cyclical-viewpoint.pdf>.

the overall economy that are helpful in understanding the effect of prevailing wages on building costs.

While labor costs are a relatively high percent of total production costs for the overall economy, these costs are a low percent of total costs in the construction industry. The most reliable data on construction labor costs can be obtained from the U.S. Census Bureau's *Economic Census of Construction*.¹⁵ These data are derived from a survey of construction contractors in every state, every five years. Data from the most recent *Economic Census of Construction* indicates that labor costs (wages and benefits) are approximately 19.1% of the net value of commercial and institutional building construction in Wisconsin.¹⁶ This category includes many of the structures (institutional buildings) that are covered by the state's prevailing wage standard. Also, labor costs, including benefits, are 20.8% of total costs highway, street, and bridge construction in Wisconsin. Again, this category includes the types of projects covered by the state's wage policy. These data are consistent with U.S. Census Bureau

¹⁵ See the 2012 U.S. Census Bureau, *Economic Census of Construction*, Construction: Geographic Area Series: Detailed Statistics for Establishments, accessed at: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_23A1&prodType=table

¹⁶ The *Economic Census of Construction* for 2012 does not report labor costs as a percent of total costs. This ratio must be calculated based on other data. Here, labor cost as a percent of total construction cost is derived by dividing total construction worker payroll, plus proportionally allocated total fringe benefits, by the net value of construction work. The net value of construction is based on the value of work completed by a contractor, less the value of work subcontracted to other contractors. The *Economic Census of Construction* defines construction worker payroll as the gross earnings paid in the reporting year to all construction workers on the payroll of construction establishments. It includes all forms of compensation such as salaries, wages, commissions, dismissal pay, bonuses, and vacation and sick leave pay, prior to deductions such as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The *Economic Census of Construction* defines the net value of construction as the receipts, billings, or sales for construction work done by contractors, less the value of construction work subcontracted to others. The net value of construction does not include contractor business receipts from retail and wholesale trade, rental of equipment without operator, manufacturing, transportation, legal services, insurance, finance, rental of property and other real estate operations, and other nonconstruction activities. Receipts for separately definable architectural and engineering work for others are also excluded. Nonoperating income such as interest, dividends, the sale of fixed assets, and receipts from other business operations in foreign countries are also excluded. See Construction: Geographic Area Series: Detailed Statistics for Establishments: 2012. Accessed at: See Construction: Geographic Area Series: Detailed Statistics for Establishments: 2012. Accessed at: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_23A1&prodType=table.

information from other states. For example, Peter Philips reports that labor costs range between 17% and 20% for selected building types in Kentucky.¹⁷ Elsewhere, Kevin Duncan has reported that labor costs are approximately 22% of the net value of construction for highway, street, and bridge construction in Colorado.¹⁸ Therefore, when wages change in the construction industry, a relatively small portion of overall costs is affected.

It is also important to keep in mind that labor costs are linked to construction efficiency and productivity. For example, professors Blankenau and Cassou find that the use of skilled and unskilled construction labor is very sensitive to wage rates.¹⁹ When construction wage rates increase, more skilled and productive construction workers are used instead of less skilled workers. Professors Balistreri, McDaniel, and Wong also find that when wages increase and more skilled construction workers are employed, more capital equipment and machinery is used in construction.²⁰ Consequently, when construction wages increase, for whatever reason, more productive workers are used along with more equipment. Consequently, since labor costs are a low percent of total construction costs, relatively small increases in labor productivity are needed to cancel out the impact of higher prevailing wage rates.

In an examination of the economic impact of California's prevailing wage policy, we have used data from the *Economic Census of Construction* to compare construction cost

¹⁷ See Peter Philips, "Kentucky's Prevailing Wage Law: An Economic Impact Analysis," January 2014.

¹⁸ See Kevin Duncan, "The Effect of Federal Davis-Bacon and Disadvantaged Business Enterprise Regulations on Highway Maintenance Costs," *Industrial and Labor Relations Review*, January, 2015, Vol. 68, No. 1, pp. 212-237. Accessed at: <http://ilr.sagepub.com/content/68/1.toc>.

¹⁹ See William Blankenau and Steven Cassou, "Industry Differences in the Elasticity of Substitution and Rate of Biased Technological Change Between Skilled and Unskilled Labor." *Applied Economics*, 2011, Vol. 43, pp. 3129-3142.

²⁰ See Edward Balistreri, Christine McDaniel and Eina Vivian Wong, "An Estimation of U.S. Industry-Level Capital-Labor Substitution Elasticities: Support for Cobb-Douglas." *The North American Journal of Economics and Finance*, 2003, Vol. 14, No. 3, 343-356.

components between states with differing wage policies.²¹ We find that in states with weak or no prevailing wage requirements, construction worker labor costs and fringe benefits are lower compared to states with average or strong prevailing wage policies. Value added per construction worker is also lower in these states with weak or no prevailing wages. The combined costs of materials, fuels, and equipment rentals are higher in states without meaningful prevailing wage standards. These findings suggest that higher material and fuel expenses are likely a consequence of the increased use of less productive labor in those states with less than average prevailing wage laws. Regardless, the data from the *Economic Census of Construction* suggests that states without effective prevailing wage laws have lower labor costs, but also have lower labor productivity, and other construction cost components that are higher. The California study was based on data from 2007. In Part 2 of this study we report similar data based on data from the 2012 *Economic Census of Construction*. The trend in construction costs components is very similar between the two periods, even though the data was obtained during different points in the business cycle.

Summary of Research on Changes in Prevailing Wages and Construction Costs

The preponderance of the research on prevailing wage laws indicates that wage standards are not associated with increased construction costs in a statistically significant way.²² The evidence presented above provides an explanation of these findings. As prevailing wage laws increase construction wage rates, the industry responds by utilizing more productive labor and

²¹ See Kevin Duncan and Alex Lantsberg, “Building the Golden State: The Economic Impacts of California’s Prevailing Wage Policy.” Accessed at: <http://www.smartcitiesprevail.org/study-prevailing-wage/>

²² A comprehensive review of the literature can be found in Kevin Duncan, “An illustration of the Impact on the Santa Clara County Economy of Repealing the Prevailing Wage Policy of the City of San Jose.” Submitted to Working Partnerships USA, February 11, 2011.

equipment. These changes are also associated with more efficient materials use. All of these changes contribute to stable construction costs even as wages increase.

Of particular relevance to the Wisconsin's State Legislature, is Kevin Duncan's current research on highway resurfacing projects that examines the cost effect of a change in prevailing wages from union to average wage and benefit rates.²³ For example, from at least the mid 1990s to April of 2002, prevailing wage and benefit rates for the detailed job classifications involved in highway resurfacing projects in Colorado were based on union rates. From April 2002 until the next prevailing wage survey in the fall of 2011, average wage and benefit rates prevailed. This change applied to 11 of the 13 detailed job classifications involved in highway resurfacing and represented an average 18% decrease in total hourly compensation for these jobs. Despite this substantial decrease in the overwhelming majority of the wages paid for highway resurfacing, there was no corresponding decrease in the cost of federally funded resurfacing work relative to comparable state-funded projects.

Duncan's further analysis of highway resurfacing projects in Colorado indicates that when contractors switch from federal-funded projects to state-funded construction, there is no statistically significant difference in bid prices.²⁴ All highway resurfacing projects in Colorado follow the same safety and quality standards, as well as anti-discrimination and disability policies, regardless of state or federal funding. Projects funded by the federal government also require adherence to Davis-Bacon and Disadvantaged Business Enterprise policies.²⁵ When

²³ See Kevin Duncan, "Do Construction Costs Decrease When Davis-Bacon Prevailing Wages Change from Union to Average Rates?" Working Paper, Colorado State University-Pueblo.

²⁴ See Kevin Duncan, "Do Federal Davis-Bacon and Disadvantaged Business Enterprise Regulations Affect Aggressive Bidding? Evidence from Highway Procurement Auctions." Scheduled to appear in Issue 3 of the *Journal of Public Procurement*, 2015.

²⁵ The Disadvantaged Business Enterprise (DBE) Program of the U.S. Department of Transportation requires that a minimum of 10% of highway expenditures involve contracting companies that are owned by socially and

contractors switch from state to federally funded projects, one additional difference is the payment of prevailing wages. But, this requirement is not associated with higher bid prices when projects of comparable size and complexity are compared. This finding illustrates that when contractors switch from projects that require prevailing wages to comparable projects that are not covered by the wage policy, there is no difference in bid prices.

Other researchers have also found that construction costs do not decrease when prevailing wage rates decrease, or when state-level prevailing wage laws are repealed. For example, Professor Wial examined the effect of a change in Pennsylvania's prevailing wage survey and wage determination.²⁶ Before the survey change in the mid 1990s, union wage and benefit rates prevailed in most counties. After the change, union rates continued to prevail in some counties, but switched to lower rates in other counties. Wial's examination of these changes on school construction costs indicates that, while lower wage and benefit rates were intended to save taxpayers money, there was no measureable relative cost impact.

In an examination of construction costs in Kentucky, Michigan, and Ohio during periods in the 1990s when prevailing wage policies for school projects changed within these states, Professor Philips finds that there was no statistically significant difference in school construction costs associated with a change in prevailing wage policies. Professor Philips also reports that value added per construction worker, a measure of labor productivity, is 14% higher in states with prevailing wage laws. Construction job-related disabilities are 12% higher in states without

economically disadvantaged individuals. See U.S. DOT DBE Program at: <http://www.dot.gov/osdbu/disadvantaged-business-enterprise>.

²⁶ See Howard Wial, "Do Lower Prevailing Wages Reduce Public Construction Costs," Keystone Research Center, July, 1999.

prevailing wages and repeal of prevailing wages is associated with a substantial decrease in the kind of apprenticeships that are associated with future productivity growth.²⁷

Taken together, the studies examining the effect of decreases in, or the elimination of prevailing wages, reveal that these changes are not associated with reduced construction costs. Why would this occur? As described above, the research by professors Blankenau, Cassou, Balistreri, McDaniel, and Wong indicate that as construction wages decrease, so does the use of skilled construction workers as well as the use of equipment. Both of these changes tend to decrease construction worker productivity. When prevailing wages are decreased or eliminated, construction worker labor productivity decreases in a way that increases construction costs.

Another approach in examining the effect of a change in construction wages within a jurisdiction is to take advantage of the “natural experiment” associated with the introduction of a prevailing wage policy. In the early 1990s the Province of British Columbia introduced a prevailing wage standard that has been extensively examined. This Canadian policy was similar to many stronger state-level prevailing wage laws in the U.S. and also required apprenticeship training and supervision.²⁸ For example, professors Bilginsoy and Philips compare the cost of building public schools before and after the introduction of the British Columbian wage policy and report that schools built under the wage regulations were no more expensive than schools that were not covered by the policy.²⁹

²⁷ All of these findings are reported in Peter Philips, “Kentucky’s Prevailing Wage Law,” January 2014.

²⁸ For a complete description of the BC policy, see Kevin Duncan, Peter Philips, and Mark Prus, “Prevailing Wage Regulations and School Construction Costs: Cumulative Evidence from British Columbia” *Industrial Relations*, 2014, Vol. 53, No. 4, pp.593-616.

²⁹ See Cihan Bilginsoy and Peter Philips, “Prevailing Wage Regulations and School Construction Costs: Evidence from British Columbia.” *Journal of Education Finance*, 2000, 24, 415- 432.

Professors Duncan, Philips, and Prus have examined the effect of the British Columbian policy on the cost and productivity of building schools. These researchers compared the cost of building public schools covered by the wage policy to the cost of building private schools that were not covered by the policy. Public schools were approximately 40% more expensive to build than comparable private schools before and after the wage policy.³⁰ One explanation of stable construction costs with the introduction of prevailing wages is that the productivity or efficiency of construction increases along with wage rates. These authors find evidence of this trend. For example, average efficiency for all public school construction in British Columbia was 95% during the early and mid 1990s. Construction efficiency on public schools covered by the first stage of the wage policy was 87%. Efficiency on projects covered by the expansion of the British Columbian wage policy, 17 months later, was 99.8%.³¹ These results indicate that the introduction of this prevailing wage law was associated with an interruption in the efficiency of construction. But, contractors restored overall efficiency in a relatively short period of time.

Not all studies report stable construction costs with the introduction of prevailing wages. Ms. Sarah Dunn and professors Quigley and Rosenthal examine the extension of prevailing wages to the construction of subsidized low income housing in California and report that construction costs increased from 9.5% up to 37%.³² There are, however, several problems with the study. First, there is the issue of labor costs as a percent of total construction costs and the size of the estimated prevailing wage cost impact. The authors provide ‘rough’ data specific to housing construction in selected California cities indicating that labor’s share of construction

³⁰ See Kevin Duncan, Peter Philips, and Mark Prus, “Prevailing Wage Regulations and School Construction Costs: Cumulative Evidence from British Columbia” *Industrial Relations*, 2014, Vol. 53, No. 4, pp.593-616.

²⁸ See Kevin Duncan, Peter Philips, and Mark Prus, “The Effects of Prevailing Wage Regulations on Construction Efficiency in British Columbia,” *International Journal of Construction Education and Research*, 2009, Vol. 5, No.1, pp. 63-78.

³² See Dunn, S., Quigley, J., and Rosenthal, L. 2005. “The Effect of Prevailing Wage Regulations on the Cost of Low-Income Housing,” *Industrial and Labor Relations Review*, Vol. 59, No. 1, pp. 141-157.

costs range from 42% to 46% of total costs. Even if labor costs are 46% of total costs, it is unrealistic to assume that prevailing wages account for up to 37% of construction costs. The implication is that labor's share of total costs would fall from 46% to about 17% (0.46×0.37) if the wage law was repealed. This figure for labor's share of total cost (17%) is unrealistically too low.

Second, the study is based on an examination of residential projects subsidized by the California Low Income Housing Tax Credit and covered by the state prevailing wage law. The Office of the Legislative Auditor, State of Minnesota has criticized this report on the basis that the cost of the publicly funded projects included in this study may have been influenced by prevailing wage laws and by other factors such as more exacting Housing and Urban Development (HUD) construction standards that may also affect construction costs.³³ However, these additional factors are not considered separately from prevailing wage effects. The implication is that the cost effect is attributed to the prevailing wage policy when it is likely that the HUD standards and other characteristics contributed to increased costs.

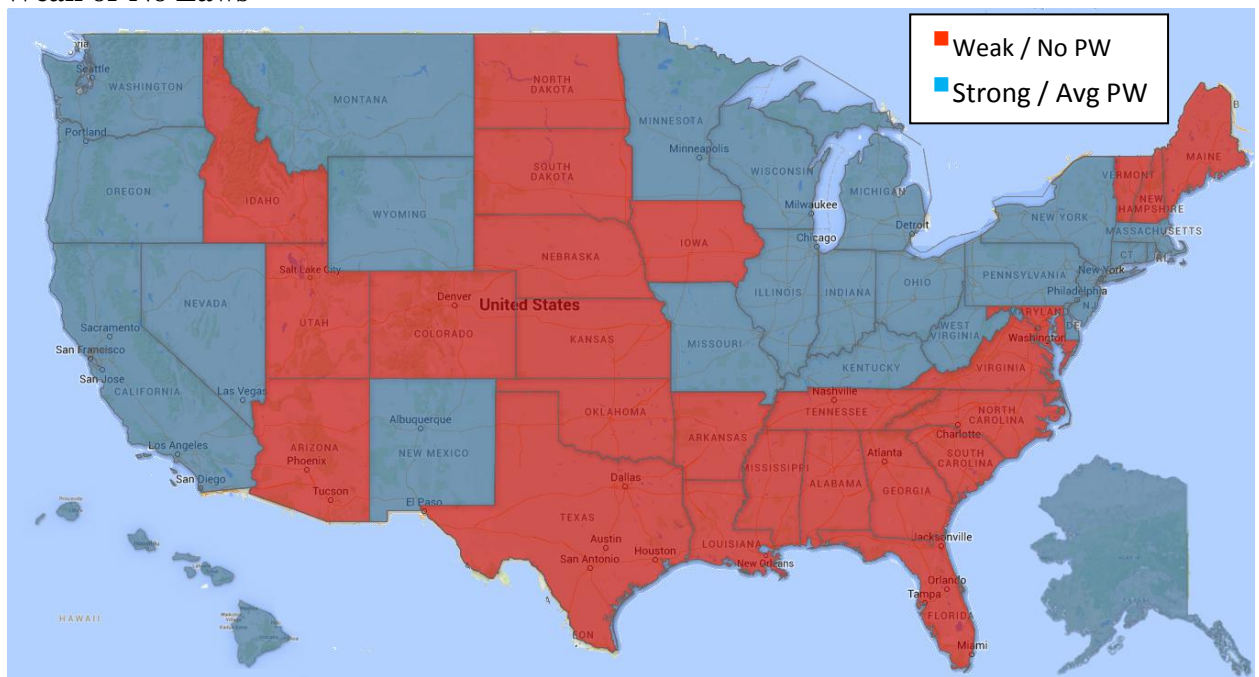
Third, the study is based on a sample of 205 residential projects, yet the authors can only identify if the prevailing wage law applies or does not apply to 175 of the projects. Yet the 30 unidentified projects are still included in the sample. An appropriate statistical test would be based on the sample of 175 projects because the inclusion of the unidentified projects may bias the cost estimate.

³³ See Office of Legislative Auditor. 2007. *Evaluation Report Prevailing Wages*. Program Evaluation Division, State of Minnesota. Accessed at <http://www.auditor.leg.state.mn.us/ped/pedrep/prevailingwages.pdf>.

PART 2: Economic impact of Prevailing Wage Laws

The nation's construction industry is incredibly diverse, employing 6 million workers in more than 650,000 establishments, comprising approximately 5% of Gross Domestic Product and 4% of national non-farm employment in 2013.³⁴ However, this national total obscures significant differences in how the industry is organized around the nation. To illustrate these differences, we divide the United States into two groups: 25 states with average and strong prevailing wages laws and 25 states with weak or no prevailing wage laws. Figure 1 maps the states by their prevailing wage status.

Figure 1: States with Strong and Average Prevailing Wage Laws and States with Weak or No Laws



³⁴ See FRED, Federal Reserve Economic Data, from the Federal Reserve Bank of St. Louis. Accessed at: <http://research.stlouisfed.org/fred2/>. The construction industry has weathered significant challenges since its 2006 peak, losing approximately 4 out of every 10 of its workers and two thirds of the inflation adjusted value of construction put in place at the recession's bottom in 2010. Since then the industry has recovered only 17% of the real loss in construction value and only 14% of the jobs lost between 2007 and 2010.

Evidence suggests that Wisconsin's current policy is of "average strength" compared to the policies of other states.³⁵ Armand Thieblot rated state-level prevailing wage laws based on factors including coverage thresholds, type of work excluded/included, and the determination of wage rates, etc.³⁶ Thieblot's numeric rating ranges from 2 (for a state law with very low strength) to 17 (for a law with very high strength). The weighted average across all states with prevailing wage laws is 9.8. Wisconsin's score of 11 suggests an average state-level law in terms of strength.³⁷ We updated Thieblot's classifications reflective of subsequent policy changes and other research.³⁸ For example, Peter Philips' recent examination of prevailing wages in Wisconsin indicates that 57% of workers on non-residential construction are covered by a union contract.³⁹ This lends further evidence that Wisconsin's law can be considered to be average.

Relying on data from the *Economic Census of Construction*, it is possible to break the industry down into major cost components and examine differences between the two groups. Cost component differences between states with different prevailing wage laws are reported in Figure 2. The variance between the two groups of states is consistent with the differences economists expect when wages are higher or lower in an industry (or when prevailing wage laws apply and when they do not). The payment of prevailing wages is associated with both a higher labor cost and benefit share of total costs and a higher rate of in-state contracting (discussed

³⁵ We define the strength of a law on the ability to protect local wages on public projects from the depressing influence of nonlocal contractors.

³⁶ See Thieblot Armand J. 1995. "State Prevailing Wage Laws." Prepared for Associated Builders and Contractors, Inc.

³⁷ Thieblot's analysis is based on information from 1995. Wisconsin's prevailing wage law has been altered since that time. A summary of changes made in 2011 can be accessed at: http://dwd.wisconsin.gov/er/prevailing_wage_rate/pw_pdf/pe_law_changes_website_072711.pdf

³⁸ A description of state-level prevailing wage laws is available at: <http://www.dol.gov/whd/state/dollar2011.htm#1>. A summary of recent state-level prevailing wage characteristics is available at www.cga.ct.gov/2010/rpt/2010-R-0526.htm.

³⁹ See Wisconsin Taxpayers Alliance report, "Evaluating Wisconsin's Approach to Determining Prevailing Wages." March 2015.

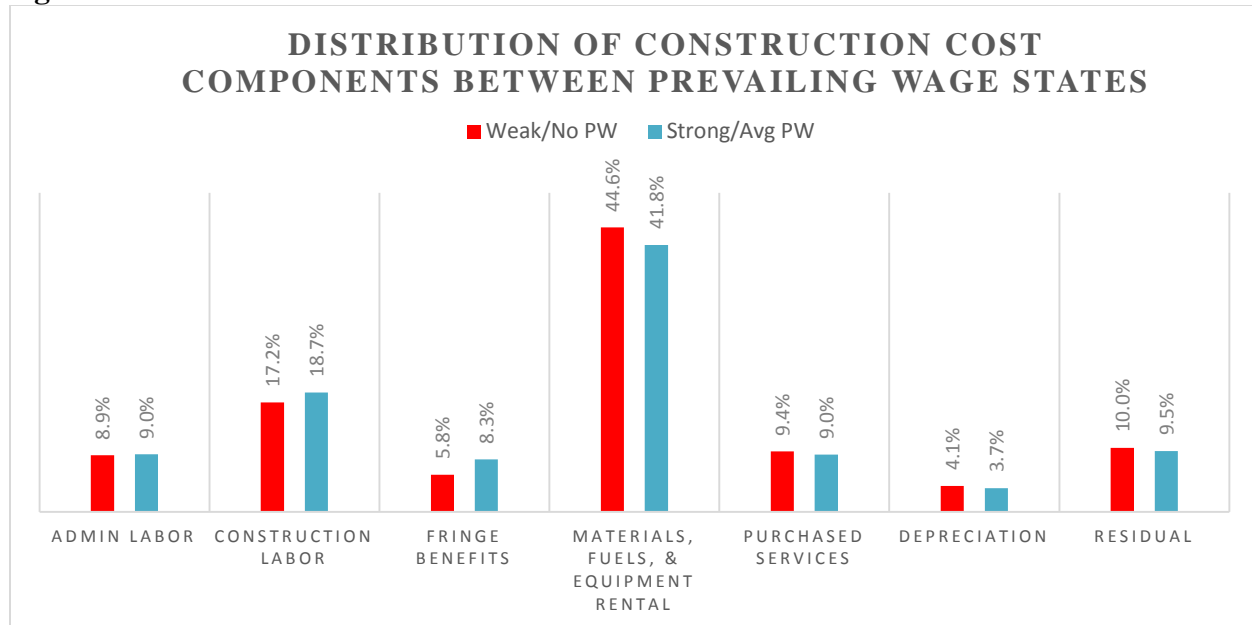
further below). In the absence of prevailing wage laws, a contractor's search for cheaper labor is more likely to result in the use of more out of area contractors that pay less than local area standards. Data from the *Economic Census of Construction* also indicates that value added per worker is 11% higher in states with strong or average prevailing wage laws. Data reported in Figure 2 suggest that when more productive workers are employed, the costs of materials and fuels are lower. The data also show that when construction worker wage and benefit costs are lower; contractor profits (residual income in Table 2) are higher.

Clear differences between states with and without PWLs are visible in Figure 2. We see that the cost of construction labor comprises a smaller share of overall construction value in states with less than average prevailing wage laws (17.2% vs. 18.7%). This translates into lower earnings for construction workers in these states. Also, benefit payments are significantly lower in weak or no law states (5.8% vs. 8.3%). As Figure 2 makes clear, reductions in wages and earned benefit payments to these workers is offset by dramatic increases in materials use and costs. Materials, fuels, and equipment rental costs are 44.6% of total costs in states with weak or no wage policy and are 41.8% in states with strong and average laws. Similarly, we see that states with less than average laws have slightly higher rates of depreciation. The balance of the differences in labor, materials, and services goes to firm owners as pre-tax residual earnings in states with less than average laws (10.0%) compared to 9.5% in the other group of states.⁴⁰ We

⁴⁰ We find a similar distribution in costs for data from the 2007 Economic Census of Construction in spite of the 2007 data covering the period prior to the Great Recession of 2008-2009 and the 2012 cost data covering the period of recovery. See Kevin Duncan and Alex Lantsberg, "Building the Golden State: The Economic Impacts of California's Prevailing Wage Policy." Accessed at: <http://www.smartcitiesprevail.org/study-prevailing-wage/>.

found a similar distribution of cost components between the two groups of states based on comparable data from 2007 *Economic Census of Construction*.⁴¹

Figure 2.



Source: Economic Census of Construction, 2012.

In addition to the differences reported in Figure 2, states with strong or average prevailing wage laws have more construction work completed by state-resident contractors. Data from the 2007 *Economic Census of Construction* indicates an approximate two percentage point difference, in terms of the total value of construction, between the two groups of states.⁴² This implies that with a weakening of the state’s prevailing wage law, two percent of the total value of construction in Wisconsin would be performed by out-of-state contractors. This

⁴¹ Data from the 2007 Economic Census of Construction was collected before the Great Recession, 2008-2009. The 2012 data was collected during the protracted recovery. Regardless of the stage of the business cycle, the cost components between the two groups of states has similar distributions. See Kevin Duncan and Alex Lantsberg, “Building the Golden State: The Economic Impacts of California’s Prevailing Wage Policy.” Accessed at: <http://www.smartcitiesprevail.org/study-prevailing-wage/>.

⁴² Comparable data from the 2012 Economic Census of Construction is not yet available. This percentage varies between regions. For example, there is a 7.4% percentage point gap in state-resident contractor use between the two groups for states in the upper Midwest and northern Plains region. We use the national average of two percent that results in a more conservative impact.

amounts to an approximate \$500 million dollar leakage out of the Wisconsin economy. This also illustrates that, with the current prevailing wage law, state tax dollars and other construction funds are used to employ Wisconsin companies and workers in a way that increases economic activity.

States with “strong” and “average” prevailing wage laws, and those with “weak” and nonexistent ones differ in ways other than this policy. Prevailing wage laws are part of a set of interrelated institutional arrangements, including a stronger emphasis on apprenticeship training, greater work-place safety, higher rates of health insurance and retirement benefits, relatively higher unionization rates and wages that contribute to the “high road” in the construction industry.⁴³ On this path, the construction industry provides the skills needed to build the structures and infrastructures for a growing, technologically sophisticated, and competitive Wisconsin economy. Prevailing wage laws establish the underlying legal framework for this type of construction industry and economic benefits.

In contrast, the construction “low road” does not have the same legal basis. In states with weak or no prevailing wage laws there are lower levels of training and productivity and higher rates of job-related injury. Wages and benefits are lower with evidence suggesting that there is greater reliance on public assistance, particularly related to uncompensated health care costs.⁴⁴ Evidence reported in Figure 1 is illustrative of this problem. Without prevailing wages, worker benefits are lower and contractor profits are higher. With lower health benefits, tax payers are

⁴³ For more discussion of the influence of prevailing wage laws and construction industry characteristics see Peter Philips, “Kentucky’s Prevailing Wage Law,” January 2014; “The Economics of Prevailing Wage Laws,” edited by Hamid Azari-Rad, Peter Philips, Mark Prus, Ashgate Publishing Limited; Aldershot, England, 2005; Frank Manzo and Robert Bruno, “Which Labor Market Institutions Reduce Income Inequality? Labor Unions, Prevailing Wage Laws, and Right-to-Work Laws in the Construction Industry.”

⁴⁴ See Jeff Waddoups “Health Care Subsidies in Construction: Does the Public Sector Subsidize Low Wage Contractors?” in Azari-Rad, Hamid, Peter Phillips, and Mark Prus, eds. *The Economics of Prevailing Wage Laws*, Ashgate Publishers, 2005 pp. 205-224.

more likely to pay a price when construction workers can't pay for their healthcare. Without adequate prevailing wages and benefits, tax payers are at risk and subsidize the profits of contractors. Also, under these conditions, the construction industry does not have the skills to contribute to a broadly competitive state economy. State and local governments are the single, largest purchasers of construction services in Wisconsin.⁴⁵ By virtue of this position, public expenditures set the tone for the state's construction industry. It is up to the Wisconsin State Legislature to determine which road the state's construction industry will follow.

The Economic Impacts of Prevailing Wages

There are three ways that weakening Wisconsin's prevailing wage policy will affect economic activity in the state. First, prevailing wage laws are associated with a greater use of in-state contractors. With a weaker law, Wisconsin public and private construction funds will leak out of the state's economy as more out-of-state contractors and construction workers are employed. This leakage will ripple throughout the economy, tax reducing revenue, and employment in a wide array of industries.

Second, changes in prevailing wages alter other forms of spending in the construction industry. As described above, states with strong or average prevailing wages have relatively higher labor costs, benefits, and lower material costs. A weakening or repealing of prevailing wage laws is associated with shifting labor income and spending on benefits to industries

⁴⁵ Purchases of state and local governments represent 17% of the total value of construction in Wisconsin in 2012. The total is 20% if federal purchases are included. This information is obtained from the 2012 Economic Census of Construction, Table 23A1. Accessed at: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_23A1&prodType=table

supplying construction materials. The net effect of this spending shift depends on the magnitude of the impacts of each component.

Finally, prevailing wages correct the distortion in the distribution of wage and profit income when public projects are awarded to the low bidder, and there is no floor to protect local wages. Construction worker earnings and benefits are relatively lower in states without prevailing wage laws and contractor profits are higher. Economic impact analysis indicates that economic activity, employment, and tax revenue increase when income is shifted downward. Consequently, by addressing the shortcomings of the low bid and low wage outcome of public construction procurement, prevailing wages alter the distribution of income in a way that increases economic activity. The economic impact analysis described below is based on the three impacts described above.

The IMPLAN Economic Impact Software

The economic impact analysis is based on the IMPLAN software and data for the state of Wisconsin to estimate the ripple, or multiplier effect of changes to the state's prevailing wage standard. Specifically, this software is used to estimate the impact on state-level economic activity, employment, and tax revenue. IMPLAN (IMpact analysis for PLANning) was originally developed by the U.S. Department of Agriculture to assist the Forest Service with land and resource management planning. The Minnesota IMPLAN Group (MIG) started work on the data-driven model in the mid-1980s at the University of Minnesota. The software was privatized in 1993 and made available for public use. The software contains an input-output model with data available at the zip-code, county, state, and national levels.

Input-output analysis measures the inter-industry relationships within an economy. Specifically, input-output analysis is a means of measuring the market transactions between businesses and between businesses and consumers. This framework allows for the examination of how a change in one sector affects the entire economy. In this way, input-output analysis is able to analyze the economic effects of policy alternatives by measuring the multiplier, or ripple effect, as an initial change in one industry stimulates further changes in transactions between other businesses and households. The results reported in this study are based on industry figures from the 2012 *Economic Census of Construction*, income distributions in the 2011 5-year *American Community Survey*, and 2007-2009 health care industry spending proportions from the *National Health Expenditures Survey*. IMPLAN deflators are used to adjust for changes in prices over time. The results are reported in 2015 dollars.

Economic Impact Results

The impact results reported below are based on the differences in labor and materials costs, benefits, and contractor profit reported in Figure 2.⁴⁶ With respect to the data reported in Figure 2, the impact is based on spending changes in Wisconsin's construction industry *if* the state were to switch from the characteristics of the typical state with a strong or average prevailing wage law to the average state with a weak or no prevailing wage policy. Our task has been to match the spending categories reported in the *Economic Census of Construction* with the industry classifications used in IMPLAN. For example, a weakening of prevailing wages will affect the allocation of health and retirement benefits and the distribution of construction worker

⁴⁶ Due to data limitations we are unable to include the effects of differences in depreciation and purchased services between the two groups of states.

income. We rely on data from the *American Community Survey* to address the income issue.⁴⁷

We use several publicly available sources to determine how changes in benefits affect healthcare and financial industries.⁴⁸ As a consequence of the methods used in the analysis, this impact study is straight-forward, objective, data-driven, and reproducible.

The data used in the economic impact analysis are reported in Table 1 and indicate that with a weaker law; approximately one-half billion dollars in construction value would be completed by out-of-state contractors. Construction worker income and benefits would decrease by about three-quarters of a billion dollars. Worker productivity is 11% lower in states with weak or no prevailing wage laws. Employment of less skilled and productive workers is associated with increased materials and fuels expenditures. This inefficiency would have a positive effect on economic activity as spending on materials and fuels would increase by about \$613 million. Economic activity due to this type of inefficiency is undesirable socially and economically. We include it in the overall impact as this spending is associated with a change in prevailing wage policy. Finally, proprietor (contractor) profit income would increase by approximately \$175 million with a weaker prevailing wage law. There would be winners and losers associated with a change in the state's prevailing wage law. The combined effect of all of these spending changes is -\$468 million. The net effect of the spending changes depends on

⁴⁷ See the US Census Bureau, American Community Survey. Accessed at: <http://www.census.gov/acs/www/>.

⁴⁸ These include: Milliman, Retirement and Compensation, accessed at: <http://www.milliman.com/EmployeeBenefits/>; Centers for Medicare and Medicaid Services, accessed at: <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html>; CMS-64 Quarterly Expense Report, Medicaid.gov, accessed at: <http://medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Data-and-Systems/MBES/CMS-64-Quarterly-Expense-Report.html>; and the Healthcare Financial Management Association, Maryland Chapter, accessed at: <http://hfmamd.org/>.

how closely related each category is to other industries in Wisconsin economy.⁴⁹ The net effect is determined by the IMPLAN economic impact software.

Table 1. Total Construction Industry Spending Changes Associated with Weakening Wisconsin's Prevailing Wage Law.

Category	Spending Change
Use of Out-of-State Contractors	–\$500 Million
Reduced Construction Worker Income, Health, and Retirement Benefits	–\$756 Million
Increased Materials, Fuels, etc. Use	\$613 Million
Increase Proprietor (Contractor) Income	\$175 Million
Total	– \$468 Million

Economic impact results are reported in Table 2. The net spending reduction of \$468 million in the categories reported in Table 1 would result in a \$1.2 billion reduction in economic activity in Wisconsin. This impact is 0.4% of state GDP in 2013.⁵⁰ The timing of this impact would depend on how long it would take the Wisconsin construction industry to transition to the characteristics of the typical state a weak prevailing wage law. However, once this adjustment occurs, the reduction in economic activity would be experienced every year. A \$1.2 billion reduction in economic activity would be associated with the loss of approximately 9,000 jobs. This represents approximately 0.3% of current, nonfarm employment in Wisconsin.⁵¹

State and local tax revenue would decrease with the reduction in economic activity.

Sales tax revenue would decrease by over \$9 million. Property taxes collected by local

⁴⁹ We measure the change in construction industry spending (materials and out-of-state contractors) through an industry impact in IMPLAN. The changes in wage and profit income are addressed through labor and household income impacts. This type of impact captures the effect of differences in spending between higher and lower income categories. To capture the effect of changes in benefits spending, we use the institutional impact in IMPLAN.

⁵⁰ GDP for Wisconsin is reported by the U.S. Bureau of Economic Analysis. 2013 is the most recent data available. Accessed at: <http://bea.gov/>.

⁵¹ See data for Wisconsin for March 2015 at “Economy at a Glance.” Accessed at: <http://www.bls.gov/regions/midwest/wisconsin.htm#eag>.

governments and income taxes collected by the state government would each decrease by over \$12 million. The total decrease in state and local tax revenue would exceed \$39 million. Similar to the economic impact, the tax effects would occur yearly.

Table 2. Economic Impact of Weakening Wisconsin's Prevailing Wage Law

Impact Category (2015 dollars)	Direct Effect	Multiplier	Total Economic Impact
Construction Industry Spending Change	– \$486 Million	2.47	– \$1.2 Billion
Employment	– 2,660 Jobs	3.28	– 8,730 Jobs
Sales Taxes Revenue	–	–	–\$9.4 Million
Property Tax Revenue*	–	–	–\$12.4 Million
Income Tax Revenue	–	–	–\$12.2 Million
Other State and Local Tax Revenue**	–	–	–\$5.6 Million
Total Tax Revenue Change	–	–	–\$39.6 Million

Source: IMPLAN. * Includes business and residential property taxes. ** Includes taxes on motor vehicle registrations, fishing and hunting licenses, severance taxes, etc.

The total economic impact is the sum of all industry-level impacts reported by IMPLAN. To illustrate the effect of weakening Wisconsin's prevailing wage laws on industries in the state, we report the impact for the top twenty affected sectors. The impacts, reported in Table 3 are sorted by employment loss with the corresponding decrease in business revenue. With a weaker prevailing wage law and the increased use of out-of-state contractors, Wisconsin's construction industry would experience reduced business activity. This would affect residential, nonresidential, road, and maintenance construction. The reduction in construction worker employment, income, and benefits would affect industries that are not related to the construction industry. Of the total job decrease of 8,700, about 1,800 of these jobs would be lost in hospitals

and in the offices of physicians and dentists. The combined revenue loss for these businesses would be approximately \$250 million. The retailers and restaurants included in the top twenty most affected industries would lose a combined 1,200 jobs and \$130 million in revenue.

In addition to the information reported in Table 3, the reduction in economic activity associated with weakening the prevailing wage law would also depress housing values. This reduction is measured by the imputed rental income if property owners were to rent their homes. This impact is – \$66 million. Lower levels of economic activity would be associated with less revenue for real estate establishments. These Wisconsin businesses would experience a decrease in revenue of approximately \$24 million.

Table 3. Top Twenty Wisconsin Industries Negatively Affected by A Weakening of the State’s Prevailing Wage Law.

Industry Category	Employment Change (Jobs)	Revenue Change (Millions)
Total	-8,731	-\$1,200
Hospitals	-931	-\$123
Offices of physicians	-689	-\$105
Construction of other new nonresidential structures	-355	-\$79
Construction of other new residential structures	-301	-\$99
Retail - Nonstore retailers	-281	-\$28
Construction of new power and communication structures	-271	-\$61
Construction of new single-family residential structures	-250	-\$47
Maintenance and repair construction of nonresidential structures	-242	-\$59
Construction of new highways and streets	-240	-\$79
Full-service restaurants	-235	-\$10
Maintenance and repair construction of highways, streets, bridges, and tunnels	-217	-\$79
Retail - Miscellaneous store retailers	-203	-\$67
Home health care services	-201	-\$9
Limited-service restaurants	-198	-\$11
Insurance carriers	-196	-\$68
* Employment and payroll of local govt, education	-178	-\$14
Retail - Clothing and clothing accessories stores	-177	-\$12
Retail - General merchandise stores	-173	-\$11
Offices of dentists	-152	-\$20
Employment services	-139	-\$6

Source: IMPLAN

Some industries would benefit from a weakening of the state's prevailing wage law. With the use of less productive construction workers, materials and fuels costs are higher. Therefore, businesses that are involved in, or related to the production of construction materials would experience increased revenue. These industries are reported in Table 4. Businesses involved in the manufacture of cement and wood materials, and in mining aggregate materials are among those industries that benefit from weak prevailing wage laws. However, the employment and revenue gains of these industries are very small compared to the losses experienced by those industries that are harmed by weak prevailing wage laws.

Table 4. Top Ten Wisconsin Industries Positively Affected by A Weakening of the State's Prevailing Wage Law.

Industry Category	Employment Change (Jobs)	Revenue Change (Millions)
Wholesale trade	327	\$68
Ready-mix concrete manufacturing	138	\$46
Other concrete product manufacturing	39	\$8
Wood windows and door manufacturing	30.	\$5
Prefabricated wood building manufacturing	20	\$3
Other millwork, including flooring	18	\$
Sand and gravel mining	16	\$4
Machine shops	12	\$2
Sawmills	11	\$3
Commercial and industrial machinery and equipment rental and leasing	9	\$2

Source: IMPLAN

Conclusion

The economic impact results illustrate the benefits of Wisconsin's prevailing wage law. This policy is not solely of interest to the construction industry. Rather, it is directly related to the state's business and economic development. For example, under Wisconsin's current policy, more state tax funds are used to employ Wisconsin contractors and construction workers. The

spending of these parties ripples through the economy generating additional economic activity in other industries and generates more tax revenue in Wisconsin.

The results of this report indicate that weakening Wisconsin's prevailing wage law is not in the best interest of taxpayers. Weakening prevailing wages will not reduce the cost of public construction, but will reduce the level of economic activity and state tax revenue. A weaker law with no effect on construction costs, along with a constitutional requirement for a balanced budget, and less tax revenue means the state will have to either reduce capital construction budgets or reduce funding for other budget priorities.