## MEMORANDUM



**DATE:** June 12, 2015

To: Interested Parties

**FROM**: Paul Holland, Fiscal Analyst

RE: Partial Bibliography of Studies of the Impacts of Prevailing Wage Laws

The following partial bibliography illustrates the assumptions of and analysis via the disparate methods (e.g., wage differential, cross-sectional, time series) and models employed by various researchers and includes abstracts or extracts from each study that summarize the study's central finding or conclusion.

Azari-Rad, Philips, & Prus, 2002, "Making Hay When It Rains: The Effect Prevailing Wage Regulations, Scale Economies, Seasonal, Cyclical and Local Business Patterns Have on School Construction Costs", accessible at: <a href="http://wabuildingtrades.org/making\_hay.pdf">http://wabuildingtrades.org/making\_hay.pdf</a>.

"Prevailing wage regulations raise the hourly wage rate paid on public school construction. But the higher labor productivity that comes with these higher wage rates or other economies associated with better construction management appear to offset the higher mandated wage rates. In any case there is no measurable difference, controlling for other factors, in public schools built with and without prevailing wage regulations."

Azari-Rad, Philips, & Prus, 2003, "State Prevailing Wage Laws and School Construction Costs", accessible at: <a href="http://onlinelibrary.wiley.com/doi/10.1111/1468-232X.00299/abstract">http://onlinelibrary.wiley.com/doi/10.1111/1468-232X.00299/abstract</a>.

"Critics of prevailing wage laws claim that their elimination will cut total public construction costs by 15 to 25 percent. Justification for this assertion may be found in a 1983 study comparing the cost of public construction regulated by the Davis-Bacon Act with the cost of similar private construction. However, this study failed to account for the difference in the cost of public and private buildings absent. Using F. W. Dodge data for 1991 to 1999, we show that the inclusion of the appropriate controls in a study of new school construction costs finds no statistically significant difference between the cost of public schools built with prevailing wage regulations."

Bilginsoy & Philips, 2000, "Prevailing Wage Regulations and School Construction Costs: Evidence From British Columbia", accessible at: <a href="http://ohiostatebtc.org/wp-content/uploads/2014/04/PWL">http://ohiostatebtc.org/wp-content/uploads/2014/04/PWL</a> BC 11.pdf.

"There is indeed a structural break in the determination of the final cost after the [prevailing wage law], but there is no evidence of significant changes in the unit costs before and after the establishment of the [prevailing wage law]. Instead, what is observed is a 6.1 percent increase in price, if the impact of the time trend is ignored. No statistical significance can be attached to this figure. If time trend is also included in the analysis, the price rises by 9.4 percent at the time of introduction of the Law followed by a steady decline afterwards. This steady decline, over time, offsets the immediate inflationary cost impact. These findings indicate that the appeal for the repeal of prevailing wage laws to reduce the school construction costs and the burden on the public budget is misguided."

Duncan, 2011, "An Analysis of Davis-Bacon Prevailing Wage Requirements: Evidence from Highway Resurfacing Projects in Colorado", accessible at: <a href="http://constructionacademy.org/wp-content/uploads/2012/09/Davis-Bacon\_CO-highway-june11.pdf">http://constructionacademy.org/wp-content/uploads/2012/09/Davis-Bacon\_CO-highway-june11.pdf</a>.

"The results of this study indicate that prevailing wage requirements on highway resurfacing projects in Colorado are not associated with statistically significant higher construction costs. At face value, this may appear to be a surprising result because we typically think that total costs rise when wages increase. However, this notion is not supported after a careful consideration of the relation between wages, labor productivity and total costs in the construction industry. For example, other research by the author of this report reveals that productivity and the efficiency of construction is higher on projects that pay prevailing wage rates. Therefore, when construction worker wages rise on prevailing wage projects, productivity also increases in a way that stabilizes the total cost of the project. Additionally, data from the Economic Census of Construction indicate that construction labor costs are a low percent (averaging between 25 to 30 percent) of total construction costs. Given that labor costs are a low percent of total costs in the construction industry, productivity does not need to increase substantially to offset the effect of prevailing wage rates."

Dunn, Quigley, & Rosenthal, 2005, "The Effects of Prevailing Wage Requirements on the Cost of Low-Income Housing", accessible at:

http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1185&context=ilrreview.

"Recent California legislation extends the application of prevailing wage regulations to construction workers building subsidized low-income residential projects. Econometric evidence based on micro data covering 205 residential projects subsidized by the California Low Income Housing Tax Credit since 1996 and completed by mid-2002 demonstrates that construction costs increased substantially under prevailing wage requirements. Estimates of additional construction costs in the authors' most extensive models range from 9% to 37%. The analysis controls for variations in cost by geographical location and for differences in project characteristics, financing, and developer attributes. The authors estimate the effect of uniform imposition of these regulations on the number of new dwellings for low-income households produced under the tax credit program in California. Under reasonable assumptions, the mid-range estimate of the prospective decrease exceeds 3,100 units per year."

Keller & Hartman, 2001, "Prevailing Wage Rates: Effects on School Construction Costs, Levels of Taxation and State Reimbursements", accessible at: <a href="http://www.jstor.org/discover/10.2307/20764029?sid=21105785676443&uid=4&uid=3739256&uid=3739728&uid=2">http://www.jstor.org/discover/10.2307/20764029?sid=21105785676443&uid=4&uid=3739256&uid=3739728&uid=2</a>.

"The 25 school district construction projects surveyed for this study varied in project size, reimbursements, and local taxation impact. The impact of the Pennsylvania Prevailing Wage Act on labor costs was clear. All school districts in the sample paid higher labor costs due to prevailing wage and benefit rates. Prevailing wages averaged \$2.87 or 17.0 percent higher than private sector wages for all labor classifications, while benefits averaged \$1.62 or 21.5 percent higher than private sector benefit rates. Reimbursements from the Commonwealth of Pennsylvania for school construction projects reduced costs to the sample school districts by an average reimbursement ratio of 10.8 percent and shifted a portion of the higher costs to the state. When extrapolated to all school construction projects from 1992-1997 the estimated additional costs were \$74.9 million. Of this total amount, 89 percent or \$66.8 million was borne by the school district, while the balance of \$8.1 million was funded by the state. School

districts and the Common wealth, through the Pennsylvania Department of Education have all felt the financial impact of the Pennsylvania Prevailing Wage Act."

Kelsay, Sturgeon, & Pinkham, 2011, "The Adverse Economic Impact From the Repeal of the Prevailing Wage Law in Missouri", accessible at: http://cas.umkc.edu/economics/resources/prevailingwagestudy.pdf.

"The attempts to repeal the prevailing wage law in Missouri are based upon the claim that repeal with save dollars on total construction costs and will bolster state and local budgets. In 2004, we conducted an in depth study of the impact of the repeal of the prevailing wage in Missouri. In 2004, we showed that the repeal of the prevailing wage statue in Missouri would not save dollars on construction costs but rather would result in a negative impact on families, taxpayers, and the state and regional economics in Missouri. Utilizing data from the F.W. Dodge Company on construction costs in the North Central States region, we update our previous report for the period 2003-2010 on the impact of the prevailing wage statute in Missouri. Our update of 2011 has shown that Missouri's prevailing wage laws do not raise the cost of construction. Our examination of both the short and long-term effects of prevailing wage show positive and substantial impacts on construction workers, their families, other industry participants and their families, and state, county, and local revenue streams."

Kersey, 2007, "The Effects of Michigan's Prevailing Wage Law", accessible at: http://www.mackinac.org/archives/2007/s2007-09.pdf.

"The prevailing wage law increases the cost of construction by 10 percent to 15 percent, and the additional costs are passed along to Michigan taxpayers. Repeal of the state prevailing wage law would have saved taxpayers an estimated \$216 million in 2002, while the repeal of local prevailing wage laws could have saved another \$16 million. (These figures represent \$250 million and \$19 million in 2007 dollars.) Exempting just the public school districts from the law would have saved \$109 million in 2002, or \$126 million in 2007 dollars."

Kessler & Katz, 1999, "Prevailing Wage Laws and Construction Markets", accessible at: <a href="http://www.nber.org/papers/w7454.pdf">http://www.nber.org/papers/w7454.pdf</a>.

"Prevailing wage laws, which require that construction workers employed by private contractors on public projects be paid at least the wages and benefits that are "prevailing" for similar work in or near the locality in which the project is located, have been the focus of an extensive policy debate. We find that the relative wages of construction workers decline slightly after the repeal of a state prevailing wage law. However, the small overall impact of law repeal masks substantial differences in outcomes for different groups of construction employees. Repeal is associated with a sizeable reduction in the union wage premium and a significant narrowing of the black/nonblack wage differential for construction workers."

Leef, 2010, "Prevailing Wage Laws: Public Interest or Special Interest Legislation?", accessible at: <a href="http://object.cato.org/sites/cato.org/files/serials/files/cato-journal/2010/1/cj30n1-7.pdf">http://object.cato.org/sites/cato.org/files/serials/files/cato-journal/2010/1/cj30n1-7.pdf</a>

"The purpose and effect of prevailing wage laws is to eliminate competition on labor costs on government construction projects. Bidders may search for the least-cost combination of other factors, but labor costs are fixed by decree. This suppression of competition is a substantial benefit to a small segment of the population, chiefly construction unions and workers, at the expense of the rest of society, which must pay more than would otherwise be necessary for projects subject to prevailing wage mandates."

Mahalia, 2008, "Prevailing Wages and Government Contracting Costs: A Review of the Research", accessible at: <a href="http://www.epi.org/publication/bp215/">http://www.epi.org/publication/bp215/</a>.

"An overwhelming preponderance of the literature shows that prevailing wage regulations have no effect one way or the other on the cost to government of contracted public works projects. And as studies of the question become more and more sophisticated, this finding becomes stronger, and is reinforced with evidence that prevailing wage laws also help to reduce occupational injuries and fatalities, increase the pool of skilled construction workers, and actually enhance state tax revenues."

Ohio Legislative Service Commission, 2002, "S.B. 102 Report: The Effects of the Exemption of School Construction Projects from Ohio's Prevailing Wage Law", accessible at: http://www.lsc.ohio.gov/research/srr149.pdf.

"Senate Bill 102 exempted school construction from Ohio's prevailing wage requirements and required an evaluation of the effects of the exemption on construction costs, construction quality, and construction wages.

LSC found indications of \$487.9 million in aggregate savings, an overall savings of 10.7 percent. Estimated savings on new construction projects was \$24.6 million (1.2 percent). Estimated savings on additions was \$408.0 million (19.9 percent). Estimated savings on alterations was \$55.2 million (10.7 percent). Evidence was not available as to the portion of the estimated savings, if any, that could be directly and conclusively attributed to the prevailing wage exemption.

LSC found indications that the exemption had little impact on the quality of public school building construction. Using the satisfaction of users' needs as a measure of quality, LSC surveyed school districts to determine the extent to which they were satisfied with the quality of public school building construction. The surveys indicate that the users of the buildings are generally satisfied with the buildings and that, in the opinion of the users, the exemption does not appear to have decreased the quality of school construction.

LSC found indications that the exemption had little impact on the wages of construction employees working on the construction of public school buildings. The search for an impact was complicated by a number of factors. School construction accounts for a small percentage of construction activity. Most workers do not specialize in one category of project, such as school construction, but specialize in a craft or activity and move between types of projects that include that activity. Demand for construction workers has been high for most of the time since the exemption went into effect.

The effects reported are for the specific exemption of school construction in the Ohio economic environment of the late 1990's. A different exemption in a different economic environment may have different effects."

Philips, 2001, "A Comparison of Public School Construction Costs: In Three Midwestern States That Have Changed Their Prevailing Wage Laws in the 1990s: Kentucky, Ohio, and Michigan", accessible at: <a href="http://www.faircontracting.org/PDFs/prevailing">http://www.faircontracting.org/PDFs/prevailing</a> wages/Public School%20Peter%20Phillips.pdf.

"A simple comparison of the mean (or average) inflation-adjusted square foot cost of building 391 new public schools in Kentucky, Ohio and Michigan broken down by urban and rural schools finds no statistically significant difference between those public schools built with prevailing wages and those public schools built without this regulation. A more complex

statistical model that estimates new public school construction costs based on the size of the project, whether it was an urban or rural school, which state built the school, and at what time of the year the school was built again finds no statistically significant effect on total new school construction costs associated with whether or not the school was built with prevailing wages."

Philips, 2001, "Four Biases and a Funeral: Dr. Vedder's Faulty Experiment Linking Michigan's Prevailing Wage Law to Construction Employment", accessible at: <a href="http://www.faircontracting.org/PDFs/prevailing\_wages/fourbias.pdf">http://www.faircontracting.org/PDFs/prevailing\_wages/fourbias.pdf</a>.

"What we do know is that in eight replications, Dr. Vedder's experiment comes out wrong. Perhaps Dr. Vedder's experiment is poorly designed. In this case, his theory has not been contradicted, it is just that his experiment is useless. But if his experiment is wrong, his numbers are wrong. His 11,000 jobs gained for Michigan because of suspension is wrong."

Philips, Magnum, Waitzman, & Yeagle, 1995, "Losing Ground: Lessons From the Repeal of Nine Little Davis-Bacon Acts", accessible at:

http://www.faircontracting.org/PDFs/prevailing\_wages/losingground.pdf.

"Using an even more conservative figure of 3 percent to estimate what Utah saved in construction costs by repealing its prevailing wage law, we calculate that the Utah state budget almost -- but not quite -- broke even. Balancing construction cost savings against lost tax revenues, in two of the years since 1987 the Utah budget saved more money in construction costs than it lost in tax revenues. In five of the years since 1987, the state lost more in tax revenues than it saved in construction costs.... In either case, the net savings or losses were small compared with the lost earnings of Utah's citizens.... But construction workers -- and the industry -- were to lose more than money when these repeals were enacted.

Prus, 1996, "The Effect of State Prevailing Wage Laws on Total Construction Costs", accessible at: <a href="http://www.iiiffc.org/pdf/study2.pdf">http://www.iiiffc.org/pdf/study2.pdf</a>.

"The results of this multivariate analysis of the impact of state prevailing wage laws on total construction costs indicates that, in contrast to earlier academic analyses as well as some casual statements, there is no measurable cost difference between similar structures as a result of prevailing wage requirements. Consequently, reforming or repealing these laws will not lead to the kinds of substantial savings promised by proponents of repeal."

Prus, 1999, "Prevailing Wage Laws and School Construction Costs: An Analysis of Public School Construction in Maryland and the Mid-Atlantic States", accessible at: <a href="http://www.buildri.org/sites/default/files/articles/full\_text\_prus\_maryland.pdf">http://www.buildri.org/sites/default/files/articles/full\_text\_prus\_maryland.pdf</a>.

"A 'here-and-there' linear regression model was developed to estimate the effect of prevailing wage regulations on total construction costs for schools, controlling for other factors. This model controlled for the type of school, the size of the project, and building characteristics. It also controlled for general differences in construction costs between states with and without prevailing wage laws and general differences between the cost of public and private construction (whether or not done under prevailing wage regulations). Controlling for these factors, this model could find no statistically significant impact on total construction costs due to prevailing wage requirements."

Roistacher, Perine, & Schultz, 2008, "Prevailing Wisdom: The Potential Impact of Prevailing Wages on Affordable Housing", accessible at: <a href="http://chpcny.org/wp-content/uploads/2011/02/Prevailing-Wisdom-web-version1.pdf">http://chpcny.org/wp-content/uploads/2011/02/Prevailing-Wisdom-web-version1.pdf</a>.

"Applying prevailing wages to affordable housing construction will increase its costs, reduce affordability, and not address construction issues of site safety, quality of construction, and job accessibility. Affordable housing developers, wherever possible, should be able to pay wages that actually prevail in the marketplace."

Thieblot, 1996, "A New Evaluation of Impacts of Prevailing Wage Law Repeal", accessible at: <a href="http://link.springer.com/article/10.1007%2FBF02685847">http://link.springer.com/article/10.1007%2FBF02685847</a>.

"The Utah study set out to overturn the conventional wisdom about the positive economic impact that would accrue from repeal of the Davis-Bacon act and state prevailing wage laws. It is an impressive-looking piece of work, but fundamentally flawed in many ways. All of its conclusions that I evaluated are wrong, and the conventional wisdom is not only supported, it is reinforced by the new statistical approach developed here. More positively than ever before, I feel that the Davis-Bacon act, whose cost to the federal government alone may exceed \$1.8 billion per year in excess government spending, should be repealed."

Vedder, 1999, "Michigan's Prevailing Wage Law and Its Effects on Government Spending and Construction Employment", accessible at: <a href="http://www.mackinac.org/archives/1999/s1999-07.pdf">http://www.mackinac.org/archives/1999/s1999-07.pdf</a>.

"It is estimated that in fiscal year 1995, the Michigan prevailing wage law increased the costs of public capital outlays by at least \$275 million, equal to five percent of individual income tax collections that year. Significant tax relief and/or expansion of public infrastructure would be possible if the Michigan law were permanently repealed."