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An Evaluation of How Repealing West Virginia's Prevailing Wage Law Affected the Cost of Public Construction

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Prevailing Wage Law Affected the Cost of Public Construction**

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August 22, 2018

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Executive Summary

Prevailing wage laws require contractors to pay their construction workers at least the prevailing wage rate when they work on certain public construction projects. Prevailing wage rates vary by location and worker classification. Proponents argue these laws increase construction workers wages, improve construction quality, and improve safety. They argue the wage requirements do not increase the costs of public construction because contractors will hire workers who are more productive and can complete the project in fewer hours. Opponents argue the laws increase costs by requiring contractors to pay higher wages than they would otherwise. They often argue that prevailing wage laws do not improve quality or safety.

Although a number of reports and studies have examined whether prevailing wage laws affect public construction costs, there is little agreement on these effects. This is largely due to the difficulty of finding similar projects built with and without the prevailing wage requirement. Several researchers found that schools built with prevailing wage laws were no more expensive than school built without prevailing wages. However, even among schools there are considerable differences across projects that affect costs. These studies fail to control for many of these differences such as the amount of site work required or the quality of the materials used.

Twenty-eight states have prevailing wage laws currently. The West Virginia Legislature made changes to its prevailing wage laws in 2015 and repealed the laws in 2016. Expressing concerns over how prevailing wage rates were set in the past, the 2015 West Virginia Legislature directed WorkForce West Virginia to develop a new methodology for setting rates. Projects bid after July 1, 2015 would be subject to the rates set using this new methodology. Because WorkForce West Virginia was unable to meet this deadline, the state's prevailing wage requirement was suspended for projects bid in July 1, 2015 through September 30, 2015. WorkForce West Virginia implemented the new methodology beginning in October. However, the legislature repealed the prevailing wage law in its entirety effective May 4, 2016.

This study compared school construction costs before and after these changes. The study uses data provided by the School Building Authority of West Virginia (SBA). The data suggests that school construction costs increased in the years prior to the legislative changes and decreased after. Comparing projects bid with and without prevailing wages since 2013 suggests construction costs per square foot decreased by 7.3 percent since the removal of the wage requirement. However, the magnitude of the decrease depends on the time-period examined and the individual schools included in the analysis. States that border West Virginia did not experience similar decreases in the costs of school construction during this time.

There are two important limitations to this analysis. First, the analysis does not account for factors other than square footage that could contribute to the cost differences observed. Previous research examining how prevailing wages affect school construction costs had similar limitations. Schools bid after the suspension and repeal may differ from schools bid before in ways that affect construction costs. These differences could affect the comparison. The second limitation is that only a few schools have been bid without the prevailing wage requirement. Differences between one or two schools can significantly affect the comparison. As West Virginia builds more schools, the state will get a better indication as to how its prevailing wage law affected construction costs.

Prevailing wages also might improve construction safety. By requiring contractors to pay higher wages, the law provide contractors with an incentive to hire workers with better training and more experience. These workers might be less likely to incur accidents. However, there is relatively little evidence that injury rates are lower in states with prevailing wages. What evidence is available may suffer from a lack of reporting in states with prevailing wage laws, making it appear that states with prevailing wages have fewer injuries.

Prevailing wage laws also might improve construction quality. If there is a quality effect, lower long-run maintenance costs might offset, in part, higher initial construction costs. However, CBER is not aware of any studies that provide empirical evidence of a quality effect.

Introduction

Prevailing wage laws require contractors pay at least the prevailing wage rate to construction workers on certain public construction projects. Prevailing wage rates typically vary by job classification and location. Proponents of prevailing wage laws argue the laws help prevent contractors from driving down wages in order to win public construction projects that are awarded to the lowest bidder. They argue the laws improve local wages, construction quality, and worker safety. Proponents contend that the requirement does not increase the cost of public construction because more productive workers can be employed on these jobs. Opponents of prevailing wage laws typically argue the laws favor union contractors by forcing all contractors to pay wage rates that are similar, or equal, to union wages. They state that this increases the cost of construction with no improvements in construction quality or safety.

Twenty-eight states have prevailing wage laws (US Department of Labor). West Virginia had a prevailing wage law until it was repealed in 2016. Prior to the repeal, West Virginia's prevailing wage law applied to state, local, and public school project that received more than a specified amount of public funds.¹ The repeal applied to any projects let for bid after May 4, 2016.

In December 2017, the West Virginia Chapter of the Associated Builders and Contractors, Inc. contracted with the University of Kentucky's Center for Business and Economic Research (CBER) to examine whether the repeal affected the cost of public construction. The study also discusses how prevailing wage laws may affect construction quality, worker safety, and state and local revenue.

Past Research

Government agencies often award public construction projects to the lowest-cost bidder. Contractors bidding on these projects have an incentive to find the lowest cost mix of inputs needed to meet the specifications of a bid. Prevailing wage laws may limit some contractors' ability to find the lowest costs. Contractors that pay less than the prevailing wage rate would have to increase wages, possibly causing their costs to increase. Proponents of prevailing wages point out that the requirement creates an incentive for contractors to hire workers who are more productive. If these workers are sufficiently more productive, their higher productivity might offset the higher wages and prevent construction costs from increasing.

While there is a considerable amount of research on how the requirement affects public construction costs, there is little agreement on the effects. While some studies concluded prevailing wage laws increase construction costs, others find the laws have no effect. As noted in a staff report to Kentucky's Program Review and Investigations Committee, a main reason for the lack of a consensus is the difficulty of finding comparable projects built with and without the prevailing wage.

Researchers strive to ensure that any cost differences they observe are due to the prevailing wage rather than other factors. Ideally, this would mean comparing the costs of public construction

¹ In 2015, the West Virginia Legislature increased the amount of public funds that requires the project be subject to the state's prevailing wage laws from \$25,000 to \$500,000.

built with the prevailing wage to the cost of identical projects built under the exact same circumstances but without the prevailing wage. Other differences between projects built with and without prevailing wages can make it difficult to know how the requirement affects costs. For example, assume that the projects built with prevailing wages also incorporate more expensive materials than similar projects built without prevailing wage. These prevailing wage projects might be more expensive, but the higher costs could be due simply to the wage requirement or the more expensive materials. Likewise, if projects built without the prevailing wage use more expensive materials, a comparison might suggest there is no cost difference. In this case, the more expensive materials may offset the savings from not requiring the prevailing wage. Because researchers cannot observe identical projects built with and without prevailing wages, they have used a number of approaches to examine the wage requirement's effects. Unfortunately, these attempts have yielded conflicting results.

A 1984 study by Fraundorf, Farrell, and Mason was one of the first studies to compare the construction costs of a sample of projects built with and without the federal prevailing wage requirement. The study compared new non-residential construction projects that were subject to the federal prevailing wage law to similar private projects that were not subject to the law. Projects built under the federal prevailing wage requirement were 26.1 percent higher than similar private projects. Bilginsoy and Philips note that public projects may be more costly than private projects for reasons other than the prevailing wage. They point out "if private buildings differ from public buildings in ways that are not adequately controlled for, this may conflate cost differences derived from prevailing wage regulations." If these differences exist, the 26 percent difference in costs that the authors attribute to prevailing wages may be due partially to these other factors.

Several researchers have focused on examining the impact prevailing wage laws have on school construction projects. Philips concluded that the costs for new schools, additions, and alterations in prevailing wage states were not statistically different than in non-prevailing wage states (1999). In 2001, Philips focused on whether changes to prevailing wage laws in Kentucky, Michigan, and Ohio affected the cost to build a new school. He found no statistically significant effect. Bilginsoy and Philips (2000), Azari-Rad, Philips, and Prus (2002), and Azari-Rad, Philips, and Prus (2003) all found no statistically significant effects using similar approaches and data.

As noted above, one of the goals when evaluating prevailing wage laws is that the projects with and without the requirement be similar. If researchers have detailed data on the characteristics of the projects, they can account for these differences. Studies that focused on school construction likely offer some advantages over those that examine public construction in general, as they will be more similar. However, there are still considerable differences across school projects that could make it difficult to isolate the impact of the prevailing wage requirement. In reviewing some of the research on school construction, Dunn, Quigley, and Rosenthal stated that the results were "questionable, as the authors did not control for many important characteristics, and some unmeasured differences among state institutions may affect the results" (2005).

Dunn, Quigley, and Rosenthal analyzed the effect of prevailing wages on low-income housing in California. The projects were relatively similar and the study accounted for differences in some

project characteristics. They found that prevailing wages increased costs by 9 to 37 percent. Duncan (2011) points out that nationally labor accounts for only 25 to 30 percent of construction costs making it unlikely that eliminating prevailing wage would fall by as much as 37 percent. However, it is not clear that labor's share of construction costs for the nation should be generalized to low-income housing in California.

Given the challenges isolating the effects of prevailing wages from other cost drivers, staff with the Kentucky Legislative Research Commission's Program Review and Investigations Committee adopted a different approach for a 2001 study and 2014 follow-up. These studies compared payroll data of workers employed on prevailing wage projects to the wages the same workers were paid when employed on non-prevailing wage jobs. The 2001 study found that labor costs for these contractors were 26 percent higher on state non-road projects and 21 percent higher on education projects than if the workers had been paid the same wage they earned on private projects. The 2014 follow-up found that labor costs were 51 percent higher for school projects and 6.7 percent higher for state non-road projects.

A 2014 report by Peter Philips for the Kentucky State Building and Construction Trades Council raised several concerns about the 2001 Kentucky study. One concern Philips noted was that if the construction workers employed on public projects were paid a lower rate, they would be less productive. He notes that in some cases, employers might find it beneficial to pay above market wages. This makes the job more attractive to the workers, motivating them to work harder and less likely to shirk their duties. However, to the extent paying above market wages is beneficial, contractors would have an incentive to do so. That is, contractors have an incentive to pay a higher wage as long as the cost of the higher wage is less than the benefits of improved worker performance. Not doing so would make the contractor less competitive. Therefore, it is unlikely that prevailing wage laws would yield cost effective increases in productivity.

Philips also argues that the higher wages would cause contractors to provide better equipment to their workers making them more productive and offsetting their higher wages. It is reasonable to expect contractors to shift from labor to capital if labor becomes more expensive. Essentially, contractors would try to minimize the impact of the higher labor costs. However, the Kentucky studies evaluate the wage difference given the actual hours worked—after this substitution occurred. Therefore, the Kentucky studies actually account for the any reduction in hours that may have occurred. The Kentucky studies, however, do not estimate the increased costs associated with purchasing or leasing the better equipment. In this case, they actually underestimate the full costs associated with prevailing wages.

Overall, research on how prevailing wage laws affect the cost of public construction have not reached a clear consensus. Research on both sides of the issue tend to have significant limitations. The next section examines whether the repeal of West Virginia's prevailing wage law affected the cost of public construction. Many of the limitations discussed above apply to this analysis as well and policymakers should consider these limitations when interpreting the results.

Changes in West Virginia's School Construction Cost

In 2015, the West Virginia Legislature enacted SB 361 due to concerns that the method used to determine prevailing wage rates resulted in inflated rates (Kabler). The bill directed WorkForce West Virginia to develop a new methodology for determining prevailing wage rates by June 1, 2015 and to use this methodology to set new rates by July 1, 2015. If WorkForce West Virginia was not able to set the new prevailing wages by July 1st, the prevailing wage requirement would not apply until a new determination was made. SB 361 authorized the Joint Committee of Government and Finance to extend this deadline.

The Charleston Daily Mail reported that WorkForce West Virginia was unable to complete the recalculation by July 1st and that the Joint Committee of Government and Finance did not extend the deadline. As a result, the prevailing wage requirement was not required on projects bid from July 1, 2015 through September 30, 2015. WorkForce West Virginia completed the new prevailing wage rates by September 30th, allowing the prevailing wage to be required on projects bid after that date.

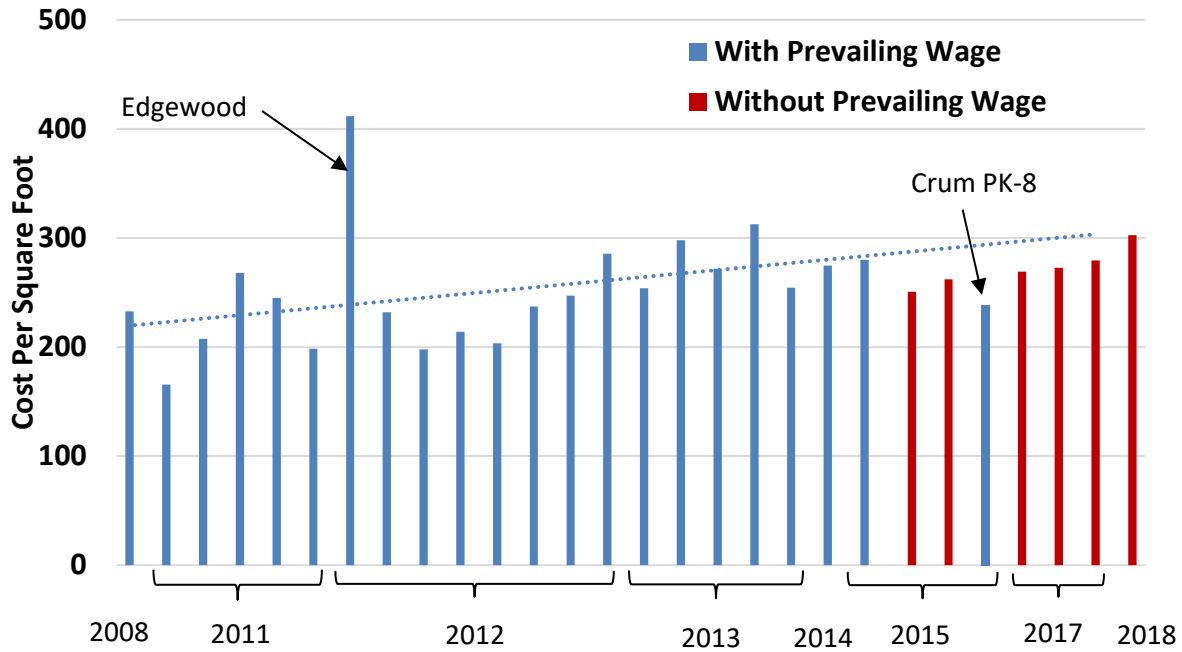
In 2016, the West Virginia Legislature repealed the prevailing wage laws. With the repeal, public projects bid after the May 4, 2016 were not subject to prevailing wage requirements.

The three-month suspension in 2015 and the repeal in 2016 create an opportunity to evaluate whether projects built without prevailing wages cost less. In March 2017, the School Building Authority of West Virginia (SBA)—at the request of the House Finance Committee—released a comparison of the costs of school construction before and after July 1, 2015. SBA compared 21 projects bid before July 1, 2015 to four projects bid after July 1st.

SBA reported that school projects bid prior to the suspension cost on average \$251.98 per square foot. Projects bid after the suspension cost \$255.11 per square foot on average. The median cost was \$247.10 per square foot before suspension, and \$256.36 after. The comparison of these projects would appear to suggest that costs were similar before and after the suspension. SBA cautioned that numerous factors can contribute to the cost difference and noted one project bid before the suspension and repeal, Edgewood Elementary, was particularly expensive due to the amount of excavation work required.

Figure A shows the cost per square foot of the 25 projects used in SBA's comparison and three additional projects. The three additional projects represent schools that CBER was able to identify as being bid after the repeal and obtain bid information on from the SBA. Projects in Figure A are sorted in order of bid-date. Projects bid with prevailing wages are shown in blue. Projects bid without prevailing wages are shown in red. The three additional projects are New Chapmanville Intermediate, New Johnson Elementary, and New Mountain Valley Elementary. Three points should be noted about Figure A.

Figure A
Bid Cost per Square Foot
West Virginia
2008 to 2018



Sources: School Building Authority of West Virginia. Analysis of Project Costs and Wage Rates Pre and Post Prevailing Wage Repeal. March 2017; Data requested from the West Virginia School Building Authority; and Center for Business and Economic Research analysis.

Note: The last three projects were not included in the SBA analysis.

First, as SBA explained, Edgewood Elementary was unusually expensive. Given the additional excavation work needed for Edgewood Elementary, it is probably not representative of the costs of school construction in the absence of prevailing wages and should be excluded from the analysis. Including Edgewood Elementary would make schools built under prevailing wages appear more costly than they are typically.

Second, Crum PK-8 was bid after the 2015 suspension but before the 2016 repeal. As a result, it would have been subject to the prevailing wage rates WorkForce West Virginia determined using its new method. The new method often resulted in lower prevailing wage rates. Table 2 shows how prevailing wage rates changed for some worker classifications after WorkForce West Virginia adopted its new methodology. These rates were for Wayne County and would have applied to Crum PK-8. Prevailing wage rates did not fall for all classifications. However, they did fall significantly for some. For example, hourly rates for wages and fringe benefits for laborers decreased by 10 percent with the new methodology. Rates for operating engineers also fell. The percentage decrease varies because the number of operating engineer classifications decreased from four groups to two. The highest rate for operating engineers decreased by 16.6 percent. The lowest rate for operating engineers decreased by less than one percent. Even with

the prevailing wage requirement, the cost per square foot for Crum PK-8 was low relative to projects bid before the repeal. Changes to the prevailing wage rates may account for Crum PK-8's lower costs, suggesting that it is also not representative of the impact of prevailing wage laws as applied prior to the suspension. Therefore, Crum PK-8 should also be excluded from the analysis.

Table 1
Examples of Changes to Prevailing Wage Rates
After Adoption of New Methodology
(Wayne County)

| | As of January 2, 2015 | | | | As of September 30, 2015 | | | Percent Change |
|---------------------------|--------------------------|--------|-------|---------|-----------------------------|--------|-------|-------------------|
| | Wage | Fringe | Total | | Wage | Fringe | Total | |
| Laborer | 24.97 | 14.78 | 39.75 | | 22.23 | 13.45 | 35.68 | -10 |
| Carpenter | 28.85 | 18.73 | 47.58 | | 29.04 | 18.59 | 47.63 | 0 |
| Electrician | 32.22 | 21.09 | 53.31 | | 37.57 | 16.29 | 53.86 | 1 |
| Plumber | 31.10 | 20.73 | 51.83 | | 33.74 | 18.60 | 52.34 | 1 |
| Ironworker | 31.24 | 20.80 | 52.04 | | 37.78 | 14.21 | 41.99 | -19 |
| Operating Engineer | | | | | | | | |
| I | 37.76 | 18.83 | 56.59 | Group 2 | 29.28 | 17.90 | 41.06 | Varies |
| II | 34.41 | 18.83 | 53.24 | Group 1 | 26.44 | 14.62 | 47.18 | Varies |
| III | 33.41 | 18.83 | 52.24 | | | | | |
| IV | 22.91 | 18.83 | 41.74 | | | | | |

Source: West Virginia Secretary of State.

Finally, the data show that cost per square foot were increasing prior to the suspension. The blue dashed line shows the general trend in costs during this period.² Inflation may contribute to the increases. It is common practice to adjust costs occurring in different years for inflation. Without adjusting for inflation, projects built under prevailing wages several years will appear to cost less than projects built without prevailing wages recently in part simply due to inflation. However, according to SBA officials, the agency does not typically adjust for inflation in its analysis. If prevailing wages do increase construction costs, not adjusting for inflation would make it less likely that SBA would detect the decrease after the suspension and repeal.

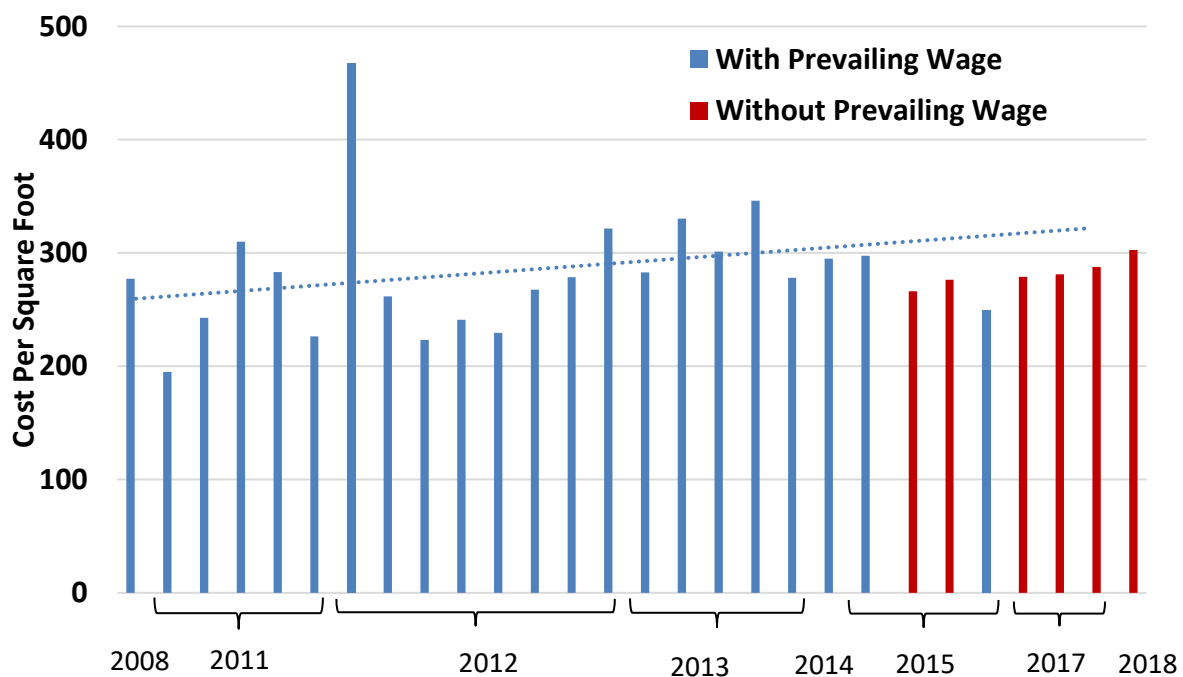
Figure B shows cost per square foot adjusted for inflation using the US Bureau of Labor Statistics Producer Price Index for Construction. Cost per square foot increased from 2008 through 2014. Cost fell somewhat after the legislative changes that began in 2015.

Table 1 compares the costs of projects bid with and without prevailing wage laws over two time-periods. Both comparisons exclude Edgewood Elementary and Crum PK-8. The first comparison shows the cost per square foot adjusted for inflation for projects bid from 2008 to 2018. The average cost per square foot was \$283.63 for prevailing wage projects and \$273.86 for non-

² The growth rate is not entirely clear because the scale on the x-axis is not constant.

prevailing wage projects. The comparison suggests that costs decreased by 3.4 percent. However, even after adjusting for inflation, construction costs appeared to be increasing from 2008 up to the suspension. Therefore, the second comparison focuses on projects bid during the years just before the suspension—beginning with 2013. During this time-period, the average cost per square foot was \$304.45 for prevailing wage projects and \$282.18 for non-prevailing wage projects, a decrease of 7.3 percent.

Figure B
Bid Cost per Square Foot
Adjusted for Inflation
West Virginia
2008 to 2018



Sources: School Building Authority of West Virginia. Analysis of Project Costs and Wage Rates Pre and Post Prevailing Wage Repeal. March 2017; Data requested from the West Virginia School Building Authority; US Bureau of Labor Statistics Producer Price Index for Construction; and Center for Business and Economic Research analysis.

Note: The last three projects were not included in the SBA analysis.

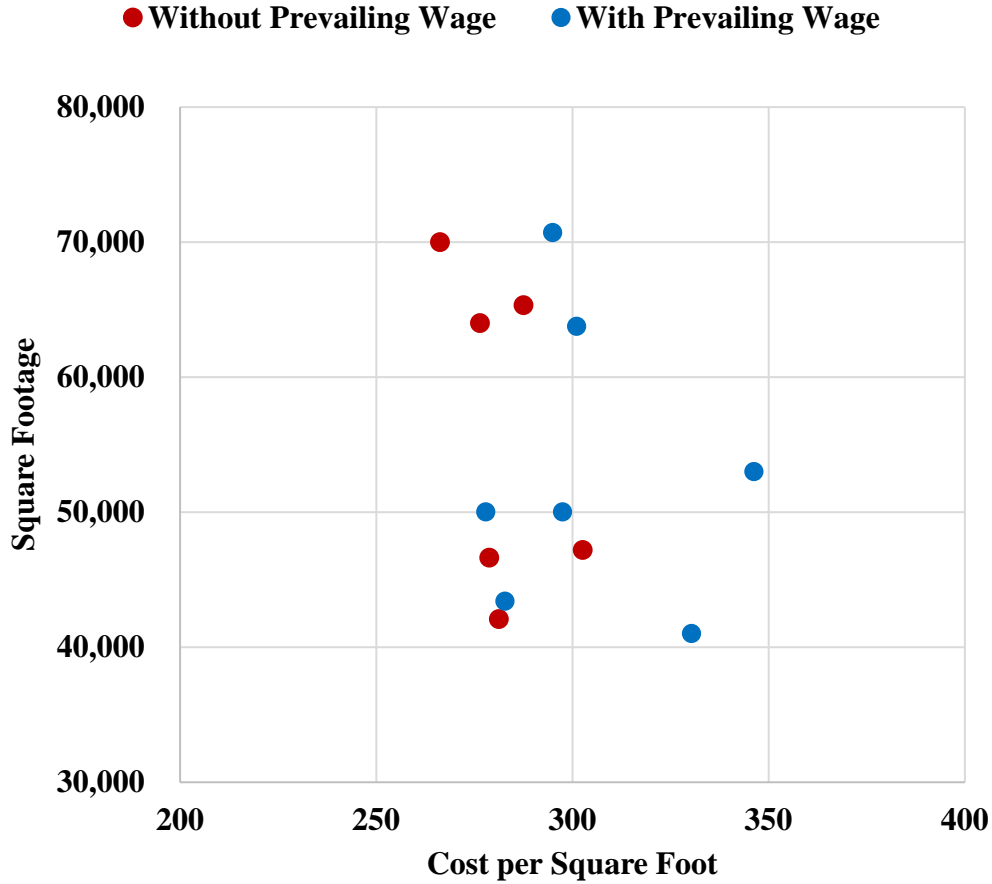
Table 2
Average Cost Per Square Foot
With and Without Prevailing Wage Requirement

| Projects | With Prevailing Wage | Without Prevailing Wage | Percent Difference |
|---|-------------------------------------|--|-------------------------------|
| Project from 2008 to 2018 (Excludes Edgewood and Crum PK-8) | 283.63 | 273.86 | -3.4 |
| Projects from 2013 to 2018 (Excludes Edgewood and Crum PK-8) | 304.45 | 282.18 | -7.3 |

Sources: School Building Authority of West Virginia. Analysis of Project Costs and Wage Rates Pre and Post Prevailing Wage Repeal. March 2017; Data requested from the West Virginia School Building Authority; and Center for Business and Economic Research analysis.

While the decrease in costs appears to coincide with the application of the prevailing wage law, other factors may contribute to the decrease. For example, SBA noted that projects under 50,000 square feet tend to have higher costs per square foot than projects over 50,000 square feet. Figure C shows the projects by square footage and cost per square foot. The data available suggests that the cost per square foot were lower for both the larger projects—over 50,000 square feet—and smaller projects. That is, differences in the size of projects do not appear to be causing the costs differences between prevailing wage and non-prevailing wage projects. However, there are two important caveats. First, given the small number of projects available, the data does not support strong conclusions. Second, other differences between these projects could affect costs.

Figure C
West Virginia School Projects Square Footage
and Cost per Square Foot
2013 to 2018



Sources: School Building Authority of West Virginia. Analysis of Project Costs and Wage Rates Pre and Post Prevailing Wage Repeal. March 2017; Data requests from the West Virginia School Building Authority; and Center for Business and Economic Research analysis.

When comparing costs before and after a policy change has occurred, there is concern that other factors such as change in the economy might have contributed to changes in costs. For example, if the cost of materials decreased during this time period, construction costs might have decreased even with no changes to the state’s prevailing wage laws. To examine this concern, Figures D and E show similar data for West Virginia’s surrounding states. This allows us to observe whether nearby states that did not repeal their prevailing wage laws experienced similar decreases in school construction costs. If they did, it would suggest factors other than West Virginia’s repeal of its prevailing wage laws caused their costs to decrease.

The data for Figures D and E come from the ConstructionConnect database. Each bar represents the cost per square foot for a school built within each state. Costs were adjusted for inflation.

Projects are sorted by bid date and schools are grouped into two categories based on bid date. Those bid prior to July 1, 2015—when West Virginia applied the prevailing wage law—are shown in blue. Those bid after July 1, 2015—after West Virginia suspended and repealed its prevailing wage laws—are shown in red. Note that the colors do not indicate whether these projects were subject to prevailing wage laws in their respective states.

According to the ConstructionConnect data, Kentucky received bids on 24 schools from 2013 to 2018. During this time, Kentucky's costs did not decrease as they did in West Virginia. There was one school with relatively low costs per square foot (\$149) and there were two with relatively high costs per square foot (\$375 and \$666). Ignoring these schools, the average cost of schools bid after July 2015 were one percent higher than those bid prior to 2015. It should also be noted that Kentucky repealed its prevailing wage in January 2017. Five schools have been bid in Kentucky since it repealed its prevailing wage law. However, the cost per square foot does not appear to have decreased.

Costs per square foot in Maryland varied considerably across projects, ranging from \$129 to \$690. However, there appears to be little evidence that costs decreased after July 2015. Cost in Ohio, Pennsylvania and Virginia show similar trends—slight increases in costs but no decreases similar to those experienced in West Virginia. Two projects in Ohio had very low costs per square foot.

The data suggests that West Virginia's surrounding states did not experience similar decreases in their costs to build schools. This suggests that the general state of the economy from 2015 through 2018 did not cause West Virginia's construction costs to decrease. This comparison does not rule out the possibility that another factor specific to West Virginia could have affected costs in the state.

Limitations

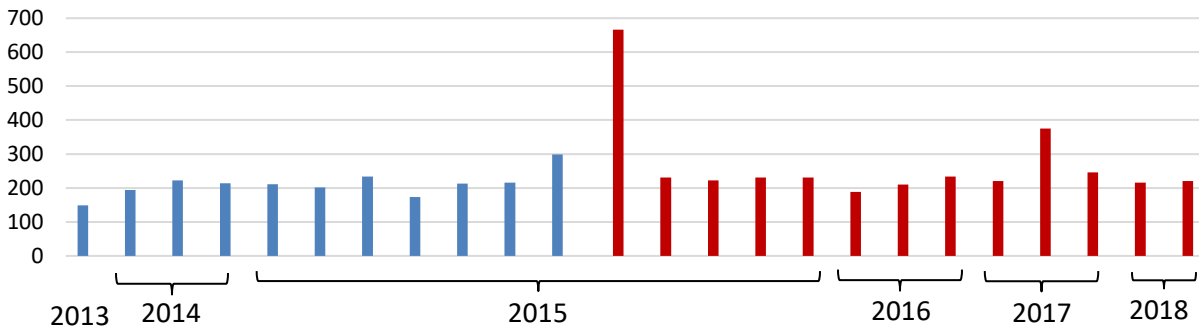
The comparisons presented above have two limitations that policymakers should consider when interpreting the results. First, differences in project specifications can affect the comparison. As discussed earlier, costs of school projects vary due to differences in characteristics, changes in the economy, and regulatory changes. A limitation of previous research studies that examined school construction was that they did not adequately account for these differences. This limitation applies to this study as well. While the data suggests costs per square foot have declined, it is not possible to eliminate the possibility that differences in the specifications of these school or other factors may have contributed to the lower costs.

Second, there are only a few projects bid without the prevailing wage requirement. Differences in one or two schools can significantly affect the comparison. As school districts bid more projects without prevailing wage projects, West Virginia policymakers may get a better indication of whether repealing its prevailing wage laws affected construction costs.

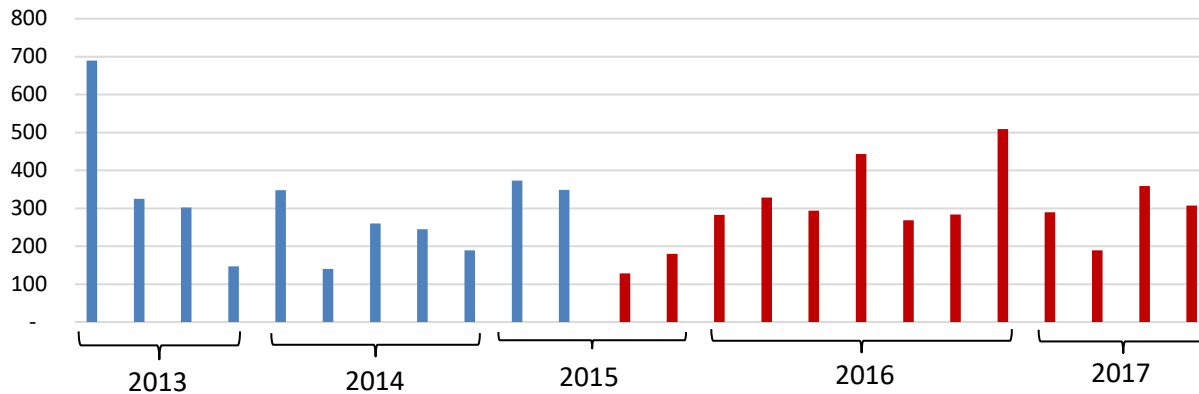
Figure D
Cost per Square Foot
Kentucky, Maryland, and Ohio
2013 to 2018

- Period During Which Prevailing Wage Applied in WV
- Period During Which Prevailing Wage Did Not Apply in WV

Kentucky



Maryland



Ohio

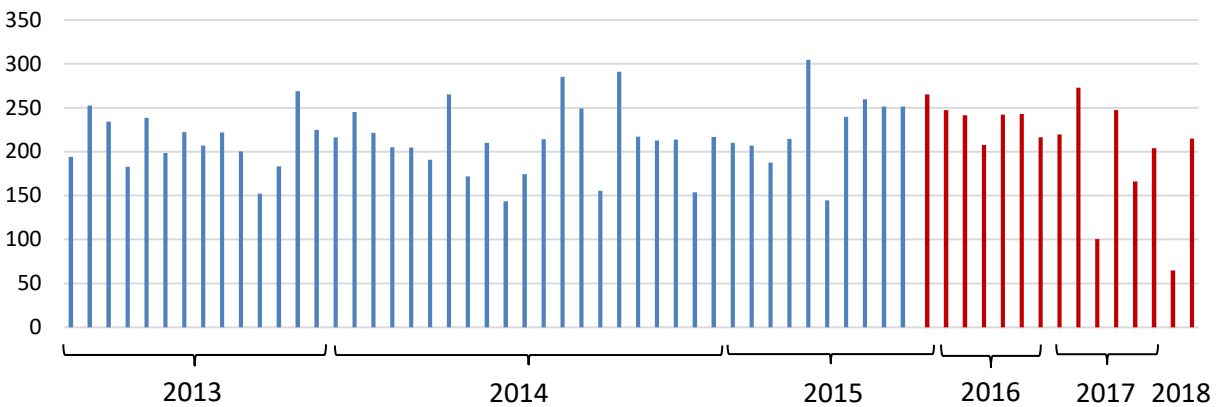
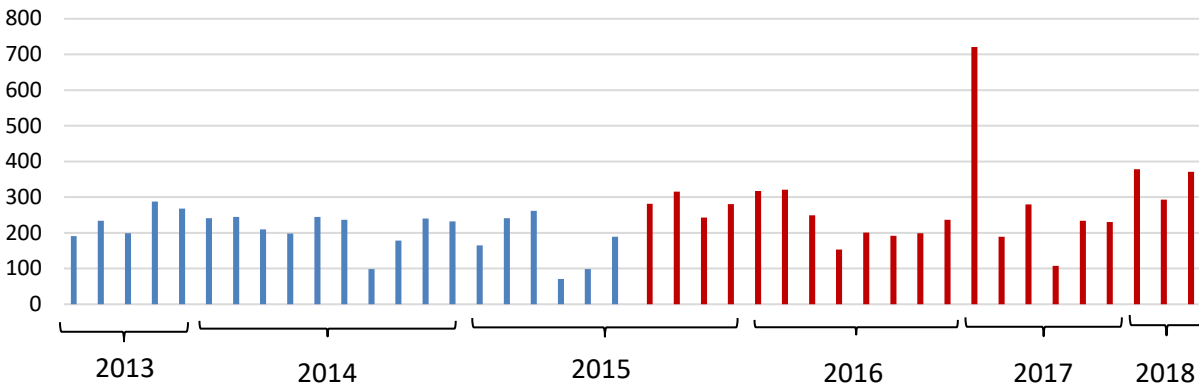


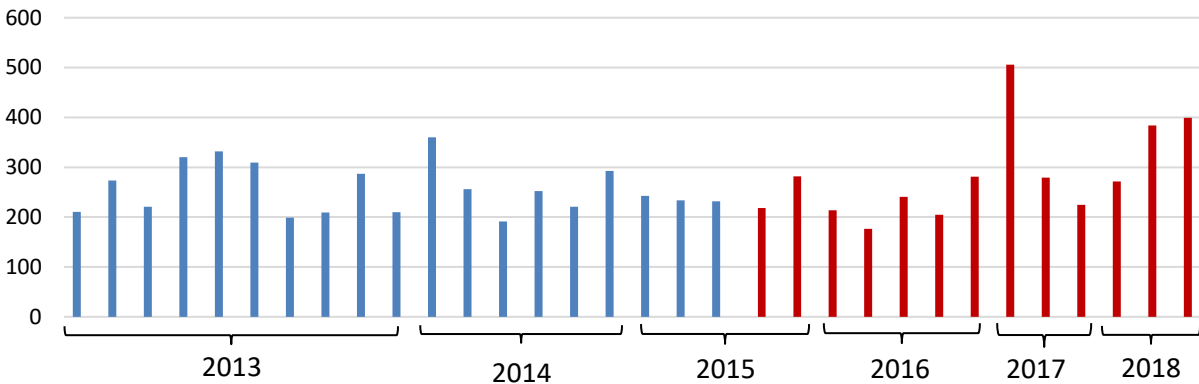
Figure E
Cost per Square Foot
Pennsylvania and Virginia
2013 to 2018

- Period During Which Prevailing Wage Applied in WV
- Period During Which Prevailing Wage Did Not Apply in WV

Pennsylvania



Virginia



Source: ConstructionConnect

Potential Effects on Quality

Proponents of prevailing wages laws often argue the wage requirements improve construction quality. By requiring contractors to pay higher wages, they may employ better workers who produce higher quality construction. Improved construction can reduce the long-term maintenance and repair costs. While there are reasons to expect prevailing wages could improve quality, the effects are uncertain and prevailing wages may be an inefficient method for improving quality.

In a competitive labor market, more productive and higher quality workers will typically earn higher wages. Therefore, one might expect an electrician who can command a wage of \$30 per hour would be more productive or provide better quality than an electrician who can only command \$15 per hour. Prevailing wage laws may increase the likelihood that these better workers are used on public projects in two ways. First, prevailing wages may increase the chances that contractors that employ high wage, high quality workers win bids. In the absence of prevailing wages, contractors that generally pay higher wages and employ better workers might be more expensive than contractors that pay lower wages. When government agencies award projects to the lowest bidder without a prevailing wage, contractors that pay high wages may be less likely to win bids. With the prevailing wage requirement, all contractors have to pay a minimum level of wages. This may increase the probability that contractors that pay high wages will win public jobs. Second, contractors who pay lower wages may substitute toward better workers under the prevailing wage requirement. In these cases, prevailing wages may improve quality.

While prevailing wages laws require that contractors pay higher wages, they do not ensure that contractors employ better workers. The 2001 Kentucky report compared the wages paid to workers on prevailing wage projects in Kentucky to the wages paid to the same workers when they worked on private non-prevailing wage jobs. The report found that 60 percent of the workers sampled earned more on prevailing wage jobs than on non-prevailing wage jobs. The 2014 follow-up report found similar results. The 2001 report notes one worker whose wage rate increased from \$8 per hour on private jobs to \$22.60 per hour on prevailing wage jobs. It is unlikely that this worker's quality improved sufficiently to command \$22.60 per hour in a competitive labor market. While this is an extreme example, the data suggests that prevailing wage laws often simply increase the wages paid to workers without providing a corresponding increase in worker quality.

It is also important to note that construction workers' wages are not necessarily determined in a competitive labor markets. Therefore, higher wages may not fully reflect quality differences. O'Connell found that prevailing wage laws allow unions to negotiate higher wages than they would otherwise. Kessler and Katz found that construction workers' wages declined when states repealed their prevailing wages laws. The decline was "borne primarily by union workers" and resulted in a significant reduction in the union wage premium. According to UnionStats.com, unions cover approximately 7,000, or 21.8 percent, of the 32,000 private construction workers in West Virginia. Nationally, unions cover 14 percent of private construction workers.

Potential Fiscal Impacts

Several reports have claimed that repealing prevailing wages laws reduce state and local tax revenue. These reports base their claims on past research showing that construction workers wages fall after states repeal their prevailing wage laws. Kessler and Katz found "Repeal of prevailing wage laws leads to slight decreases in the relative wage levels of construction workers." Given that construction workers wages fall, they would pay less in income taxes and spend less on goods and services that are subject to sales taxes.

Philips (2014) argued that Kentucky would see income and sales tax revenues decline by approximately \$9.8 to \$19.7 million annually if it repealed its law. Quesada, Manzo, Belman, and Bruno estimated that Illinois would see revenue decrease by \$44.35 million. Kelsay, Sturgeon, and Pinkham estimated Missouri would lose \$23.8 million to \$35.8 million. Kelsay (2015) argued that West Virginia would lose \$4.51 to \$8.94 million annually in income and sales tax revenue. While these studies argue repealing prevailing wage laws would reduce revenues, they discuss only a portion of the overall fiscal effects and ignore several other aspects of repeal that might offset these lost revenues.

The fiscal impact of repeal depends on whether prevailing wages affect construction costs. As discussed, researchers have reached different conclusions as to whether prevailing wages affect the costs of public construction.

The reports cited above developed their estimates under the assumption that prevailing wage laws do not increase the cost of construction. Under this assumption, state and local agencies would not experience savings from repeal. The negative fiscal impact comes from the reduction in construction workers' wages, which would reduce the income and sales taxes that they pay. In addition, because construction workers would have lower incomes, they would spend less supporting other businesses in the state, which would further reduce revenues.

This type of analysis, however, only describes a portion of the fiscal impact associated with repeal. Generally, construction spending goes to labor, materials, capital, administration, or profits. If labor costs decline but total costs do not, then one of these other categories must increase and these increases will have an offsetting effect on revenues. For example, if spending on materials increase, companies that supply construction materials will earn more and pay more in taxes. This spending also supports businesses and workers in other industries and generates tax revenues.³ Therefore, an increase in spending on materials would generate an increase in revenues that would offset a portion of the losses from reduced labor. The reports listed above do not address these offsets. As a result, they overstate any negative fiscal impact associated with repeal. This is true even if prevailing wages have no effect on construction costs.

While the reports cited above assumes prevailing wage laws do not increase construction costs, several studies found evidence suggesting the laws do increase costs. The data presented in Figure A suggests that repealing the prevailing wage in West Virginia reduced the costs of public construction by approximately 7.3 percent. Construction workers would still earn less under repeal and there would be less economic activity and lower tax revenues associated with their wages. However, state and local governments would likely reallocate those savings to other public priorities such as hiring additional social workers, increasing teacher pay, or providing Medicaid services. Additional spending in each of these categories would also generate economic activity and tax revenues.

Potential Effects on Safety

Proponents often argue that prevailing wage laws improve safety rates. By requiring contractors to pay higher wages, prevailing wage laws may provide an incentive to hire better trained and

³ This is often referred to as the induced effect.

more experienced workers who may be less likely to incur injuries. For union contractors, a portion of the fringe is often set aside specifically for training.

Azari-Rad compared injury rates in the construction industry across states with and without prevailing wage laws. He found injury rates were lower in prevailing wage states. Azari-Rad's study was based on data from the Survey of Occupational Injuries and Illnesses. He notes that the survey does not include self-employed workers and therefore may underreport injuries. The underreporting may affect the validity of his results if self-employed workers are relatively more common in either prevailing wage states or non-prevailing wage states.

Prevailing wages laws often do not apply to self-employed contractors, which may provide an incentive to classify workers as self-employed. Businesses have misclassified workers' status to avoid paying unemployment insurance and workers compensation (Kelsay and Sturgeon). Contractors that misclassify workers to avoid these costs may have a competitive advantage over those that do not. Contractors may have a similar incentive to misclassify workers in prevailing wage states. To the extent this occurs, injury rates may appear lower in prevailing wage states simply because these states have more workers classified as self-employed independent contractors whose injuries are not reported in the Survey of Occupational Injuries and Illnesses.

Figures E and F show nonfatal injury and illness rates and fatal injury rates for West Virginia's construction industry from 2008 to 2016. Nonfatal injury and illness rates are based on incidents per 100 full time equivalent (FTE) workers. Fatal injury rates are based on fatalities per 100,000 FTE workers. For example, West Virginia's construction industry incurred 1.5 nonfatal injuries or illnesses for every 100 FTE workers in 2016. There were 15.9 fatalities per 100,000 FTE workers in 2016.

Unfortunately, this data is not sufficient to draw conclusions as to whether West Virginia's repeal affected safety. Projects bid during certain portions of 2015 and 2016 were not subject to the prevailing wage requirement. Therefore, the portion of construction work performed under the prevailing wages might have decreased during these years but it is not clear by how much. Even if less work was subject to the prevailing wage, it is not clear that accidents have increased. Nonfatal injuries and illnesses were generally decreasing from 2008 to 2014; increased significantly in 2015; and decreased in 2016. Fatality rates were relatively, but not unusually, high in both 2015 and 2016. Overall, the changes in injury rates do not support conclusions given the uncertainty with how changes in the application of prevailing wage actually affected work performed in 2015 and 2016. Rates for 2017 are not yet available.

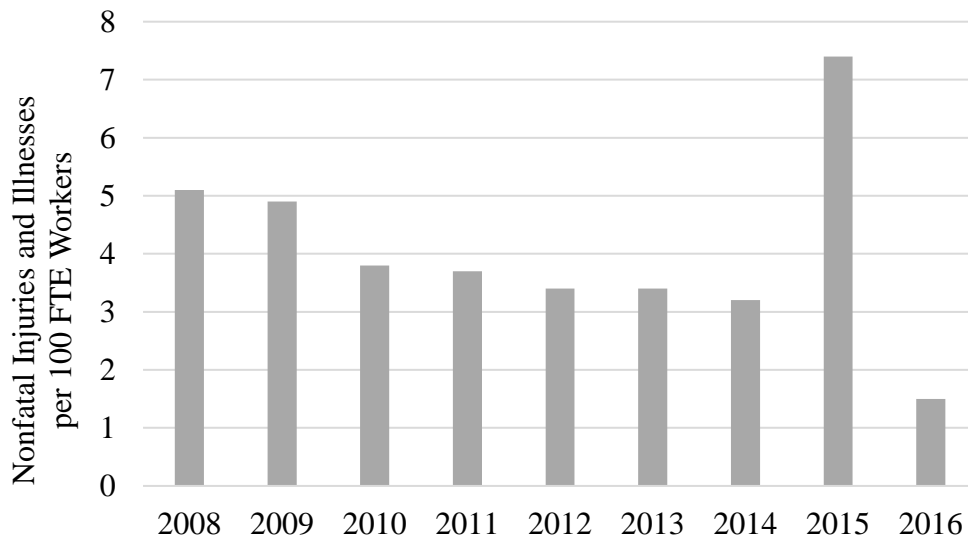
Conclusions

Past research have yielded mixed results as to whether prevailing wage laws affect public construction costs. Recent data suggests that the costs per square foot to build schools decreased after the West Virginia Legislature suspended its prevailing wage law in 2015 and repealed it in 2016. Based on bids received by the West Virginia School Building Authority, the cost per square foot for projects bid without the prevailing wage requirement were 7.3 percent lower than for projects bid with prevailing wages. This comparison uses projects bid from 2013 through 2018. The magnitude of the cost difference is sensitive to projects are included in the

comparison. Using projects from 2008 through 2018 suggests projects bid without prevailing wages were 3.4 percent lower.

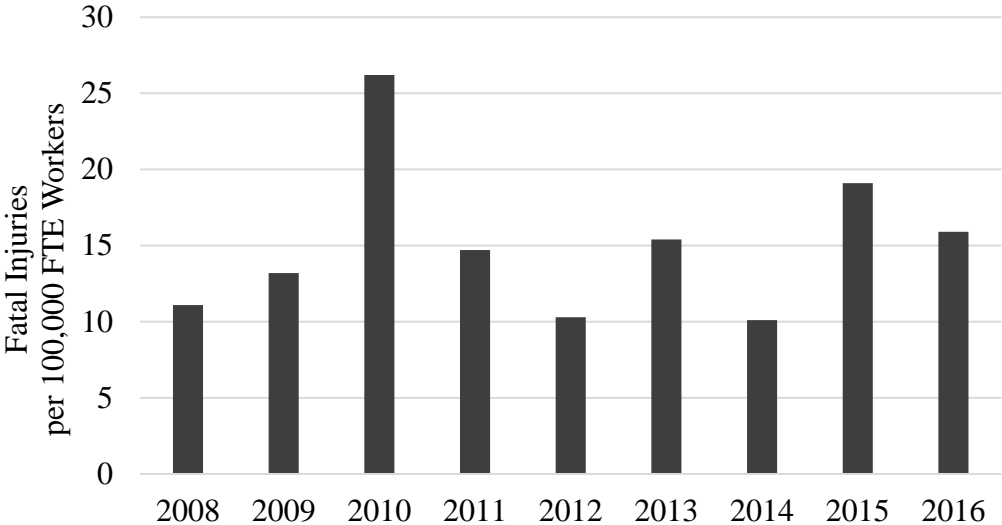
Prevailing wage laws may improve construction quality and safety by providing contractors with an incentive to hire better-trained workers. However, there appears to be no research examining how prevailing wage affects the quality of public construction. There is some empirical research suggesting injury and fatality rates in the construction industry are lower in prevailing wage states. Injury and fatalities rates for West Virginia’s construction industry are not sufficient to support conclusions.

Figure F
Nonfatal Injury and Illness Rates
West Virginia Construction Industry
2008 to 2016



Source: United States. Bureau of Labor Statistics. Injuries, Illnesses, and Fatalities.

Figure G
Fatal Injury Rates
West Virginia Construction Industry
2008 to 2016



Source: United States. Bureau of Labor Statistics. Injuries, Illnesses, and Fatalities.

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