

Wisconsin's Prevailing-Wage Law

An Economic Impact Analysis

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Executive Summary

While all agree that apprenticeship training and skill upgrading are key to a productive construction labor force and the maintenance of middle-class careers in construction, in Wisconsin, only the joint labor-management programs invest serious money in the training of Wisconsin's youth. Only 6% of Wisconsin's annual private investment in apprenticeship and other forms of construction training come from nonunion programs. Under collective bargaining, Wisconsin's union contractors



provide 95% of annual apprenticeship, post-apprenticeship and other training expenditures. Furthermore, the joint labor-management programs spend more on each apprentice they train compared to private nonunion training programs. This difference in quality and quantity plays out in higher productivity on the union side of the Wisconsin construction industry, higher construction worker incomes, greater health insurance coverage and more secure retirements for Wisconsin construction workers.

In states with prevailing-wage laws, workers are more productive both on public works and across the entire construction industry. In prevailing-wage law states, value-added per worker on public works is 21% to 33% higher than in states without prevailing-wage laws. On average, Wisconsin's public works productivity advantage ranges between 25% to 75% higher than the 18 states that do not have prevailing-wage regulations. Because of enhanced and more widespread apprenticeship training and a greater retention of experienced workers, this increased productivity on public works spills over into the overall construction industry. States with prevailing-wage laws, on average, have a value-added per construction worker that is 14% higher than in states without prevailing-wage regulations.ⁱ

In states without prevailing-wage regulations, nonunion contractors fear a looming skill shortage as the economy emerges from the Great Recession. With stagnant and unfunded private training and apprenticeship programs, in states like Georgia, spokespersons for nonunion contractors are calling for guest-worker programs and taxpayer financed vocational training to fill the gaping hole left when their local construction industry stopped training apprentices and upgrading journeymen skills.

Indeed, when Kansas repealed its prevailing-wage law in 1987, apprenticeship training fell by 38%. After Colorado repealed its prevailing-wage law in 1985, apprenticeship training fell by 42%.ⁱⁱ

The nonunion Associated Builders and Contractors (ABC) advocates repealing Wisconsin's prevailing-wage law. Yet the ABC supports prevailing wages as part of its foreign construction guest-worker proposal to meet prospective skill shortages. The ABC argues that when foreign guest-workers enter into the U.S. construction industry, they should be paid the same wages and benefits as similarly situated U.S. construction workers.ⁱⁱⁱ Without which, these foreign guest-workers would drive down U.S. wages. One of the original purposes of Wisconsin's prevailing-wage law was to protect Wisconsin workers' wages and local Wisconsin labor standards when out-of-state contractors bring in out-of-state workers to build Wisconsin's public projects. Prevailing wage regulations do for Wisconsin exactly what the ABC thinks is right for all American construction workers.

Critics of Wisconsin's prevailing-wage law argue that labor costs (including wages, benefits and payroll taxes) are about 30% of total construction costs. These critics predict that with the repeal of Wisconsin's prevailing-wage law, wages on public works will fall by about 25%. Because one-quarter of 30% is 7.5%, these critics then conclude that the public will save about 7.5% on total public construction expenditures with the repeal of Wisconsin's prevailing-wage law.

This argument assumes that a 25% cut in wages will not affect labor productivity, training or the retention of experienced workers. Data from the U.S. Census Bureau's *Economic Census* for construction, which uses contractor payroll and financial records, casts doubt on these assumptions. Wisconsin currently enjoys a substantial labor productivity advantage on public works compared to states without prevailing-wage laws. This productivity advantage is not shared by Wisconsin's residential contractors, who typically are not covered by prevailing-wage regulations. Prevailing-wage-law repeal risks losing that public-works productivity advantage and wiping out most or all of the hoped-for cost savings.

In general, critics of Wisconsin's prevailing-wage law argue that prevailing-wage regulations stifle competition, discourage innovation, inflate wages and increase public construction costs. In fact, studies show that prevailing-wage requirements do not reduce the numbers of bidders on public works or stifle competition.^{iv} Instead of discouraging innovation, prevailing wages promote and support innovation by providing the high quality, flexible and cutting-edge apprenticeship training and the skill upgrading of experienced workers needed to build the facilities that innovative companies require. Prevailing wages and family-friendly benefits also allow skilled and experienced workers to stay within the construction industry, preserving human-capital investment despite the industry's notorious volatility and uncertainty. All of this,

in turn, allows for the building of a modern, efficient and cutting-edge set of structures and infrastructure that encourages and supports the global competitiveness of Wisconsin's businesses and workers.

In a global economy requiring innovative, smart and timely delivery of new products and services, the overall Wisconsin economy relies upon a construction industry rooted in skilled labor that has ready access to both cutting-edge apprenticeship training for new workers and constant skill upgrading and retooling for experienced workers. This industry-financed, human-capital accumulation and preservation provides the Wisconsin construction industry with the necessary skills to deliver tomorrow's global-ready structures and infrastructures today. These skills and their management promote on-time delivery of construction projects, built the right way the first time, so that Wisconsin's other industries can, in turn, meet and beat their competition around the globe.

Prevailing wages help embed, in each lowest public bid, the cost of financing this vital training and skill upgrading. This helps both union and nonunion contractors train. Furthermore, public construction accounts for 20% of all construction activities--this helps set the tone for training across private, commercial, and industrial construction.

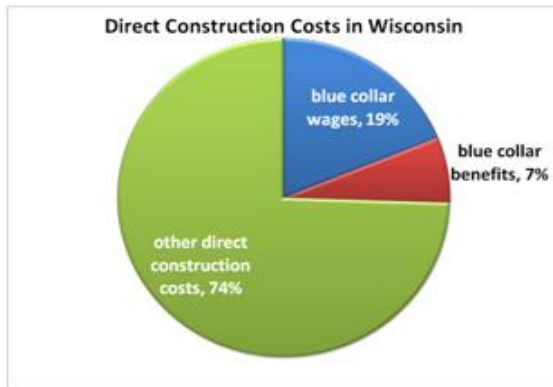
Prevailing wage repeal drives down wages and also risks the loss of construction human-capital. As experienced workers leave the industry, the industry subsequently experiences difficulties in attracting and retaining skilled workers. Lower wages and benefits lead to less training, less experience and lower productivity.^v

There is widespread agreement that prevailing-wage repeal will drive down wages on public works. Indeed, the original purpose of prevailing-wage regulations was to prevent the government, which accounts for about 20% of all construction activity, from undercutting private sector construction wages by encouraging cutthroat bidding on public works.

Governments are prone to driving down construction wages because government bidding is not like construction bidding in the private sector. Private sector owners can dismiss bids they deem to be too low or unreliable. Almost always, public owners must accept the lowest bid. This encourages contractors bidding on public works to jettison training costs, health insurance and any other cost that can be avoided in the short run just to grab the job at hand. Cutthroat bidding practices lead to less training, less experience and falling wages--all spilling over into the private sector. This turns a public sector procurement practice into a private sector skill shortage. Prevailing wages, in part, are a response to the inherent cutthroat bidding tendencies endemic to public sector procurement practices.

There is little evidence to support the assertion that repealing prevailing-wage regulations, in fact, saves any money at all. The classic case is a comparison of the school construction costs in Kentucky and Ohio. In 1996, Kentucky applied its prevailing wage law to public school

construction. In 1997, Ohio exempted its public schools from prevailing-wage requirements. The cost of new school construction in these adjoining states remained similar before, during, and after these policy changes in Prevailing Wage. A 2013 peer-reviewed study from Bowling Green University confirmed that no measurable savings in school construction costs came from exempting Ohio schools from prevailing-wage requirements.



But there are costs associated with pushing Wisconsin's construction industry down a cheap labor path. The loss of skills will inevitably lead towards lower construction worker incomes across all of Wisconsin's construction industry, the loss of middle-class careers in construction and efforts to fill the void with guest-worker programs. In states with prevailing-wage laws, construction worker incomes are 18% higher than in states

without this requirement. Contributions to social security, unemployment insurance and other benefits are correspondingly greater. This income advantage is not just on public works but also across these prevailing-wage law states' entire construction industries. This means that in these states with prevailing-wage laws, the industry is paying its own way in terms of covering unemployment costs, worker injury costs, the health care costs of construction workers' families, and the retirement costs of these blue-collar workers while paying for the cost of training the next generation of skilled workers.

Repealing Wisconsin's prevailing-wage law not only means pushing blue-collar workers out of the middle class, it also means inviting the construction industry to dodge its own costs of doing business. Repeal means less funding of worker-comp claims while engaging a less-skilled labor-force which is more likely to get hurt. Repeal means less funding of unemployment insurance, even though construction has twice the unemployment rate of the overall Wisconsin economy. Repeal means less funding of health insurance, less funding of retirement needs, less funding of apprenticeship training and more lobbying for guest-worker programs to bridge the gap left by repeal. Cutthroat bidding on public works will encourage underground-economy tactics to shave bids and become the lowest bidder. Cutthroat bidding will attract inexperienced or unqualified bidders seeking a foothold in the industry and putting construction performance and completion at risk in a bidding environment where the lowest bidder rules. The prevailing-wage law of Wisconsin induces better-trained, more experienced, safer, local workers to stay within Wisconsin's construction industry throughout their work-lives. Wisconsin's prevailing-wage law is good for Wisconsin construction, good for Wisconsin's construction workers, good for all the industries and businesses that rely upon a technologically advanced and capable construction industry.

This report was written at the request of the Wisconsin Contractors Coalition. The evidence, arguments and conclusions in this report are the sole responsibility of its author, Peter Philips, Ph.D., Professor of Economics, University of Utah. This report is in the public domain.

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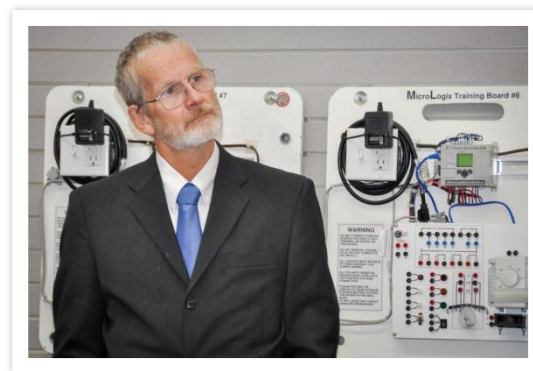
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Peter Philips (Ph.D. Stanford University) is a professor of economics at the University of Utah and recognized expert on the U.S. construction labor market. He has published widely in academic journals on various aspects of construction including construction safety, teenage deaths in construction, absenteeism on construction worksites, labor turnover on construction sites, the role of health insurance in retaining experienced workers in construction, bidding in construction, the role of local hire on public works and prevailing-wage regulations. His most recent peer-reviewed academic articles on prevailing wage, fair wage and prevailing-wage regulations in the United States and Canada include:

- Kevin Duncan, Peter Philips and Mark Prus, "Prevailing Wage Regulations and School Construction Costs: Cumulative Evidence from British Columbia," *Industrial Relations*, Vol. 53, No. 4 (October, 2014)
- JaeWhan Kim, Kuo-Liang Chang and Peter Philips, "The Effect of Prevailing Wage Regulations on Contractor Bid Participation and Behavior: A Comparison of Palo Alto, California with Four Nearby Prevailing Wage Municipalities," *Industrial Relations*, Vol. 51, Issue 4, pp. 874-891 (October, 2012)
- Kevin Duncan, Peter Philips and Mark Prus, "Using Stochastic Frontier Regression to Estimate the Construction Cost Inefficiency of Prevailing Wage Laws," *Engineering, Construction and Architectural Management*, Vol. 19 Issue 3, pp. 320-334 (2012)
- 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*, 1550-3984, Volume 5, Issue 2, pp. 63-78 (April, 2009)
- Kevin Duncan, Peter Philips and Mark Prus, "Prevailing Wage Laws, Productivity and Construction Efficiency," *Construction Management and Economics Conference Proceedings*. Edited by Will Hughes. pp. 1411-1418 (2008)
- Kevin Duncan, Peter Philips and Mark Prus, "Prevailing Wage Legislation and Public School Construction Efficiency: a Stochastic Frontier Approach," *Construction Management and Economics*, Vol. 24, pp. 625-634 (June, 2006)

Philips is the coauthor of four books on the construction industry including: *Construction Research at NIOSH*, The National Academies Press, Washington, DC, 2008, *The Economics of Prevailing Wage Laws*, Ashgate Publishers, 2005, *Building Chaos*, 2003 and *Portable Pensions for Casual Labor Markets*, 1995. Philips was the only economist on the National Academies review panel evaluating the National Institute of Occupational Safety and Health's research on safety in the construction industry. Philips has served as an expert on the construction labor market for the U.S. Labor Department, the U.S. Justice Department, the U.S. Court of Federal Claims and Wisconsin Energy Corporation subsidiary WePower.



PETER PHILIPS
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Joint Labor-Management Apprenticeship Programs Account for 95% of All Training Investment in Wisconsin's Current and Future Construction Workers

The Importance of Apprenticeship Training and Skill Upgrading in Construction

One thing that both the union shop and many nonunion contractors agree upon is that apprenticeship training and journeyman skill upgrading is good for the construction industry. However, as we shall see, in Wisconsin, the nonunion side of construction contributes substantially less towards financing apprenticeship and other forms of training compared to the contractors and union members on the organized side of construction. Just 5% of the annual, privately financed, training investment spent on Wisconsin's youth entering the construction trades comes from the nonunion side of the industry. The remaining 95% comes from contributions required by collectively bargained contracts (Figure 1 below). While accounting for only 5% of the total investment in Wisconsin construction skills and human capital, the nonunion Associated Builders and Contractors (ABC) nonetheless graduates 18% of all Wisconsin apprentices reflecting the lower per-apprentice expenditures in the ABC programs (Figure 2 below). The Joint Labor-Management Programs in Wisconsin lead both in terms of the number of apprentices graduated and in the quality of their apprenticeship training.

Apprenticeship training in the construction industry creates secure, middle-class jobs in a turbulent labor market while insuring that the American construction labor force has the world-class capabilities to build the cutting-edge economic infrastructure needed to make the rest of the local economy world-class competitive in a globalized market. Cooperative joint labor-management apprenticeship programs lasting two, three, four and even five years are widespread in the construction industry for a very good reason: apprenticeship training makes construction workers more productive and safer.

Without training, the infrastructure, roads, bridges, dams, industrial, commercial, residential and public buildings that America relies upon as the physical basis for all the other activities that thrive within our economy would be at risk.

Construction needs professional craft training because each new building, each new industrial facility, each new road is in many ways a unique, one-of-a-kind, distinctive project. No two projects are exactly alike and most projects differ from each other in myriad ways. The custom character of construction activity requires complex teamwork and professional judgment. The blue-collar workers in construction are at the end of a long line of planning and execution beginning with engineers and architects, followed by project managers, passed to general contractors and subdivided among a host of subcontractors who finally marshal the army of blue-collar workers who actually build the roads and erect the buildings that are the physical layout of the American economy. Many things can go wrong between the initial vision of an owner and the building that rises up from the ground. That is why the workers actually constructing the building (or road or factory) have to know what they are doing and what others intend. This is why construction workers who have completed a certified apprenticeship program are professionals. They have to be able to form their own judgment at the last instance regarding whether

the wall is going up right, the wires are being strung correctly, the fixtures are in the right place and whether the hundreds of other decisions and implementations make sense and truly reflect the owner's original vision.

Costs are minimized and safety is enhanced by having a professional blue-collar construction labor force. Apprenticeship training and middle-class wages are key to building and retaining a skilled and experienced local construction workforce.

Of course, there is no guarantee in this complex process that the work will be accomplished on time.

Indeed, delays in construction are some of the most serious costs of construction. The cost of a school is not only the dollars that go into it, but also whether the school opens in time for the next

academic year. The cost of a road

is not only the money it takes, but also the time it takes before truckers and commuters can freely use it. The cost of a road is the work that is not done right the first time, work that has to be redone, work that is delayed for want of intelligence, training and experience, and work that is interrupted by accidents. All these costs are minimized by having a professional, carefully trained and experienced blue-collar labor force.

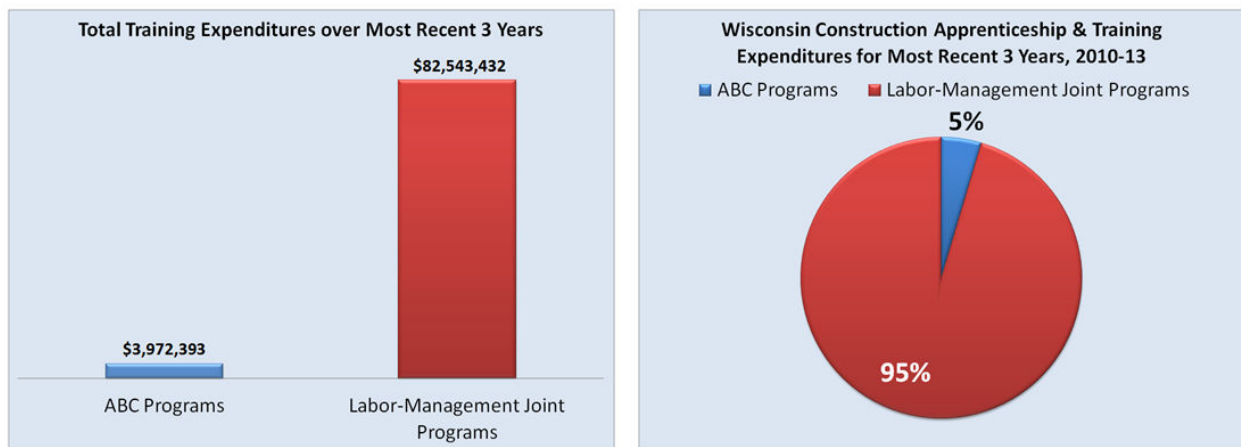
Construction is also the most dangerous major industry in the United States. More workers are killed annually in construction than in any other major segment of the economy--three times more than mining and one-and-one-half times more than manufacturing.^{vi} Christopher Janicak, Professor of Safety Sciences at Indiana University of Pennsylvania, in a 2013 study, found that over the period 2005 to 2009, Hispanics accounted for a disproportionate 26% of all construction deaths due, in part, to lack of training and lack of proper protection.^{vii} Deaths and injuries due to lack of training and lack of proper safety equipment are both a human tragedy and an industrial cost. Better trained and better equipped workers are safer and safer workers mean fewer job interruptions. Investment in construction worker apprenticeships and journeyman skill upgrading makes sense from both a human and a cost perspective. When advocates of prevailing-wage repeal argue that 25% cuts in wages will save taxpayers 7.5%, this calculation does not consider the human costs, the productivity costs, the worker-comp costs and the project interruption costs of increased injuries and deaths associated with going down the less-trained, less-skilled construction path on public works.

Investments in Training by Labor-Management and Nonunion Programs

Investing in apprenticeship and skills-upgrade training in construction is an act of faith and courage. Construction is one of the most volatile industries in the economy with booms and busts coming at irregular but inevitable intervals. Yet solid professional training takes time, in most cases four years, in some cases five. Apprenticeship training takes commitment. It is not uncommon for contractors to invest as much as \$10,000 per year in an apprentice's classroom and on-the-job education. Who has the money and the courage to invest in a young person when the demand for that person's skills may not be there four or five years down the road? The loss of skilled workers during the downturn and the

demands of subsequent business upturns, along with demographic trends, can create both spot shortages and chronic shortages in safe, skilled, professional, blue-collar construction workers in almost all of the construction crafts.

Yet for the most part, the nonunion side of Wisconsin construction does not invest in construction worker training. Using Form 990s that all private, nonprofit apprenticeship and construction training programs must submit, over the last three years for which their forms are available, the Wisconsin ABC spent a total of \$3,972,393 on apprenticeship and other forms of training. (Figure 1) This compares to a three-year total for the set of Joint Labor-Management Programs in Wisconsin of \$82,543,432. (Figure 1) In percentage terms, the ABC programs accounts for 5% of all apprenticeship and other forms of privately financed construction training in Wisconsin.



Source: Mike Tigas and Sisi Wei, ProPublica, Non-Profit Explorer, ProPublica, Updated February 18, 2015 <https://projects.propublica.org/nonprofits/> see also: <https://www.citizenaudit.org> for comparable data.

FIGURE 1: WISCONSIN APPRENTICESHIP TRAINING EXPENDITURES BY NONUNION AND JOINT LABOR-MANAGEMENT PROGRAMS (source: IRS Form 990 from the National Center for Charitable Statistics, Urban Institute <http://nccsweb.urban.org/nccs.php>)

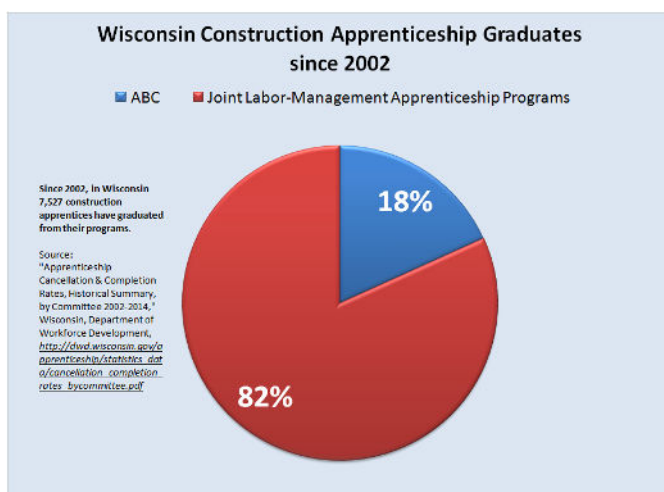


FIGURE 2: PERCENT OF ALL 7,527 WISCONSIN CONSTRUCTION APPRENTICES GRADUATING TO JOURNEYWORKER STATUS FROM ABC PROGRAMS AND JOINT LABOR-MANAGEMENT PROGRAMS SINCE 2002

While the ABC spends only 5% of the total monies invested in training and human-capital formation in Wisconsin construction, the ABC accounts for 18% of all the apprentices who have graduated in Wisconsin construction since 2002. (Figure 2) This reflects the fact that the ABC programs spend less per apprentice compared to the Joint Labor-Management Programs in Wisconsin. The better Labor-Management Programs not only graduate 82% of all construction apprentices in Wisconsin, but also by spending 95% of all privately financed training

monies on 82% of all construction trainees, these Labor-Management Programs invest more per apprentice and consequently, these apprentices receive better training. So both in terms of quantity and quality, Labor-Management training in Wisconsin leads the way in financing and addressing the current and future needs of the Wisconsin construction industry. (A list of Wisconsin registered construction apprenticeship programs may be found in Appendix I).

Skill shortages do loom when the next generation of construction workers is not prepared and trained to enter the industry as the last generation leaves. The Great Recession hit at a time when the Baby Boomers were entering their 50s and 60s. In Wisconsin, the courage of the multiemployer/union side of construction has led to a continued investment in the next generation so that as the economy picks up, a qualified and safe labor force is in-place to build this century's new structures and infrastructures. But this is not necessarily the case in states that do not have prevailing-wage laws. The case of Georgia's construction industry is instructive.

ABC Calls for Guest-Worker Programs to Meet Skilled Labor Shortage

Ideally, the construction industry, itself, should pay for the training of the next generation of construction workers. That way, the full cost of construction is internalized to the industry. Wisconsin's prevailing-wage regulation helps internalize apprenticeship training costs to the industry itself. In states without prevailing-wage laws, apprenticeship training either does not exist or is largely paid for by taxes through public technical schools and community colleges or is replaced by the promotion of guest-worker programs and other forms of immigration.

"[We] need to address immigration laws and make it easier for people to move to the United States from other countries and work in the construction industry..."

-Scott Shelar, the executive director of the Construction Education Foundation of Georgia (ABC)

For example, in Georgia--a state that has never had a state prevailing-wage law, the ABC established the Construction Education Foundation of Georgia "years ago to address the craft training needs of Georgia's construction industry."^{viii} The Georgia ABC states: "The number-one issue facing the construction

industry today is a shortage of skilled craft workers."^{ix} It asserts that "240,000 new skilled craft workers are needed every year in the U.S. 6,000-8000 new skilled craft workers are needed every year in Georgia."^x Scott Shelar, the executive director of the Construction Education Foundation of Georgia, argues that the looming skills shortage in construction requires both more training and more immigration. He argues:

Construction executives, superintendents and HR managers realize they have a problem: Half of their workforce (according to the Bureau of Labor Statistics) are Baby Boomers--those born between 1946 and 1964. They've already started retiring at a rapid pace, which will continue for the next 15 years. This, combined with tighter immigration laws (especially here in Georgia) and implementation of programs like E-Verify on most large projects are making it difficult, even in

this slow-recovering economy, for many construction companies to find skilled workers. So what to do? There seem [to] be two schools of thought. One says we need to address immigration laws and make it easier for people to move to the United States from other countries and work in the construction industry. The other says we need to invest in our schools and young adults here in the United States and convince them that there are good careers in construction, and specifically the skilled trades. The answer, most likely, is that we need to do both.^{xi}

Rather than addressing the issue of a skilled labor shortage in construction through industry-sponsored apprenticeship programs for local workers, the national ABC advocates a guest-worker program tied to the business cycle:

Instead of industry-sponsored apprenticeships for local workers, the ABC representing nonunion contractors calls for a guest-worker program to meet the looming skill shortage in construction.

"...any future immigration law must include a new market-driven program to provide a legal path for foreign workers to enter the United States when the economy needs them, with fewer entering when the economy contracts..."

--"ABC Outlines Features of a Successful Guestworker Program"
March 20, 2013^{xii}

ABC Wants Its Guest-Worker Program to Have Prevailing Wages

While the ABC opposes prevailing-wage regulations in Wisconsin, it promotes prevailing-wage regulations for its proposed construction foreign guest-worker program:

A successful future guestworker program must include....A program that requires employers to treat these legal foreign workers in the same manner as U.S. workers—with all the same benefits, workforce protections and wage rates as similarly situated workers at the same location.^{xiii}

If the ABC's foreign guest-worker program did not have prevailing-wages in it, of course, it would drive down the wages and benefits of similarly situated U.S. construction workers wherever those guest-workers went.

Wisconsin's prevailing-wage regulation protects Wisconsin construction workers just like the ABC thinks is right for all U.S. workers. Wisconsin's prevailing-wage assures that on state and local public works, out-of-state workers are paid the same as similarly-situated Wisconsin construction workers. In fact, one of the original purposes of prevailing-wage laws was simply to protect local labor standards from itinerant out-of-state contractors bringing in cheaper labor from lower-wage areas within the United States. In the case of out-of-state workers on Wisconsin's public works, Wisconsin's prevailing-wage simply requires that contractors treat these out-of-state workers in the same manner as Wisconsin workers—with all the same benefits and wage rates as similarly-situated Wisconsin workers.

But what the prevailing wage also does is internalize the cost of training the next generation of local construction workers to the construction industry itself. This generation of buildings pays for the next generation of safe, qualified local construction workers. Repealing the prevailing wage pushes the industry into advocating for guest-worker programs hoping that these foreign workers will come with the needed skills, experience and safety awareness required to fill the gap caused by the destruction of industry-sponsored apprenticeship training. When construction goes down the unskilled, untrained, cheap-labor path, good careers in construction disappear. The industry becomes more dangerous, less productive and more reliant upon guest-worker programs. For advocates of prevailing-wage law repeal, these risks are justified by the assertion that 15% to 30% of public construction costs can be saved by prevailing-wage repeal.

Critics Claim of 7.5% Savings from Repeal Unfounded

Will Repeal Reduce Total Construction Costs by around 7.5%?

Critics of Wisconsin's prevailing-wage law argue that labor costs (including wages, benefits and payroll taxes) are about 30% of total construction costs. These critics predict that with the repeal of Wisconsin's prevailing-wage law, wages on public works will fall by about 25%. Because one-quarter of 30% is 7.5%, these critics then conclude that the public will save about 7.5% on total public construction expenditures with the repeal of Wisconsin's prevailing-wage law.

This argument assumes that a 25% cut in wages will not affect productivity. Data from the U.S. Census Bureau's *Economic Census* for construction, which uses contractor payroll and financial records, casts doubt on the assumption that repealing prevailing wages in Wisconsin will leave labor productivity on public works unchanged.

Figure 3 shows four measures related to construction labor productivity for Wisconsin compared to the average for 18 states that do not have prevailing-wage laws.

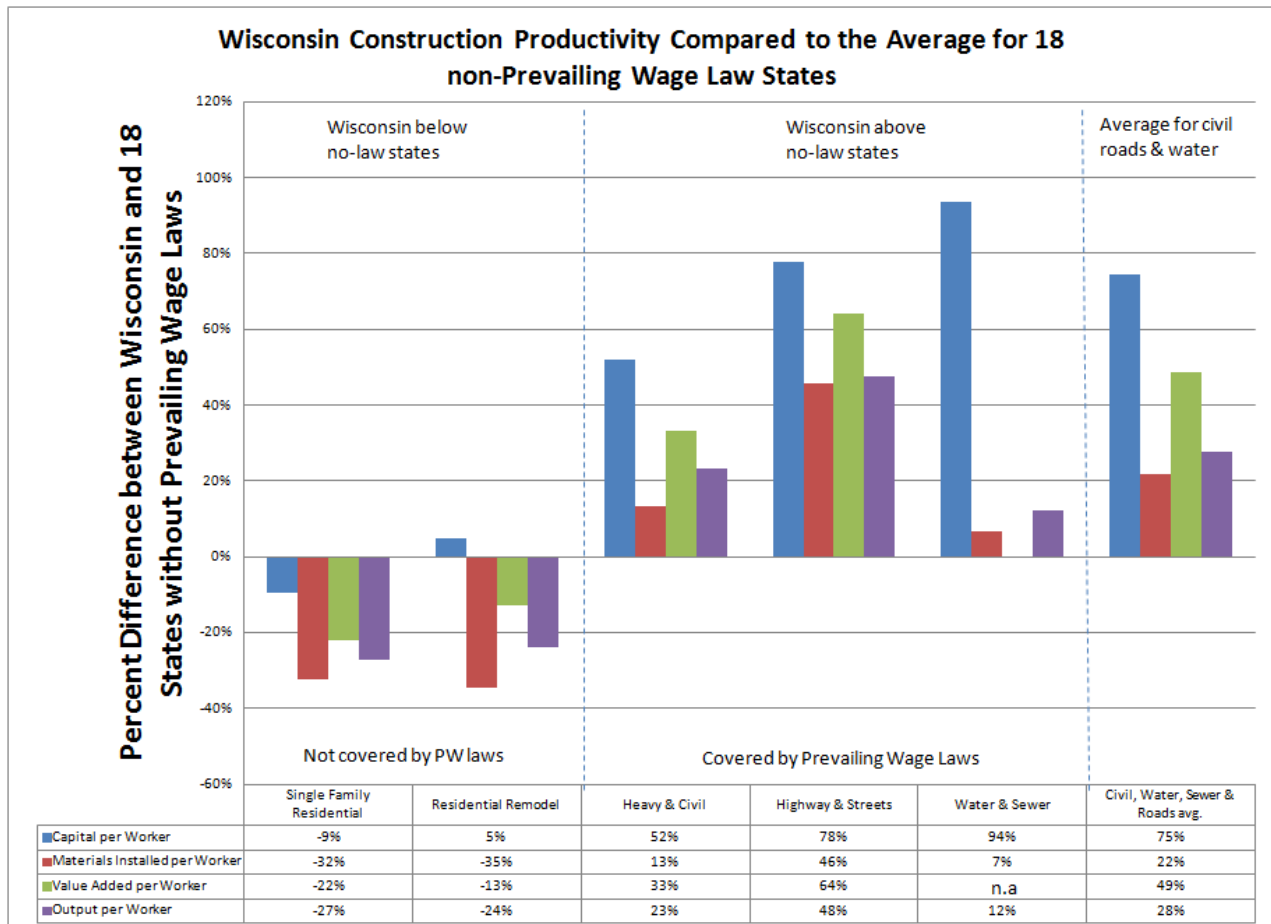


FIGURE 3: THE PERCENT WHICH WISCONSIN CONSTRUCTION MEASURES RELATED TO LABOR PRODUCTIVITY ARE HIGHER THAN OR LOWER THAN THE AVERAGE FOR THE SAME PRODUCTIVITY MEASURES IN 18 STATES THAT DO NOT HAVE PREVAILING-WAGE LAWS BY CONSTRUCTION SEGMENT^{xiv}

Capital per worker, also known as the capital-labor ratio, measures the amount of capital contractors have invested per blue-collar construction worker. Higher capital-labor ratios mean that workers have more, bigger or better equipment and tools to work with leading to higher labor productivity. Materials-installed-per-worker measures the value of the materials put-in-place per blue-collar construction workers over one year of construction. The more asphalt and concrete laid, the more steel erected, the more equipment and fixtures installed, the more roads and structures are built per worker. Value-added-per-worker is the value of output per worker minus the materials put-in-place. So this captures the value that the contractor and his workers add in transforming materials into buildings. The value of output-per-worker includes both the value of the original materials and the value added by the contractor and his workers.

Each measure of labor productivity has its strengths and weaknesses. But the general pattern in Figure 3 is clear: labor productivity on Wisconsin's public works is higher than that for blue-collar workers on public jobs in states that do not have prevailing-wage regulations.

Wisconsin blue-collar workers on single-family homes and residential remodeling are included in [Figure 3](#) as a control group. Residential workers in Wisconsin are not covered by prevailing-wage regulations and they do not have a productivity advantage over comparable residential workers in no-law states. This may reflect a movement of more productive Wisconsin construction workers out of residential construction into better paying jobs in commercial, industrial and public works construction or into other industries entirely. Workers with skills have options and do move when wages are better elsewhere.

Wisconsin's relatively low productivity in residential construction serves as a warning that Wisconsin's relatively high labor productivity on public works could fall if a repeal leads to a 25% cut in blue-collar wages. How far productivity would fall could vary.

Consider the productivity measure, construction-materials put-in-place per blue-collar worker. A drop in materials put-in-place per worker typically corresponds to a drop in the amount of structures and infrastructure built. The more materials put-in-place in a year, the more streets and roads are paved, the more schools are built, the more water and sewage infrastructure is constructed. If the value of materials put-in-place per worker falls by (say) 10%, then roughly speaking, 10% fewer roads or facilities are built.

In [Figure 3](#), the smallest materials-put-in-place productivity advantage on Wisconsin prevailing-wage jobs is 7% for water and sewer projects. Wisconsin's critics of prevailing-wage regulations anticipate that a 25% cut in public works wages will result in a 7.5% drop in total costs on municipal water projects. This calculation explicitly assumes that there is no drop in labor productivity with a 25% wage cut. However, if Wisconsin loses its materials-productivity advantage on water and sewer projects, output could fall by 7% offsetting almost all of the anticipated savings from a repeal. On other civil, highway and street projects, it is possible that no savings would occur or even that costs might actually rise with a repeal.

[Figure 3](#) does not include school construction or public office buildings or other similar prevailing-wage projects because unlike civil projects, the Census Bureau's *Census of Construction* does not break out those categories. So a skeptic might hypothesize that prevailing-wage productivity advantages exist only for highways, streets, water projects, sewer projects and civil construction in general. But because we have no data telling us one way or the other, the skeptic might argue that on building projects, there are no prevailing-wage productivity advantages.

But one of the underlying reasons for productivity advantages under prevailing-wage regulations is that prevailing wages help both signatory and nonunion contractors invest in training. And many of the skilled construction crafts--electricians, sheet metal workers, plumbers--work primarily on schools and public building, not civil engineering projects. So while we do not have the data available, it seems more reasonable to assume that the productivity advantages shown in [Figure 3](#) for civil projects also exist for other public building projects. If that is the case, the anticipated 7.5% savings on public building projects may also diminish or disappear due to a loss of labor productivity tied to a 25% wage cut.

Labor Costs Are 26% of Total Costs on Wisconsin Public Construction and Falling

The amount of savings that would be attained by a cut in wages depends (in part) on the share of labor costs in the total cost of construction. If labor costs, including wages and benefits, constitute a set portion of total construction costs, excluding land, then the potential savings from repealing prevailing-wage regulations cannot exceed those blue-collar labor costs. In this section, we will examine the share of labor costs in the cost of construction in Wisconsin. The data source for this exercise is again the U.S. Census Bureau, *Census of Construction* (also known as the *Economic Census-Construction*), which surveys construction contractors in every state every five years. We will use the results of the 2007 survey, since at the time of this writing, the most recent 2012 survey has yet to be released. We will see that, due to improvements in labor productivity, blue-collar labor costs have been falling steadily in Wisconsin for over 40 years. In 2007, they amounted to 26% of total construction costs, and today may well be lower than that.

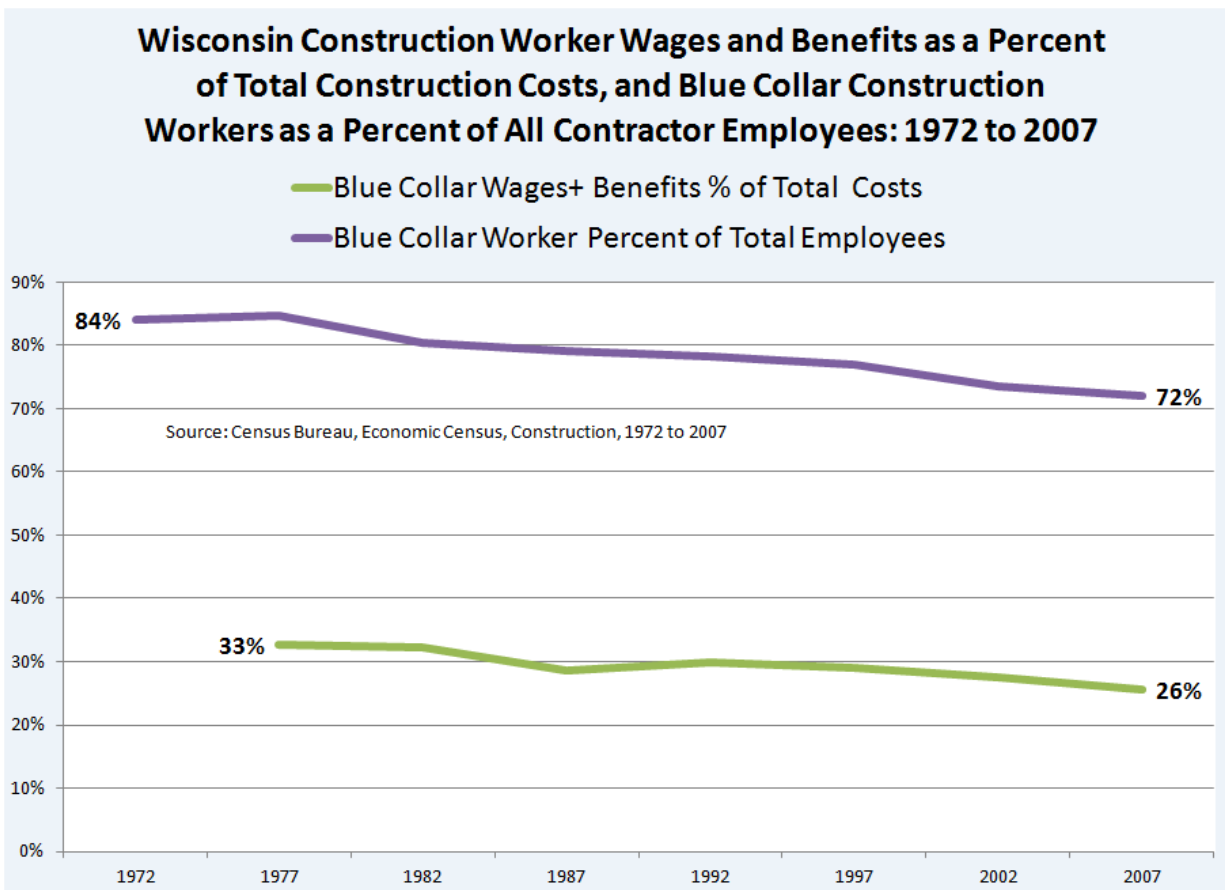


Figure 4: Labor costs as a percent of total costs in Wisconsin construction 1972 to 2007

For the period 1972 to 2007, Figure 4 shows Wisconsin blue-collar labor costs—wages and benefits including payroll taxes, pensions, and health insurance—as a percent of total construction costs (excluding land acquisition costs, construction development, design and oversight costs not provided by

construction contractors). [Figure 4](#) also shows blue-collar workers as a percent of all construction contractor employees again from 1972 to 2007. Over this period, blue-collar workers have fallen from 84% of all construction contractor employees to 72%. Due to increased blue-collar construction worker productivity and the increased use of white-collar workers by construction contractors, blue-collar wages and benefits have fallen from 33% of the total costs contractors charged owners to 26%.

The key point is this: blue-collar labor costs as a percent of total costs have continuously fallen for as long as we have data. [Figure 4](#) shows that over the 30 years from 1977 to 2007, blue-collar labor costs as a percent of total costs in Wisconsin have fallen by one-fourth. This is partly due to technological change along with rising blue-collar human-capital and corresponding increased labor productivity. This increased productivity is concentrated in the multiemployer-union sector of construction where apprenticeship training is concentrated. The falling blue-collar labor costs as a percent of total costs is also due to the rise of white-collar employment as some general contractors and other construction contractors assume some of the architectural, engineering and project-management activities traditionally performed by others. By 2015, one can fairly assume that blue-collar labor costs have fallen further as a percent of total construction costs in Wisconsin. The significance of this fact is as follows: repealing prevailing-wage regulation based on the assertion that such a repeal will substantially reduce public construction costs is claiming that substantial savings can be squeezed from an ever-shrinking piece of the overall construction-cost pie.

The Prevailing-Wage Law Promotes a Healthier Construction Labor Force

When critics claim that eliminating the prevailing wage will substantially cut public construction costs, they have in mind a simple notion--cutting wages will not affect worker productivity at all. This overlooks the fact that decent compensation--including apprenticeship contributions--attracts, trains and retains workers willing and able to work harder and smarter. As a result, better paid workers are more productive, safer and healthier.

One example of this comes in the case of health insurance benefits. Research has shown that construction workers with decent health insurance benefits are 40% more likely to stay in construction than workers without health insurance. Research has also shown that construction workers with higher wage rates are more likely to stay within the industry through seasonal and cyclical turbulence and high unemployment.^{xv}

Union and nonunion workers who have good health insurance, pension benefits, and higher wages are more likely to remain in the construction industry despite construction's notorious volatility. Middle-class blue-collar construction workers tend to have more experience than poorly-paid, casual workers. And the apprenticeship programs provide a formal method for older workers to transmit their know-how to younger workers. Prevailing wage regulations mean that the bidding the government uses on public works reinforces rather than undercuts this symbiosis between higher wages, higher productivity, safer workplace, healthier lives, retention of experience, transmission of skills and middle-class blue-collar construction careers.

Thus, because training and experience lead to a more productive and safer construction labor force, prevailing-wage regulations that maintain existing local area wages, training contributions, and pension and health insurance contributions provide a set of incentives that make the construction labor force more productive and safer.

Higher Productivity Promotes Retirement Savings, Health Insurance Coverage and Higher Income

Figure 5 shows that in states with prevailing-wage laws compared to states without prevailing-wage laws, construction workers are paid 18% more in wages. In states without prevailing-wage laws, where construction workers are paid less, the nonunion sector finds difficulty convincing young American adults that construction provides good careers. Where career opportunities are lacking, young people are less likely to consider construction as a profession and less likely to stay in construction over the long haul.

This means that in states like Wisconsin with prevailing-wage laws and better pay, it is easier to train construction workers and to know that this investment in apprenticeship training will not be lost to the industry and know that trained workers will continue to accumulate additional experience without leaving the industry and know that contractors and owners will benefit in terms of a more productive workforce and higher quality construction projects. Better wages pay for themselves by attracting, training and retaining better workers. Squeezing wages and benefits has the effect of pushing many of the best workers out of construction and attracting less skilled workers, many of whom will be less likely to stay in construction long enough to accumulate sufficient experience to do the job safely and correctly.

In prevailing-wage law states, on and off public works, construction workers are paid 18% more in wages. Contractors contribute 25% more in social security and worker-comp premiums.

It is not surprising that in states such as Georgia, the construction industry faces a chronic shortage of skilled workers. It is also sad that in states such as Georgia, the political response has been to look to immigration through guest-worker programs rather than to policies such as the prevailing wage.

Instead of promoting local human-capital formation and retaining skilled local workers through better-paying blue-collar construction jobs, critics of the prevailing wage advocate cutting wages on public works by roughly 25% and thus putting downward pressure on all construction wages in Wisconsin. The long-run result of eliminating prevailing-wage requirements, if Georgia is any indication, is that in the future, critics of Wisconsin's prevailing wage will come back to ask for guest-worker programs and higher taxes to solve the inevitable skills shortages that will follow the elimination of Wisconsin's prevailing-wage law. But to get that done, they will also ask that these foreign guest-workers be paid the prevailing wages even though they want Wisconsin's prevailing wage repealed.

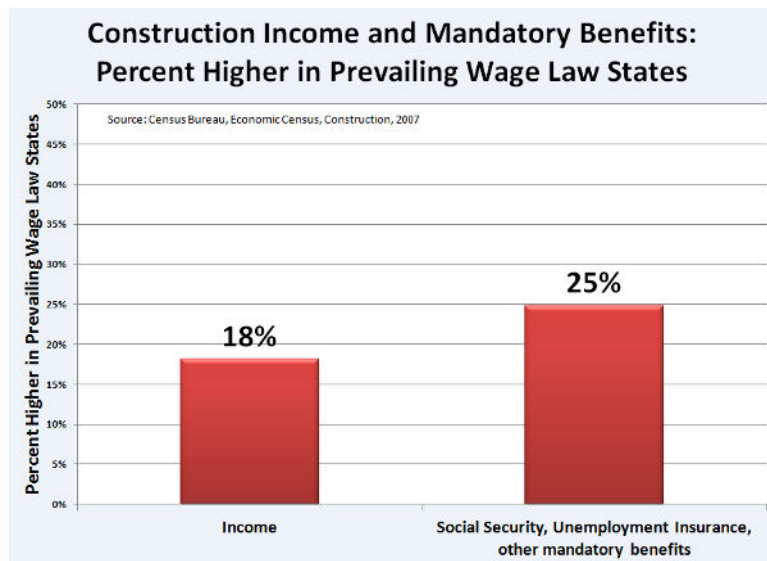


FIGURE 5: COMPARISON OF WAGES, PENSIONS AND BENEFITS PAID IN STATES WITH AND WITHOUT PREVAILING-WAGE LAWS.

These issues of skills, experience and safety are not considered by those claiming an elimination of the prevailing wage would save 15 to 30 percent on total public construction costs, nor do they consider the size of blue-collar labor costs relative to total construction costs. As a consequence, it is not surprising that when one goes to find a 30-percent savings, or even a 15-percent savings from prevailing-wage law repeal, it is not there to behold.

No Evidence that Repeals Generate Savings

Ohio exempted its public schools from prevailing-wage regulations in 1997, yet a 2013 Bowling Green University study found no evidence supporting the claim that this exemption saved taxpayers money. Kentucky applied prevailing-wage regulations to its schools in 1996, yet comparing its school construction costs to those of Ohio show no increase of costs in Kentucky relative to Ohio after Kentucky applied prevailing wages to school construction and Ohio exempted its school construction from prevailing-wage requirements.

Bowling Green University Study Finds No Cost Savings from Ohio's School Exemption

Professor Alan Atalah, Dean for Graduate Affairs and graduate coordinator for the Construction Management Department at Bowling Green University,¹ has found that in Ohio, subsequent to exempting public schools from prevailing-wage requirements, union contractors continued to win public school jobs while still paying union wages. Indeed, he found that, on average, union bids on public schools in Ohio were slightly lower than nonunion bids, although the difference was close enough to make the results not statistically significant. This is consistent with the findings shown below that Ohio school construction costs did not decline after the state exempted school construction from prevailing wages. The lesson from Ohio is that higher wage rates do not necessarily mean higher construction costs. And claiming that wage rates will fall after repealing prevailing-wage laws does not really mean that public construction costs will decline.

In 1997, Ohio exempted public school construction from prevailing-wage requirements. In 2013, Professor Alan Atalah published his study on the impact of Ohio's prevailing-wage exemption on Ohio's public school construction costs. Dr. Atalah has a doctorate in Engineering with a specialization in Civil

¹ This author has no relationship to and does not know Professor Atalah other than through his published research.

and Construction Engineering and teaches courses in Estimating and Bidding Strategies. This background led him to frame his study around the bids of union contractors paying what would have been Ohio’s prevailing wage, had the exemption not occurred compared, to the bids or nonunion contractors on public schools who were free from prevailing-wage requirements after the exemption took effect. Professor Atalah summarized the results of his study as follows:

In 1997, the Ohio Senate passed Senate Bill 102, which established the Ohio School Facilities Commission as a separate agency to oversee the rebuilding projects of the public schools in Ohio. To lower the construction cost, the bill exempted construction contractors from paying prevailing wages on these projects based on the hypothesis that this exemption would save the Ohio tax payer 10.7%. Many other studies concluded that these savings would range from 1.5 to 26%. The purpose of this research was to investigate this hypothesis through the statistical analysis of 8093 bids received for the schools’ construction from the years 2000 through 2007. Union contractors-who paid their workers union wages-and non-union contractors-who did not pay prevailing wages bid these projects. By comparing the bids/SF [bid price per square foot] from both groups (union and nonunion), the hypothesis was tested. The research indicated that there was no significant difference between the bids/SF for union contractors and the bids/SF for non-union contractors.^{xvi}

Atalah divided his sample of 8093 bids into two sets—1) all bids except the lowest bid and 2) the lowest bids only. The hypothesis is as follows: if prevailing-wage regulations increase bid costs, then eliminating prevailing wages will free nonunion contractors to pay lower wages, while union contractors constrained by their collective bargaining agreements will continue to pay wages at or higher than what prevailing-wage regulations would have required them to pay. So the question is—did nonunion contractor bids come in lower than union contractor bids on Ohio public schools after prevailing-wage requirements were eliminated? Table 1 shows that on average, both for the lowest bids on projects and for the bids which were not the lowest, nonunion contractors bid higher. However, from a statistical standpoint, the difference between union and nonunion contractor bids on Ohio public schools was insignificant. Thus, Dr. Atalah rejected the hypothesis that the elimination of prevailing-wage requirements on Ohio public schools led to lower costs.

TABLE 1: DIFFERENCES IN THE AVERAGE BID PRICE PER SQUARE FOOT FOR OHIO PUBLIC SCHOOLS BY UNION AND NONUNION CONTRACTOR, 2000 TO 2007^{xvii}

	Union / Non-Union Contractor	Number of Bids on Public School Projects	Average Bid Cost per Square Foot	Standard Deviation	Probability You Would Be Wrong if You Thought the Averages Were Different	Accept / Reject Hypothesis that Average Squarefoot Bid Costs Are Different
All Bids Except Lowest	Union	2,307	\$19.22	\$25.31	0.1936	Reject
	Non-union	4,286	\$20.49	\$43.03		
Lowest Bids	Union	547	\$16.99	\$23.54	0.4199	Reject
	Non-union	949	\$18.49	\$39.57		

4/1/2015

Wisconsin's Pre

A Natural Experiment: School Construction Costs in Kentucky, Ohio and Michigan

In the 1990s, a natural experiment occurred that can shed further light on the question: how do prevailing-wage regulations, in general, and the prevailing wage in particular affect public construction costs? In 1996, Kentucky went from not having a prevailing-wage law on public schools to implementing prevailing wages on all public school construction. In 1997, Ohio went from having prevailing-wage regulations apply to public schools to removing the law. Due to a court decision, Michigan suspended its prevailing-wage regulations on schools in late 1994 only to re-implement the regulation in the middle of 1997. So we have a natural experiment that employs both a before-and-after comparison in three adjoining states, and a here-and-there comparison of new school construction costs in each state.

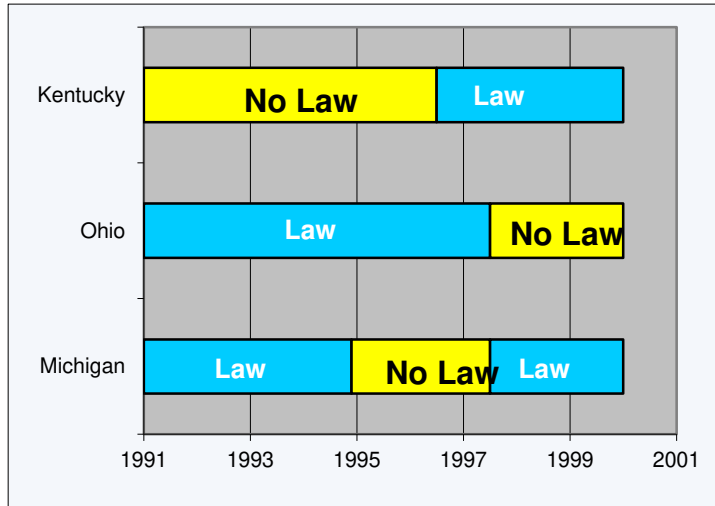


FIGURE 6: PREVAILING WAGE POLICY BY STATE, KENTUCKY, OHIO, MICHIGAN, 1991-2000

Furthermore, the type of construction, schools, is a relatively homogeneous set of construction projects and the time period is close together. So this natural experiment provides a close apples-to-apples comparison of public school construction with and without prevailing-wage regulations. Figure 6 shows the timing in the 1990s when each state had and did not have prevailing-wage regulations in force.

No Cost Savings when Law Was Suspended or Removed

Using FW Dodge data covering 391 new schools constructed in Kentucky, Ohio and Michigan over the period 1992 to 2000, analysis done by this author in 2001 showed that there was no measurable, statistically significant difference in the total cost of construction associated with the removal of prevailing-wage regulations.^{xviii}

TABLE 2: DESCRIPTION OF THE NEW SCHOOLS USED IN THE STUDY

Characteristic of Schools in Study	
Number of New Schools in Study	391
Average Square Foot Size of the School	86,415
Average Total Cost of the Project (Year 2000 dollars)	\$8,483,937
Percent of All Schools	
Michigan	38%
Ohio	36%
Kentucky	26%
Percent of School with a Gym-Pool Facility	7%
Percent of Urban Schools	32%
Percent of Schools Built Under Prevailing Wages	49%

Table 2 shows that of the 391 new schools with an average size of 86,415 feet, almost half (49%) were built under prevailing wages and half (51%) were not. Michigan, which had prevailing wages, dropped them and then took them up again, accounted for 38% of the schools in the sample. Ohio accounted for 36% and Kentucky

accounted for 26% of the schools. Thirty-two percent of the schools were in urban areas while the rest

were rural. All the monetary figures in the study were normalized in the year 2000 dollars and the average project cost was almost \$8.5 million. Before looking at all three states, we will start by looking at the adjacent states of Kentucky and Ohio.

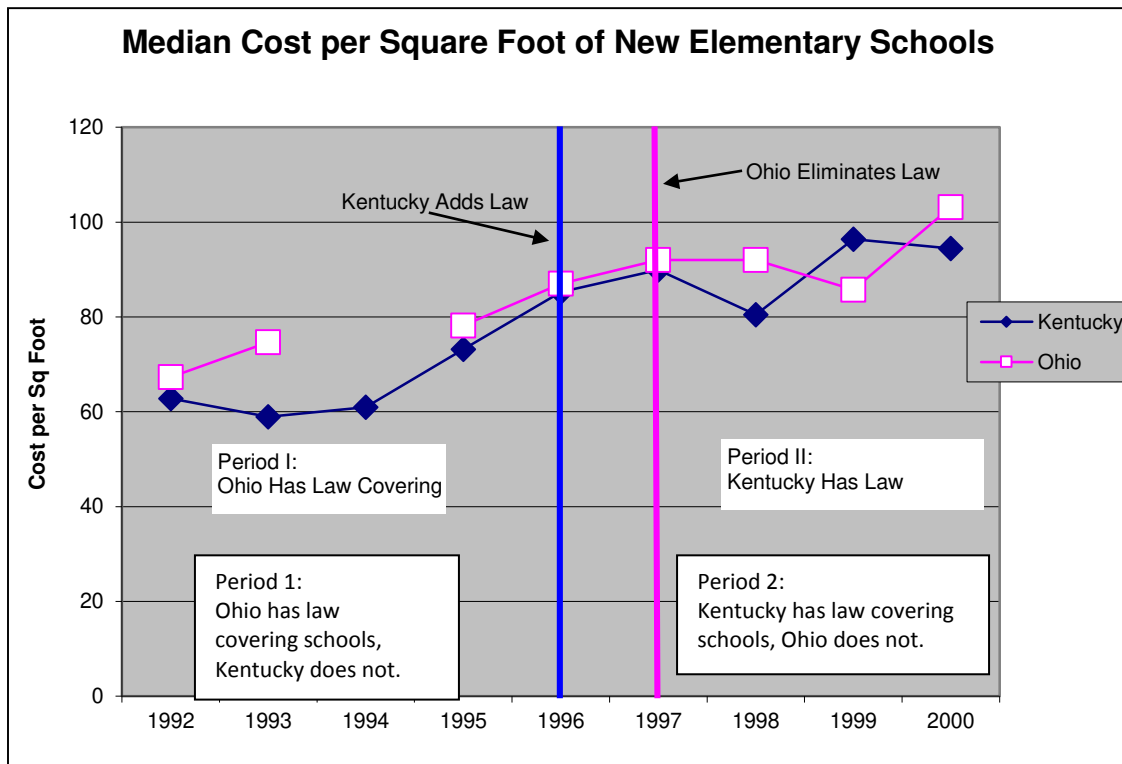


FIGURE 7: MEDIAN SQUARE FOOT COST OF NEW ELEMENTARY SCHOOLS BEFORE AND AFTER LAW CHANGES IN KENTUCKY AND OHIO, 1992-2000

A simple comparison in Figure 7 of the median square foot cost of new school construction based on “start costs” (or accepted bid price) in Kentucky and Ohio over the 1992 to 2000 time period shows no discernible cost effect, either of Kentucky implementing prevailing wages in 1996 nor Ohio removing prevailing wages for schools in 1997.^{xix} Table 3 shows the mean square foot cost of rural schools in periods in which there was no law (\$96) compared to when there was a law (\$98). Table 3 also shows, for urban schools, the mean square foot cost when there was no law (\$114) and when there was a law (\$114). In both cases, there is no statistically significant difference in these average square foot costs.

TABLE 3: REAL, INFLATION-ADJUSTED, SQUARE-FOOT COST OF NEW PUBLIC SCHOOL CONSTRUCTION IN KENTUCKY, OHIO AND MICHIGAN 1992-2000

New Public Schools							
Real (Inflation Adjusted) Square Foot Cost							
	a	b	c	d	e	f	g
1	Rural Schools				Urban Schools		
2	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	
3	No Law	\$96	\$26	161	\$114	\$36	40
4	Law	\$98	\$24	104	\$114	\$34	86
5	t-test	-0.76			0.05		
6	Statistically Significant Difference?	No			No		

This 2001 *Kentucky-Ohio-Michigan Study* goes on to apply a more sophisticated econometric model to these 391 new schools, finding that there were statistically significant effects on total costs if ground were broken on a project at the onset of winter, and that rural schools were statistically less expensive compared to urban schools, and that Kentucky schools were less expensive compared to Ohio and Michigan, and if a school had a pool, it was more expensive than if it did not. However, ***there were no measurably or statistically significant effects of prevailing wages on total start costs.***

Expanded Research Confirmed the Results of this Natural Experiment

In subsequent peer-reviewed² research on more than 4000 new schools built nationwide published in the *Journal of Education Finance*,^{xx} the results of the *Kentucky-Ohio-Michigan Study* were confirmed.

There was no measurably or statistically significant effect on start costs associated with the presence of prevailing-wage regulations. Additionally, it was found that substantial savings on school

construction could be found if schools were built counter-cyclically. By avoiding building into what *Engineering News Record* calls “cost storms” when construction is booming, there is a measurably large and statistically significant savings that can accrue to the public. Such counter-cyclical spending can also benefit the construction industry and the local community by dampening the chronic boom-bust cycle of construction. Those who wish to save public construction costs would also be well advised to avoid breaking ground as winter hits. Repealing prevailing wages will result in lower wages, lower benefits, less training and lower productivity, but repeal does not assure substantial savings on total construction costs.

Conclusions

Government is a major player in the construction industry. On average, in Wisconsin about 20% of all construction in any year is federal, state or local construction. Wages and benefits on Wisconsin public works should reflect the wages paid similarly situated Wisconsin construction workers on local Wisconsin construction projects. Just as the ABC advocates protecting American workers with prevailing-wage regulations when importing foreign guest-workers, Wisconsin's prevailing-wage regulation protects Wisconsin workers when out-of-state contractors and out-of-state workers come in to work on Wisconsin's public projects.

Through prevailing-wage policies, government supports apprenticeship training and journeyman skill-upgrading in construction, and prevailing wages promote the creation and retention of local skilled and experienced blue-collar labor force. Prevailing wages help foster middle-class construction careers in Wisconsin for the next generation of local construction workers from Wisconsin. Those who say that by driving down construction wages by 25% on public works, the taxpayer can save 7.5% on total construction costs are incorrect. Wisconsin's current construction productivity advantages over states without prevailing-wage laws will be put at risk with repeal. Any gain from lower wages is very likely to be offset by a loss in productivity.

² Peer-review refers to the academic process whereby research proposed for publication is sent to a set of independent experts in the field for review. The research is only published after it passes the evaluation of these reviewers and the journal editor.

In the closest we have to a natural experiment in the mid-1990s, when Ohio exempted its public schools from prevailing-wage requirements, Kentucky applied prevailing wages to its public schools, and due to a court case, Michigan removed and then reapplied prevailing-wage requirements to its public schools, no taxpayer savings from the suspension or exemption of prevailing wages could be found. Furthermore, in the recent Bowling Green University study looking at a sample of over 8000 bids on Ohio public schools, no savings could be found when looking at public school construction in Ohio over the first decade of this century due to prevailing-wage exemption in 1997. Wisconsin's prevailing-wage law serves a purpose. It helps promote training and skill formation and supports middle-class blue-collar families. Eliminating prevailing-wage protections will lead Wisconsin in the opposite direction towards the decline of apprenticeship training, the rise of low-wage, no-benefit jobs, the emergence of chronic skill shortages and the call for guest-worker programs to provide a fix for problems that under prevailing-wage regulations do not exist.

Appendix I: List of Wisconsin Registered Apprenticeship Programs

These are the Wisconsin construction trades registered apprenticeship programs as listed by the Wisconsin Department of Workforce Development.^{xxi} They do not include operating engineers, terrazzo and teledata, which the Department of Workforce Development will soon provide. All the ABC programs are listed at the same Madison address. The ABC does not have programs in bricklaying, glazing, painting, steamfitting and tilesetting listed by the DWD. However, the ABC's website lists a steamfitting apprenticeship at the Northeastern Wisconsin Technical College – Green Bay.^{xxii} "JAC" in the table below refers to labor-management "joint apprenticeship councils." Some JACs do multiple crafts such as the Northwestern WI Area Masonry JAC does masonry, plasterers and bricklaying, but generally the JACs in an area do one craft.

Bricklaying

Madison Area Bricklaying JAC
Milwaukee Area Bricklaying JAC
Northwestern WI Area Masonry JAC
Tri-County Area Trowel Trades JAC
WI River Valley Area Masonry JAC

Carpentry

ABC of Wisconsin
Central Wisconsin Area Carpentry JAC
Northeast WI Carpentry JAC
Wausau Area Carpenters JAC
Eau Claire Area Carpentry JAC
Lakeshore Area Carpentry Advisory Committee
Madison Area Carpentry JAC
Southeast WI Area Carpentry JAC

La Crosse Area Carpentry JAC

Masonry

ABC of Wisconsin

Northwestern WI Area Masonry JAC

WI River Valley Area Masonry JAC

Madison Area Cement Masonry JAC

Milwaukee Area Cement Masonry JAC

Tri-County Area Trowel Trades JAC

La Crosse Area Masonry JAC

Laborer

ABC of Wisconsin

Fox Valley Area Laborer JAC

Northwest WI Construction Craft Laborer JAC

ABC of Wisconsin

South Central Construction Craft Laborers JAC

SE WI Construction Craft Laborers JAC

ABC of Wisconsin

SW WI Area Construction Craft Laborers JAC

Electrician

ABC of Wisconsin

WI River Valley Area Electrical JAC

Northeast WI Area JAC

Appleton/Oshkosh Area Electrical JAC

Eau Claire Area Electrical JAC

Kenosha Area Electrical JAC

Kettle Moraine Area Electrical JAC

Madison Area Electrical JAC

Milwaukee Area Electrical JAC

Racine Area Electrical JAC

South Central WI Area Electrical JAC

La Crosse Area Electrical JAC

Madison Area Electrical JAC (VDV)

Southwest WI Area Electrical JAC

Sheet Metal

ABC of Wisconsin

Central WI Area Sheet Metal JAC

Fox Valley Area Sheet Metal JAC

Eau Claire-Superior Sheet Metal JAC

East Central WI Area Sheet Metal JAC

Milwaukee Area Sheet Metal JAC

Southeastern WI Area Sheet Metal JAC
La Crosse Area Sheet Metal JAC
Madison Area Sheet Metal JAC

Glazing

Madison Area Glazing JAC
Southeastern Glazing JAC

Insulators

ABC of Wisconsin
Northern WI Area Heat & Frost JAC
Southern WI Heat & Frost Insulators JAC

Ironworkers

ABC of Wisconsin
Madison Area Ironworking JAC
Milwaukee Area Ironworking JAC

Painters

ABC of Wisconsin
Madison Area Painting & Decorating JAC
Milwaukee Area Painting & Decorating JAC

Plumbers

ABC of Wisconsin
Appleton Area Plumbing JAC
Central Wisconsin Area Plumbing JAC
Marshfield Area Plumbing JAC
Northeast WI Area Plumbing JAC
Rhineland Area Plumbing JAC
Wausau Area Plumbing JAC
Eau Claire Area Plumbing JAC
Northern WI Plumbing Advisory Committee
Western WI Area Plumbing
Fond du Lac Area Plumbing
Kenosha-Racine-Walworth Plumbing JAC
Lake To Lake Area Plumbing JAC
Madison Area Plumbing JAC
Milwaukee Area Plumbing JAC
La Crosse Area Plumbing JAC
Southwest WI Area Plumbing Advisory Committee

Plasterers

ABC of Wisconsin
Northwestern WI Area Masonry JAC
WI River Valley Area Masonry JAC
Madison Area Cement Masonry JAC
Milwaukee Area Cement Masonry JAC
Tri-County Area Trowel Trades JAC
La Crosse Area Masonry JAC

Roofers

ABC of Wisconsin
SE Wisconsin Roofing & Waterproofing JAC

Sprinkler Fitters

ABC of Wisconsin
Milwaukee Area Sprinkler Fitting JAC

Steamfitters

Appleton Area Steamfitting JAC
Green Bay Area Steamfitting JAC
Tri-City Area Steamfitting JAC
Wausau Area Steamfitting JAC
Eau Claire Area Steamfitting JAC
East Central Steamfitting JAC
Kenosha/Racine/Walworth Steamfitting JAC
Madison Area Steamfitting JAC
SE WI Area Steamfitting JAC
La Crosse Area Steamfitting JAC
Madison Area Steamfitting JAC

Tapers and Finishers

Madison Area Painting & Decorating JAC
Milwaukee Area Painting & Decorating JAC

Tile Setter

Northeast WI Area Masonry JAC
WI River Valley Area Masonry JAC
WI River Valley Area Masonry JAC
Madison Area Bricklaying JAC
Milwaukee Area Tile Setters JAC
Tri-County Area Trowel Trades JAC
Madison Area Bricklaying JAC

Endnotes

ⁱ U.S. Census Bureau, Economic Census, Construction, 2007, Geographic Series (latest data available--2012 Economic Census, Geographic Series to be released in 2015);

ⁱⁱ U.S. Bureau of Apprenticeship Training

ⁱⁱⁱ <http://www.abc.org/NewsMedia/Newsline/tabid/143/entryid/870/abc-outlines-features-of-a-successful-guestworker-program.aspx>

"ABC March 13 joined five other construction groups to send a letter to members of the U.S. House of Representatives Subcommittee on Workforce Protections outlining the features of a successful guestworker program.... The groups pointed to the anticipated shortage of qualified workers and noted that the immigrant workforce has played a vital role in the growth and sustainability of the construction industry.... Congress attempted to resolve this deficiency in 1990 by creating the H-2B classification for low-skilled non-agricultural workers, but the program is capped at 66,000 visas per year and is not market-based – which means the supply almost never matches the demand. “To resolve this problem going forward, any future immigration law must include a new market-driven program to provide a legal path for foreign workers to enter the United States when the economy needs them, with fewer entering when the economy contracts,” the groups wrote."

While the ABC opposes prevailing wages in Wisconsin, it supports prevailing wages for foreign guest-workers:

"A program that requires employers to treat these legal foreign workers in the same manner as U.S. workers—with all the same benefits, workforce protections and wage rates as similarly situated workers at the same location."

^{iv} JaeWhan Kim, Kuo-Liang Chang and Peter Philips, "The Effect of Prevailing Wage Regulations on Contractor Bid Participation and Behavior: A Comparison of Palo Alto, California with Four Nearby Prevailing Wage Municipalities" *Industrial Relations*, Vol. 51, Issue 4, pp. 874-891, October, 2012; Sheng Li and Peter Philips, "Construction Procurement Auctions: Do Entrant Bidders Employ More Aggressive Strategies than Incumbent Bidders?," *Review of Industrial Organization* Volume 40, Number 3, 191-205; Li, Sheng and Peter Philips, "Analysis of the Impacts of the Number of Bidders upon Bid Values: Implications for Contractor Prequalification and Project Timing & Bundling," *Journal of Public Works Management & Policy*, Vol. 12, No. 3, 503-514 (2008); Kevin C. Duncan, " Do Federal Davis-Bacon And Disadvantaged Business Enterprise Regulations Affect Aggressive Bidding? Evidence From Highway Resurfacing Procurement Auctions," *Journal of Public Procurement* (forthcoming in issue 3, 2015).

^v Kim, Jaewhan and Philips, Peter, "Health Insurance and Worker Retention in the Construction Industry," *Journal of Labor Research*, 2010, Volume 31, Number 1, 20-38; Kim, Jaewhan and Philips, Peter, "Effect of Multiemployer Collective Bargaining on Employer-Provided Health Insurance in the Construction Industry," *Journal of Labor Research* 12/2010; 31(4):322-331.

^{vi} <http://www.cpwr.com/sites/default/files/publications/CB%20page%2038.pdf>

^{vii} Christopher A. Janicak, " Occupational Fatalities Involving Hispanic Workers in the Construction Industry," *Open Journal of Safety Science and Technology*, 2013, 3, 1-7.

^{viii} http://www.abcga.org/Education/Future_Workorce.aspx

^{ix} http://www.abcga.org/Education/Future_Workorce.aspx

^x http://www.abcga.org/Education/Future_Workorce.aspx

^{xi} http://www.cefga.org/documents/CEFGAarticleforTGC_04182013.pdf

^{xii} <http://www.abc.org/NewsMedia/Newsline/tabid/143/entryid/870/abc-outlines-features-of-a-successful-guestworker-program.aspx>

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While the ABC opposes prevailing wages in Wisconsin, it supports prevailing wages for foreign guest-workers:

"A program that requires employers to treat these legal foreign workers in the same manner as U.S. workers—with all the same benefits, workforce protections and wage rates as similarly situated workers at the same location."

^{xiii} <http://www.abc.org/NewsMedia/Newsline/tabid/143/entryid/870/abc-outlines-features-of-a-successful-guestworker-program.aspx>

^{xiv} U.S. Census Bureau, Economic Census, Construction, 2007, Geographic Series (latest data available--2012 Economic Census, Geographic Series to be released in 2015); The comparison no-law states are: ALABAMA, ARIZONA, COLORADO, FLORIDA, GEORGIA, IOWA, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, NORTH CAROLINA, NORTH DAKOTA, NEW HAMPSHIRE, OKLAHOMA, SOUTH CAROLINA, SOUTH DAKOTA, UTAH, VIRGINIA

^{xv} JaeWhan Kim and Peter Philips, “Health Insurance and Worker Retention in the Construction Industry,” *Journal of Labor Research*, 2010

^{xvi} Atalah, Alan, “Comparison of Union and Non-Union Bids on Ohio School Facilities Commission Construction Projects,” *International Journal of Economics and Management Engineering*, Mar. 2013, Vol. 3 Iss. 1, pp. 29-35.

^{xvii} Atalah, Alan, “Comparison of Union and Non-Union Bids on Ohio School Facilities Commission Construction Projects,” *International Journal of Economics and Management Engineering*, Mar. 2013, Vol. 3 Iss. 1, Tables III and IV, p. 33.

^{xviii} Peter Philips, “A Comparison of Public School Construction Costs In Three Midwestern States that Have Changed Their Prevailing Wage Laws in the 1990s,” University of Utah, 2001. (Hereinafter the *Kentucky-Ohio-Michigan Study*).

^{xix} “Start costs” refer to the accepted bid price and do not include change orders, cost overruns, downstream maintenance costs, scheduling problems or other auxiliary aspects of construction costs.

^{xx} Hamid Azari-Rad, Peter Philips, and Mark Prus, “Making Hay When It Rains: The Effect Prevailing Wage Regulations, Scale Economies, Seasonal, Cyclical And Local Business Patterns Have On School Construction Costs,” *Journal of Education Finance*, 27 (SPRING 2002). 997-1012. Similar results were found by the same authors in “State Prevailing Wage Laws and School Construction Costs,” *Industrial Relations*, Vol. 42, No. 3 (July 2003). Using Canadian data for British Columbia Cihan Bilginsoy and Peter Philips again found no measurably or statistically significant effect of the implementation of British Columbia’s Fair Wage law: “Prevailing Wage Regulations and School Construction Costs: Evidence From British Columbia,” *Journal of Education Finance* v25 no3 pp. 415-31 Winter 2000. The *Journal of Education Finance* is published from the University of Arkansas and is “The leading journal in the field of education finance” *Industrial Relation* is published by the University of California and is one of the oldest labor economics journals in the US. Both journals accept articles for publication only after a rigorous blind reviewing process by experts in the field.

^{xxi} http://dwd.wisconsin.gov/apprenticeship/construction_trades.htm (committee name and address is available by following the links from this page for instance <http://dwd.wisconsin.gov/apprenticeship/trades/bricklayer.htm>)

^{xxii} <http://www.abcwi.org/en-us/educationtraining/apprenticeship/apprenticeshipapplicants/trainingtrades.aspx#LiveAccordionContent482366-la>