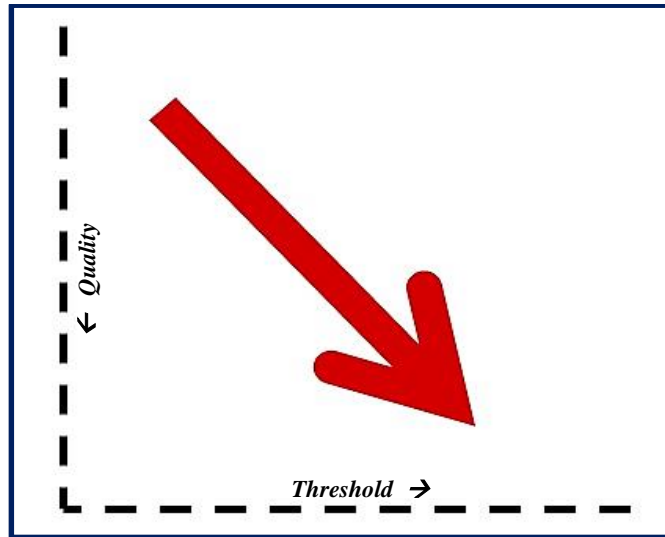


# An Analysis of the Impact of Prevailing Wage Thresholds On Public Construction



## IMPLICATIONS FOR ILLINOIS

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## EXECUTIVE SUMMARY

A contract threshold is the minimum cost of a public project at which point workers must be paid prevailing wage rates. Publicly-funded projects below the threshold are exempt from the law, while those above are covered. Contract thresholds vary by state, from those with no threshold (such as Illinois) up to \$500,000 in Maryland.

***Higher contract thresholds lower business revenues for in-state contractors.*** Increases in prevailing wage thresholds incentivize out-of-state contractors to enter the market.

- A \$100,000 increase in a prevailing wage state's contract threshold is associated with 1.2 percentage-point drop in the market share of in-state contractors ( $\pm 0.5$  percentage points).
- Over the five years from 2007 to 2012, three states raised their prevailing wage coverage thresholds.
  - Indiana had a \$100,000 threshold hike and the in-state contractor share fell 2.7 percentage points.
  - Oregon had a \$25,000 threshold hike and the in-state contractor share fell 1.6 percentage points.
  - Ohio had a \$10,405 threshold hike and the in-state contractor share fell 0.5 percentage points.
- Another \$100,000 threshold change in Indiana from 2012 to 2013 had no statistical impact on the number of bids submitted on public projects, indicating that prevailing wage coverage did not limit competition.

***Higher contract thresholds reduce wages and health insurance coverage for construction workers.*** Differences in coverage thresholds across and within states provide an opportunity for researchers to understand how thresholds affect construction workers. Every \$100,000 threshold increase is statistically associated with:

- A 0.45 percent to 4.9 percent decrease in the annual incomes of construction workers;
- A 0.28 percent to 0.33 percent decrease in health coverage for construction workers;
- Inconclusive impacts on the employment of blue-collar construction workers.

Similarly, a separate “difference-in-differences” method finds that threshold changes were responsible for a 0.44 percent reduction in annual incomes, a 1.11 percent decline in health coverage, and a small negative effect on overall employment among blue-collar construction workers. Raising a threshold lowers the wages and health coverage of construction workers.

***Introducing a threshold would have negative consequences for public construction in Illinois.*** Public bid data suggest that the median cost of all public projects in the state is about \$300,000. If Illinois introduced a threshold of \$100,000 for coverage under the state's prevailing wage law:

- About 25 percent of all public projects would be affected;
- The average number of bids would be unchanged;
- In-state contractors would annually lose \$139 million in business revenue to out-of-state construction companies on public projects that are funded by Illinois taxpayers;
- Annual labor income of blue-collar construction workers in Illinois would decline by \$53 million;
- Between 600 and 2,040 construction workers in Illinois would lose their health coverage at work.

These predictions align with a [previous forecast](#) on the impact of weakening prevailing wage in Illinois. Researchers have estimated that a statewide repeal of Illinois' prevailing wage law would shrink Illinois' economy by \$1.1 billion per year and reduce state and local tax revenues by \$44 million annually. With a total income loss of \$192 million for Illinois' contractors and workers, the consequences of a \$100,000 threshold would equate to about 18 percent of the total effect of full-scale repeal. A \$300,000 threshold would equate to about 54 percent of the total effect.

***Raising the threshold lowers the bar in public construction.*** Weakening prevailing wage laws by introducing or raising contract thresholds has negative impacts on local contractors, construction workers, and economies.

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## BACKGROUND

### *Introduction*

A state prevailing wage law supports construction workers employed on public infrastructure projects. The policy requires that workers employed on projects funded by taxpayer dollars are compensated according to hourly wage and benefits rates normally paid on similar private and public projects in an area. Prevailing wage prevents units of government from undercutting local wage standards on public construction, ensuring that workers can afford to live in the community where they are building a project. Instead of lowering worker wages below their privately-established levels to become the lowest bidder, prevailing wage encourages contractors to compete on a level playing field over other factors, such as the productivity of their workforce, managerial efficiencies, and materials costs. In this way, prevailing wage helps to stabilize state construction markets.

As of January 2016, a total of 31 states have a prevailing wage law. However, state prevailing wage laws can differ by the breadth of work included or excluded, the method for determining prevailing wage rates, and the contract threshold for a project to be covered under the policy. Stark differences have led economic researchers to distinguish between states that have a “strong” prevailing wage law, an “average” prevailing wage law, a “weak” prevailing wage law, and no law. First outlined by Thieblot (1995), these state-level ratings were intended to study states with similar statutes.

Contract thresholds are an important determinant of the strength of a state’s prevailing wage law. A contract threshold is the minimum cost of a public project at which point workers must be paid prevailing wage rates. Public projects below the threshold are exempt from the law, while those above the minimum dollar amount are covered by the law. For example, the federal Davis-Bacon Act establishes a minimum threshold of \$2,000. Any public works project directly contracted with federal tax dollars or for which appropriation includes a Davis-Bacon provision that exceeds \$2,000 is therefore covered by the policy.

Contract thresholds vary across states (Figure 1). Nine prevailing wage states— including Illinois— have no minimum threshold. In these states, the prevailing wage law covers all publicly-funded projects regardless of size. Other states have thresholds at or near the federal Davis-Bacon level of \$2,000. However, the range of coverage thresholds extends to minimum amounts of \$400,000 for new construction in Connecticut and \$500,000 for all construction in Maryland. Additionally, thresholds can vary within a state over time. For example, four states— Alaska, Indiana, Ohio, and Wisconsin— raised their minimum thresholds by between \$23,000 and \$121,742 from 2012 to 2013 (Figure 1).

This report, conducted by researchers at the Illinois Economic Policy Institute and the Project for Middle Class Renewal at the University of Illinois at Urbana-Champaign, is an evaluation of contract thresholds for project coverage under the prevailing wage law. The background section reviews the academic and policy research on the effects of weakening state prevailing wage laws on economic outcomes. The section also discusses data sources and study methodology. The impact that increases in state contract thresholds have on business and labor market outcomes is presented in the following section. The analysis is subsequently applied to Illinois to forecast effects if Illinois were to introduce a prevailing wage threshold. Finally, a conclusion summarizes key findings.

FIGURE 1: THRESHOLD AMOUNTS FOR CONTRACT COVERAGE UNDER PREVAILING WAGE LAWS, 2007-2013

State	2007	...	2012	2013	Change from 2007 to 2012	Change from 2012 to 2013
Alaska	\$2,000	...	\$2,000	\$25,000	\$0	\$23,000
Arkansas	\$75,000	...	\$75,000	\$75,000	\$0	\$0
California	\$1,000	...	\$1,000	\$1,000	\$0	\$0
Connecticut*	\$400,000	...	\$400,000	\$400,000	\$0	\$0
Delaware*	\$100,000	...	\$100,000	\$100,000	\$0	\$0
Hawaii	\$2,000	...	\$2,000	\$2,000	\$0	\$0
Illinois	\$0	...	\$0	\$0	\$0	\$0
Indiana <sup>1</sup>	\$150,000	...	\$250,000	\$350,000	\$100,000	\$100,000
Kentucky	\$250,000	...	\$250,000	\$250,000	\$0	\$0
Maine	\$50,000	...	\$50,000	\$50,000	\$0	\$0
Maryland	\$500,000	...	\$500,000	\$500,000	\$0	\$0
Massachusetts	\$0	...	\$0	\$0	\$0	\$0
Michigan	\$0	...	\$0	\$0	\$0	\$0
Minnesota <sup>†</sup>	\$25,000	...	\$25,000	\$25,000	\$0	\$0
Missouri	\$0	...	\$0	\$0	\$0	\$0
Montana	\$25,000	...	\$25,000	\$25,000	\$0	\$0
Nebraska	\$0	...	\$0	\$0	\$0	\$0
Nevada	\$100,000	...	\$100,000	\$100,000	\$0	\$0
New Jersey	\$2,000	...	\$2,000	\$2,000	\$0	\$0
New Mexico	\$60,000	...	\$60,000	\$60,000	\$0	\$0
New York	\$0	...	\$0	\$0	\$0	\$0
Ohio*	\$67,853	...	\$78,258	\$200,000	\$10,405	\$121,742
Oregon	\$25,000	...	\$50,000	\$50,000	\$25,000	\$0
Pennsylvania	\$25,000	...	\$25,000	\$25,000	\$0	\$0
Rhode Island	\$1,000	...	\$1,000	\$1,000	\$0	\$0
Tennessee	\$50,000	...	\$50,000	\$50,000	\$0	\$0
Texas	\$0	...	\$0	\$0	\$0	\$0
Vermont	\$100,000	...	\$100,000	\$100,000	\$0	\$0
Washington	\$0	...	\$0	\$0	\$0	\$0
West Virginia	\$0	...	\$0	\$0	\$0	\$0
Wisconsin <sup>‡</sup>	\$44,000	...	\$25,000	\$100,000	-\$19,000	\$75,000
Wyoming	\$25,000	...	\$25,000	\$25,000	\$0	\$0

Source(s): WHD, 2016. <sup>1</sup>Indiana repealed its prevailing wage law— called *Common Construction Wage*— in early 2015. \*Thresholds for Connecticut, Delaware, and Ohio are for new construction projects only. <sup>†</sup>Minnesota threshold shown is for projects where more than one trade is involved. Where a single trade is involved, the threshold is \$2,500. Neither has changed since 2007. <sup>‡</sup>Wisconsin’s law changed in 2010. In 2007, the coverage threshold was \$44,000 on projects where one trade is involved. By 2012, the threshold was \$25,000 for all projects.

### ***Literature Review on Weakening Prevailing Wage***

An extensive review of the literature finds no study that directly investigates prevailing wage contract thresholds and how they influence contractors, construction workers, or the economy. Economic researchers have not attempted to estimate the independent impact of prevailing wage thresholds. Instead, contract threshold amounts have been included in the set of policies and practices that determine the relative *strength* (or effectiveness) of a state prevailing wage law.

Studies on “weak” prevailing wage laws are the closest that academics have come to understanding the influence of contract thresholds on the public construction industry. Recent analysis has considered \$50,000 the threshold tipping point where the effectiveness of prevailing wage policies significantly diminishes (Dickson Quesada et al., 2013). Distinctions by Thieblot (1995) have since been updated by Duncan and Lantsberg, who conclude that there were 25 states with “strong” or “average” prevailing wage laws and 25 states with either a “weak” prevailing wage policy or no law at all in 2012 (Duncan & Lantsberg, 2015).

Weakening prevailing wage laws has been found to have significant negative economic consequences, particularly for local contractors and workers. By ensuring that workers can afford to live where they are constructing a project, prevailing wage levels the playing field for contractors. Without an effective prevailing wage law, contractors from low-wage, low-skill regions can enter the market, win public bids, and take taxpayer dollars back with them to their own states. Data from the 2007 *Economic Census of Construction* reveals that states with weak or no prevailing wage policies experience an influx of out-of-state contractors performing public construction work. States with weak or no law have 2 percent *less* of the total value of construction work completed by in-state construction firms compared to states with strong or average prevailing wage laws (Duncan & Lantsberg, 2015). In Illinois, this would equate to over \$1 billion in construction value leaking from the state economy, a loss of income and profit that would ripple throughout the state and affect industries that are unrelated to construction (Dickson Quesada et al., 2013). Data from the more-recent 2012 *Economic Census of Construction* indicates that strong or average prevailing wage laws now increase the market share of in-state contractors by 2.4 percent compared to states with weak or no laws (See Appendix Table A).

The negative impacts of weak prevailing wage laws on local contractors are also costly for workers and taxpayers. Recent analysis finds that weakening prevailing wage in Wisconsin would result in a loss of 2,600 total jobs, \$1.2 billion in economic output, and \$39 million in state and local tax revenues due principally to the flood of out-of-state contractors (Duncan & Lantsberg, 2015). Similarly, weakening prevailing wage in Michigan would eliminate 11,000 total jobs, reduce the state's gross domestic product by \$1.7 billion, and lower state and local tax revenues by \$28 million (Duncan et al., 2015). The data show that weakening prevailing wage hurts local contractors and reduces worker wages, particularly for the lowest-paid construction employees. As a result, the most vulnerable workers are pushed into poverty, resulting in increased dependence on government assistance. Economic analysis suggests that, if all 25 states with strong or average prevailing wage legislation decided to weaken their laws, an additional 102,000 blue-collar construction workers would rely on food stamps and 319,000 would lose health insurance coverage (Manzo et al., 2016).

Attempts to either introduce a prevailing wage contract threshold or raise the current threshold in states are predicated on the unsubstantiated claim that weakening prevailing wage will cut costs. For example, in a testimony before the Pennsylvania House of Representatives, the Pennsylvania State Association of Township Supervisors states that it "believes that the Prevailing Wage Act should be modified to increase the compliance threshold" because "raising the threshold for prevailing wage compliance from \$25,000 to \$200,000 would allow local governments to stretch the taxpayer's dollar further" (Herr, 2011).

However, an extensive body of peer-reviewed research conducted in the last 15 years finds that weakening prevailing wage laws does not save taxpayer dollars by reducing overall construction costs (Duncan et al., 2014; Duncan, 2011; Mahalia, 2008). Using state-of-the-art statistical methods, economists and policy researchers have examined the effect of prevailing wage on the cost of building schools, highways, low-income housing, and other structures. Fully 75 percent of all peer-reviewed studies find that prevailing wage has no statistical impact on total costs (Manzo et al., 2016). An independent report from the Wisconsin Legislative Fiscal Bureau provides the following summary of the research: "[T]he evidence on prevailing wage effects generally range from relatively small effects to no statistically significant effects. ... These findings echo a 2007 report prepared by the nonpartisan Minnesota Office of the Legislative Auditor which ... concluded that while some studies found a small impact on costs, more comprehensive studies have found that the impact is not statistically significant" (Horton, 2015).

The economic literature provides at least three reasons why weakening prevailing wage does not result in taxpayer savings. First, prevailing wages reflect local labor standards set by competitive practices. State prevailing wage surveys to determine the amount that contractors actually pay workers on public works and similar projects are both effective and reliable (Jordan et al., 2006). A study of contractor bidding behavior in California finds that the presence of prevailing wage regulations does not decrease competition in public bidding, implying that prevailing wage is a true reflection of the local market rate (Kim et al., 2012). Second, labor costs are a low and historically declining percentage of total costs in the construction industry, representing just 23 percent of total construction costs in 2012 (Duncan et al., 2015). Third, when construction wages fall, skilled workers are replaced by untrained



workers and higher material, fuel, rental, and equipment costs. Since labor costs represent a small portion of overall costs, drops in worker productivity and minor changes in other costs entirely offset the effect of lower wages (Duncan & Lantsberg, 2015). Upon combining the preponderance of the evidence, the general conclusion is that taxpayers do not save from weakening prevailing wage laws, they subsidize.

### ***Data Sources, Methodology, and Limitations***

This report predominately utilizes data from three sources. First, all state-level threshold information was obtained from the “Dollar Threshold Amount for Contract Coverage – Historical Tables,” released by the Wage and Hour Division of the U.S. Department of Labor (WHD, 2016). The only modification made to the data was for Indiana in 2012, which the Wage and Hour Division reported had a \$150,000 contract threshold but actually had a threshold of \$250,000 (IDOL, 2013). Second, data from the U.S. Census Bureau’s *Economic Census of Construction*— a national survey of construction contractors conducted every five years— is used to analyze the in-state shares of construction value. The most recent *Economic Census of Construction* data are from 2007 and 2012 (Census, 2015). Third, 2012 and 2013 data from the *American Community Survey* (1-year estimates) are used to analyze impacts on individual construction workers. *American Community Survey* information is derived from the Integrated Public Use Microdata Series (IPUMS-USA) provided by the Minnesota Population Center at the University of Minnesota (Ruggles et al., 2015).

This report takes advantage of two policy phenomena in the American public construction industry. First, differences in contract thresholds *across* states with prevailing wage laws provide a “national laboratory” to conduct research. Some states— including Illinois— have no threshold, Maryland has a \$500,000 minimum for prevailing wage coverage, and other states fall somewhere in between. These differences allow for statistical correlations between thresholds and various construction outcomes in any given year. Second, four states with prevailing wage laws increased their contract thresholds from 2012 to 2013. Differences *within* these states— Alaska, Indiana, Ohio, and Wisconsin— provide a “natural experiment” to conduct research. Construction outcomes in the four states that raised their thresholds can be compared to those in the 28 states that did not in order to isolate the impact of threshold changes.

The next section, which investigates the share of all construction work completed by in-state contractors, is a “correlational analysis” using the *Economic Census of Construction*. The analysis examines the relationship between two variables: the dollar amount of the coverage threshold for prevailing wage (X-axis) and the value of all construction work in a state completed by domiciled contractors (Y-axis). While this approach cannot provide definitive conclusions, it can reveal important general trends depending on the strength of the evidence.

After exploring the impact of prevailing wage contract thresholds on construction businesses, the succeeding section investigates their effects on labor market outcomes in the 32 states with prevailing wage laws. Data from the *American Community Survey* are used in “regression analyses,” which separate out the unique impact of prevailing wage contract thresholds from the influence of other factors. The other factors accounted for in the statistical models include demographics, military veteran status, immigration status, marital status, level of educational attainment, school enrollment status, and urban status— which is a “proxy” (or close substitute) for cost-of-living since prices are typically higher in urban cities than in suburban and rural areas. The regressions also control for hours worked by each individual and for whether the construction worker lives in a collective-bargaining state or “right-to-work” state. The latter is a mild proxy for both union membership (which is higher in collective-bargaining states) and the collection of labor market policies in a state (which tend to favor corporate interests in “right-to-work” states). Lastly, the analyses account for those individuals who work for the federal government, who are typically paid federal Davis-Bacon wages and not the state-level prevailing wage rates. However, this approach is limited by “lurking” or “unobservable” variables, which are other factors that are not accounted for but influence the labor market outcome being studied. This approach also only looks at the year before and the year after a threshold change. Future research should focus on effects over longer periods of time.

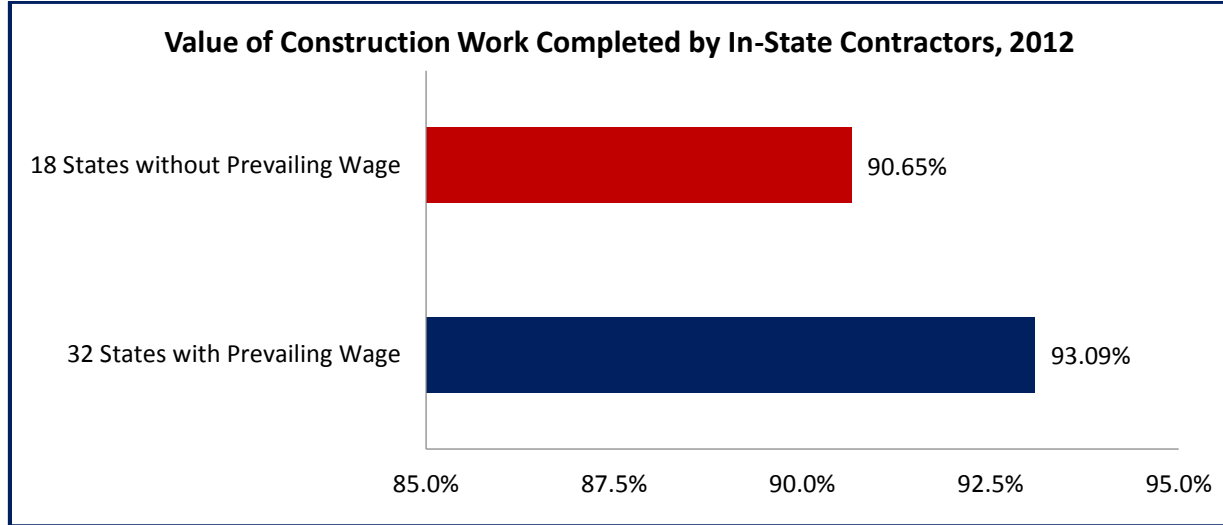
## POLICY IMPACTS OF THRESHOLDS

### *The Impact of Higher Contract Thresholds on Local Contractors*

Advocates of prevailing wage laws argue that the policies level the playing field for contractors and ensure that small construction businesses can compete in their states. The *Economic Census of Construction* reports statistics on both the total value of projects constructed in every state and data on construction work performed by all contractors in each state by location of work completed. Accordingly, the amount of work performed by in-state contractors and their workers can be determined. The latest releases of the *Economic Census of Construction* were in 2007 and 2012.

Figure 2 displays aggregate data on the value of construction work completed by in-state contractors in 2012 for states with and without prevailing wage laws. In all 32 states with prevailing wage laws that year, in-state contractors completed \$680.6 billion of construction work out of \$731.1 billion in total project value in their respective states, or 93.1 percent. In-state contractors in the states without prevailing wage laws, on the other hand, completed \$549.9 billion of construction work out of \$606.6 billion in total value, or 90.7 percent. Overall, in-state contractors tend to do better in states with prevailing wage laws.<sup>1</sup>

FIGURE 2: IN-STATE CONTRACTOR MARKET SHARE OF CONSTRUCTION WORK, BY TYPE OF STATE, 2012



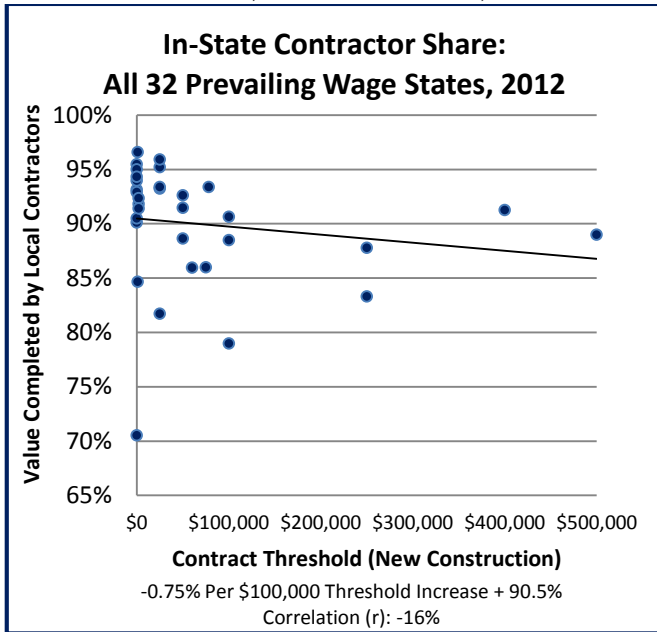
Source(s): Authors' analysis of Census, 2015. For more, see Table A in the Appendix

Local contractors tend to complete less construction work in prevailing wage states where coverage thresholds are higher. While Figure 2 compares states with and without prevailing wage laws, Figures 3 and 4 contrast the 32 states with prevailing wage statutes by threshold amount. In 2012, the majority of states with prevailing wage laws had in-state contractor shares of over 90 percent and most of these states had thresholds of \$25,000 or less (Figure 3). On average, a \$100,000 increase in a prevailing wage state's contract threshold was associated with a 0.75 percentage-point drop in the local contractor share of total construction value in 2012 (Figure 3). This general trend holds even if the nine prevailing wage states without contract thresholds are omitted: In Figure 4, every \$100,000 raise in the coverage floor is associated with a decrease in work completed by in-state businesses of 0.71 percentage points.

<sup>1</sup> For a full breakdown of total construction value and the in-state contractor share, see Table A in the Appendix.

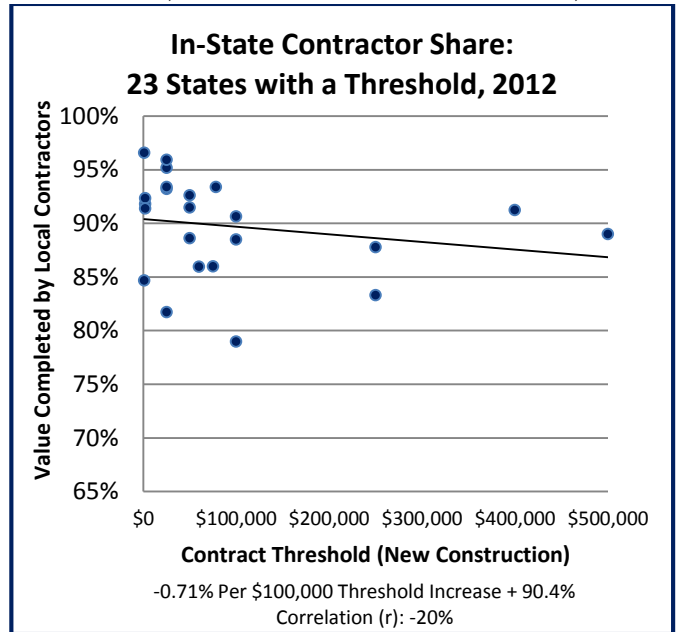


FIGURE 3: IN-STATE CONTRACTOR SHARE BY THRESHOLD, ALL PWL STATES, 2012



Source(s): Authors' analysis of Census, 2015; WHD, 2016.

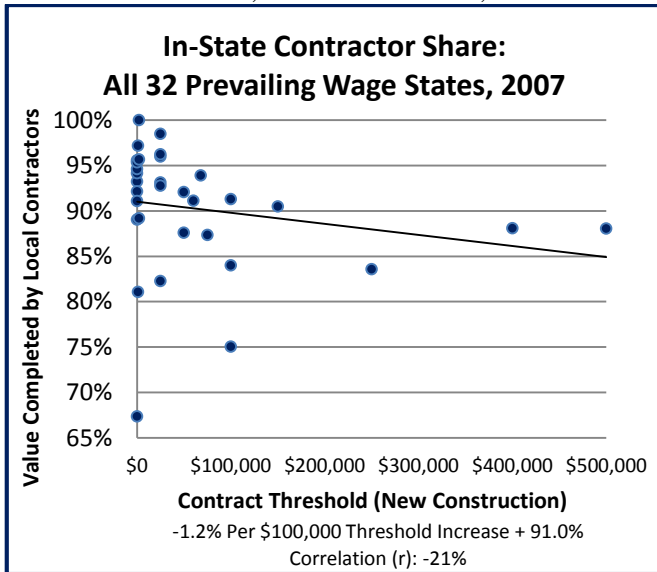
FIGURE 4: IN-STATE CONTRACTOR SHARE BY THRESHOLD, PWL STATES WITH THRESHOLDS, 2012



Source(s): Authors' analysis of Census, 2015; WHD, 2016.

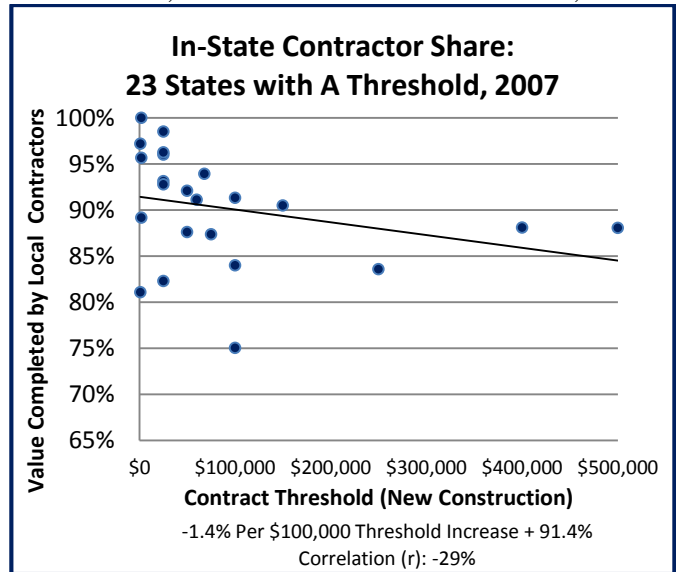
As depicted in Figures 5 and 6, earlier construction statistics corroborate this finding. In fact, the linear relationship is even more negative using 2007 data. Every \$100,000 threshold increase reduces the proportion of infrastructure projects constructed by in-state contractors by between 1.2 percentage points and 1.4 percentage points. The former estimate is based on all 32 prevailing wage states (Figure 5); the latter excludes the nine states without any threshold (Figure 6). The 2007 information suggests a larger negative impact of threshold increases on local construction firms. It also features a marginally higher level of evidence, with stronger correlation coefficients.

FIGURE 5: IN-STATE CONTRACTOR SHARE BY THRESHOLD, ALL PWL STATES, 2007



Source(s): Authors' analysis of Census, 2015; WHD, 2016.

FIGURE 6: IN-STATE CONTRACTOR SHARE BY THRESHOLD, PWL STATES WITH THRESHOLDS, 2007

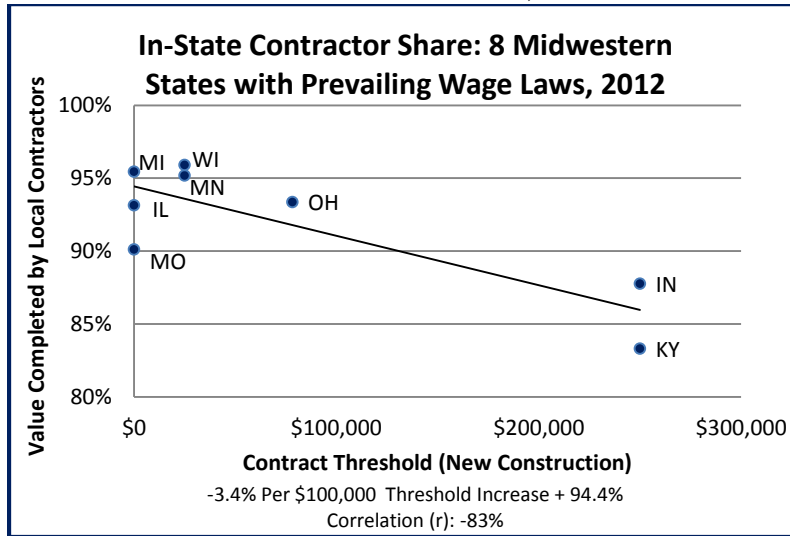


Source(s): Authors' analysis of Census, 2015; WHD, 2016.

It is important to note that the state-level relationships may conceal differences across the nation. Small, geographically dense prevailing wage states in New England may have relatively lower in-state contractor shares

than large Western prevailing wage states. Figure 7 therefore focuses on one geographic region: the Midwest. Among Illinois and seven neighboring states with prevailing wage policies, there is a strong negative correlation between higher coverage thresholds and bids awarded to in-state contractors. In the Midwest, every \$100,000 hike in the prevailing wage threshold is associated with a 3.4 percentage-point decrease in construction work completed by local contractors. Every Midwestern state with a threshold below \$100,000 had an in-state contractor share of over 90 percent. This includes Illinois, at 93.1 percent. In Indiana and Kentucky, where the thresholds were \$250,000, out-of-state construction companies entered the market and completed more projects: just 87.8 percent of Indiana’s construction work was done by in-state contractors and only 83.3 percent of projects in Kentucky were constructed by in-state contractors. It is worth noting that Iowa—a state that borders Illinois but is not shown because it does not have a prevailing wage law— had an in-state contractor share (85.6 percent) that was 7.5 percentage points lower than Illinois.

FIGURE 7: IN-STATE CONTRACTOR SHARE BY THRESHOLD, PWL STATES IN THE MIDWEST, 2012



Source(s): Authors’ analysis of Census, 2015; WHD, 2016.

Regardless of how the data are analyzed, the indication is that a higher threshold results in less work done by in-state contractors. The association ranges from -0.71 percentage points using recent data at the national level to -3.4 percentage points in the Midwest region. The middle estimate is an effect of -1.2 percentage points.

Changes in threshold levels in a few states create a secondary opportunity to assess prevailing wage law impacts. Over the five years from 2007 to 2012, three states raised their prevailing wage coverage thresholds and one state lowered its threshold. These states were Indiana (+\$100,000), Oregon (+\$25,000), Ohio (+\$10,405 for new construction projects), and Wisconsin (-\$19,000). Figure 8 utilizes the middle-of-the-road correlation to compare what the relationship “predicts” would happen to the in-state contractor share in these states to what actually happened. The prediction also factors in the national trend, as a slightly smaller amount of construction value (0.48 percentage points) was completed by in-state contractors in the post-recession year of 2012 than in the pre-recession year of 2007.

Increasing the contract threshold for coverage under the state’s prevailing wage law would be predicted to reduce the in-state contractor share of construction work in all three states. In Ohio, where the threshold hike was smallest at \$10,405, resident companies would be expected to lose 0.78 percentage points of the total value of construction work to out-of-state contractors. In actuality, the loss was 0.53 percentage points. The impact of Oregon’s \$25,000 threshold increase, predicted to be a 0.93 percentage-point drop, was an actual loss of 1.64 percentage points. Finally, Indiana’s \$100,000 threshold hike predicted a reduction of the in-state contractor share by 1.68 percentage points. The real decline was even greater at -2.73 percentage points. Conversely, the coverage threshold in Wisconsin was decreased from \$44,000 for single-trade projects to \$25,000. This drop in the threshold was expected to increase the in-state contractor share by 0.23 percentage points. However, *after subtracting out the*

*national trend*, the net prediction for Wisconsin was -0.25 percentage points. This was nearly identical to the actual change in local contractor market share of -0.33 percentage points. As expected, higher threshold increases aligned with larger drops in the share of work completed by in-state contractors.

FIGURE 8: CHANGE IN IN-STATE CONTRACTOR SHARE, MEDIAN PREDICTION VS. ACTUAL DATA, 2007 TO 2012

State	Threshold Change (2007-2012)	Predicted: (-1.2 p.p. per \$100,000) with National Trend (-0.48 p.p.)	Actual: Change in In-State Share (2007 to 2012)	Actual Minus Predicted
Wisconsin	-\$19,000	-0.25%	-0.33%	0.08%
Ohio	+\$10,405	-0.78%	-0.53%	0.25%
Oregon	+\$25,000	-0.93%	-1.64%	-0.51%
Indiana	+\$100,000	-1.68%	-2.73%	-1.05%
<b>Average (absolute value) percentage points away from actual:</b>				<b>±0.47%</b>

Source(s): Authors' analysis of Census, 2015; WHD, 2016.

On average, the expectation from the linear trend underestimated the in-state contractor market share decline by 0.47 percentage points. The cumulative evidence indicates that for every \$100,000 increase in the prevailing wage contract threshold, the in-state contractor share of the construction market decreases by 1.2 percentage points, plus or minus half of a percentage point.

Importantly, there is no evidence that raising a threshold increases bid competition. Figure 9 presents public bid data obtained for 14 northern Indiana counties on projects that involved operating engineers in 2012 and 2013 (IIFFC, 2016). Operating engineers run the heavy equipment, machines, and cranes on construction projects. From 2012 to 2013, Indiana again raised its contract threshold from \$250,000 to \$350,000. If Indiana's prevailing wage law (called Common Construction Wage) limited competition, then the data should indicate that more contractors submitted bids when the policy no longer applied to projects below the threshold.

FIGURE 9: PREVAILING WAGE THRESHOLD CHANGE EFFECT ON COMPETITION – AVERAGE NUMBER OF BIDS ON PUBLIC PROJECTS INVOLVING OPERATING ENGINEERS IN 14 NORTHERN INDIANA COUNTIES, 2012 AND 2013

Northern Indiana Projects Using Operating Engineers: 2012-2013	Projects: \$250,000 - \$350,000			All Projects: \$350,000 or Less		
	Number of Projects	Average Bids Per Project	Standard Error	Number of Projects	Average Bids Per Project	Standard Error
2012	40	2.875	0.304	140	2.636	0.139
2013	35	2.771	0.299	106	2.660	0.166
Difference		-0.104			0.025	
<b>Statistically significant?</b>	<b>No</b>			<b>No</b>		

Source(s): Authors' analysis of IIFFC, 2016. The 14 counties include: Elkhart, Fulton, Jasper, Kosciusko, LaGrange, LaPorte, Lake, Marshall, Newton, Noble, Porter, Pulaski, St. Joseph, and Starke.

But contrary to the expectations of prevailing wage opponents, the bid process remained stable. The threshold increase was not associated with any statistical change in the average number of bids submitted on applicable projects (Figure 9). In 2012, there were an average of 2.88 bids on projects costing between \$250,000 and \$350,000. A year later, when the threshold increase removed prevailing wage coverage for projects of this size, only 2.77 bidders competed for the jobs. The difference was not statistically meaningful. Extending the analysis to include all northern Indiana projects with winning bids of \$350,000 or less finds similar results. For these projects, the average number of bids was 2.64 before the threshold hike and 2.66 after the threshold hike, a statistically insignificant difference. Establishing a more extensive effect of a threshold on the number of bids would require examining additional data from multiple trades across those states that utilized thresholds. Nonetheless, based on this sample, it appears that prevailing wage threshold increases tend to produce no discernible change in competition through the number of bidders. This implies that threshold increases *shift* bid submissions from local contractors exiting the market to out-of-state contractors entering the market.

## The Impact of Higher Contract Thresholds on Blue-Collar Construction Workers

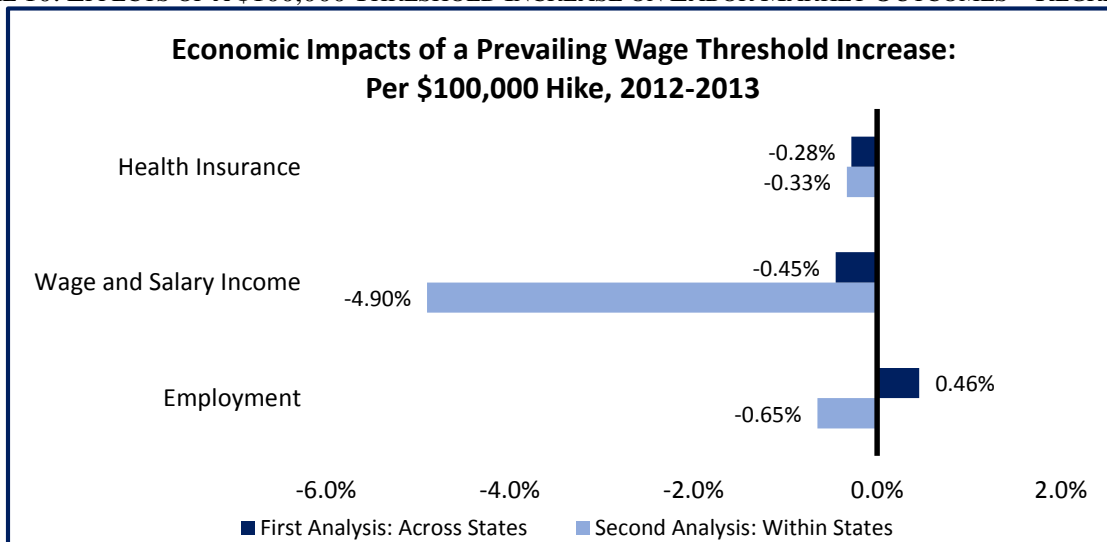
Recent increases to prevailing wage threshold amounts in Wisconsin, Ohio, Indiana, and Alaska provide a “natural experiment” to assess the impact of threshold changes on construction workers. To parse out the impacts attributable to the threshold change, this study utilizes three “regression analyses,” as explained in a previous section. For full regression results, please see Tables B through D in the Appendix.

Data from the *American Community Survey* for 2012 and 2013 provide information on 144,427 individuals in the blue-collar construction labor force, including the unemployed. Blue-collar construction workers comprise all trades employees such as laborers, carpenters, operating engineers, electricians, and plumbers. Supervisors, executives, lawyers, office workers of construction companies, and other white-collar workers are excluded from the analyses in this section.

Results from two advanced statistical approaches are reported in Figure 10. Both models concentrate only on the 32 states with prevailing wage laws. The first model is similar to the previous in-state contractor share analysis in that it only investigates the impact of *having a \$100,000-higher threshold* in both 2012 and 2013. The analysis does not explicitly separate the threshold hikes from overall threshold levels. In total, there were 101,818 observations of persons connected to the blue-collar construction labor force in all prevailing wage states in 2012 and 2013, including 88,112 who had a job. Results are weighted to match the actual American population using statistical weights provided by the U.S. Census Bureau.

In this first analysis, every \$100,000 increase in a prevailing wage state’s contract threshold is statistically associated with a 0.45 percent decrease in the annual wage and salary incomes of blue-collar construction workers (Figure 10). The probability that a given construction worker is covered by a health insurance plan also declines by 0.28 percent for each \$100,000 threshold hike. As the coverage threshold goes up, wage and health costs tend to decline. However, the first model suggests that employment among persons in the blue-collar construction labor force increases by 0.46 percent, which offsets any savings in labor costs. If, however, the new workers are less skilled, as economic research finds is generally the case when prevailing wage laws are weakened, the threshold hike would reduce productivity while keeping labor costs essentially constant, causing economic inefficiency.

FIGURE 10: EFFECTS OF A \$100,000 THRESHOLD INCREASE ON LABOR MARKET OUTCOMES – REGRESSIONS



Source(s): Authors’ analysis of Ruggles et al., 2015; WHD, 2016. For more, see Tables B, C, and D in the Appendix.

The second model focuses on the impact of *raising the threshold by \$100,000 higher* in 2013. While the first model looks at changes across state lines, the second evaluates changes within state lines relative to the constant thresholds of other states. In total, there were 50,085 observations of persons connected to the blue-collar construction labor force in all prevailing wage states in 2013, including 43,871 who had a job— which comprise

4,915 employed blue-collar construction workers in the four states with prevailing wage threshold changes. Once again, results are weighted to match the actual American population using statistical weights provided by the U.S. Census Bureau.

The within-state analysis reports effects that are more negative than the across-state model. On average, the regression finds that every \$100,000 increase in a prevailing wage state’s contract threshold is statistically associated with a 4.90 percent decrease in the annual wage and salary incomes of blue-collar construction workers (Figure 10). The probability that a given construction worker is covered by a health insurance plan also declines by 0.33 percent for each \$100,000 threshold hike. As the coverage threshold goes up, wage and health costs both decline. In contrast to the first model, however, the second model finds that employment among blue-collar construction workers decreases by 0.65 percent. The drop in construction worker employment in a state following an increase in the coverage threshold is due to the flow of out-of-state contractors and their workers into the market. These out-of-state contractors and workers enter states with weakened prevailing wage laws, undercut and lower the local wage level through their increased supply, cause higher unemployment for residents, and then take earnings back to their home states when the project is completed.

The third and final method called a “difference-in-differences” approach is also used to isolate the impact of *increasing thresholds*. Difference-in-differences are utilized in both the social sciences and the medical field to isolate the impact of a change in one group (the “treatment group”) from a similar group (the “control group”). While first and second models provided estimates per \$100,000 threshold hike, the difference-in-differences method evaluates the average effect of simply increasing a threshold. In total, there were 101,818 observations of persons connected to the blue-collar construction labor force in all prevailing wage states in 2012 and 2013, including 88,112 who had a job. Results are weighted to match the actual American population using statistical weights provided by the U.S. Census Bureau.

The difference-in-differences approach yields similar results, summarized in Figure 11. After controlling for other observable factors, average annual incomes increased by 0.89 percent for blue-collar construction workers in the four states that raised their prevailing wage thresholds in 2013. However, for comparable workers in the 28 other states with prevailing wage laws that did not change their thresholds, annual incomes grew by 1.33 percent on average. Thus, the isolated impact of raising a contract threshold was responsible for a 0.44 percent decrease in construction worker earnings in 2013. Similarly, based on the difference-in-differences approach, the net effects of raising a threshold also include a 1.11 percent drop in construction worker health coverage and an employment loss of 0.15 percent. These estimates further substantiate the finding that in-state employment and compensation standards are negatively impacted by threshold hikes.

FIGURE 11: DIFFERENCE-IN-DIFFERENCES ESTIMATES, EFFECT OF THRESHOLD INCREASES – THIRD ANALYSIS

<b>Difference from 2012 to 2013</b>	<b>Annual Income</b>	<b>Health Insurance</b>	<b>Employment</b>
A. 4 States with Threshold Change (“Treatment Group”)	+0.89%	+0.11%	+2.34%
B. 28 States without Threshold Change (“Control Group”)	+1.33%	+1.22%	+2.49%
<b>Difference in Differences [A – B]</b>	<b>-0.44%</b>	<b>-1.11%</b>	<b>-0.15%</b>

Source(s): Authors’ analysis of Ruggles et al., 2015; WHD, 2016. For more, see Tables B, C, and D in the Appendix.

In summary, raising a prevailing wage threshold has negative consequences for blue-collar construction workers. A \$100,000 threshold hike would reduce incomes by 0.4 to 5 percent and health coverage by as much as 1.1 percent. Similarly, a \$500,000 threshold hike would result in worker incomes that are 2 to 10 percent lower and would decrease health coverage by between 1.5 and 5.5 percent. At the same time, there is no evidence that overall labor costs would fall within a state, thereby contradicting claims that adopting or increasing a threshold would reduce total construction costs for governmental units. There is evidence, however, that out-of-state contractors are more likely to enter the market and complete projects when thresholds are increased, lowering employment among blue-collar construction employees who work for in-state businesses.



## IMPLICATIONS FOR ILLINOIS

### *State and Local Public Construction in Illinois*

Illinois does not have a contract threshold for coverage under the state’s prevailing wage law. Payment of the prevailing wage to workers is required on all public construction projects funded by the state government or by a local unit of government. This broad scope of coverage is one of the many features in Illinois’ statute that makes it a “strong” prevailing wage law. Eight other states with prevailing wage laws do not have a threshold.

The *Economic Census of Construction* reports that the value of state-owned and locally-owned construction projects totaled \$11.57 billion in Illinois in 2012 (Figure 12). The largest type of construction work funded by state and local government bodies in Illinois is highway, street, and bridge construction, with an investment of \$3.26 billion during the year (28.1 percent). Commercial and institutional building public projects– which include the construction and repair of schools, hospitals, and government buildings– accounted for another \$2.30 billion in 2012 (19.9 percent). These projects are followed by those involving electrical contractors (10.8 percent), plumbers and related contractors (7.4 percent), water and sewer line contractors (6.3 percent), other heavy and civil engineering contractors (6.3 percent), and site preparation contractors (4.6 percent). Roofing, carpentry, and all other types of construction work account for 2 percent or less of the total value of state- and locally-owned public construction projects in Illinois.

FIGURE 12: BREAKDOWN OF PUBLIC PROJECTS IN ILLINOIS, BY TYPE OF CONSTRUCTION WORK, 2012

<b>State- and Locally-Owned Projects by Type of Construction Work</b>	<b>Share</b>	<b>Value</b>
<b>Total Value of Construction Work on State and Locally-Owned Projects</b>	<b>100.0%</b>	<b>\$11,571,766,000</b>
Highway, street, and bridge construction	28.1%	\$3,256,506,000
Commercial and institutional building construction	19.9%	\$2,299,273,000
Electrical contractors and other wiring installation contractors	10.8%	\$1,249,460,000
Plumbing, heating, and air-conditioning contractors	7.4%	\$861,386,000
Water and sewer line and related structures construction	6.3%	\$734,708,000
Other heavy and civil engineering (e.g., land drainage, parks, trails, etc.)	6.3%	\$733,257,000
Site preparation contractors	4.6%	\$527,248,000
All other specialty trade contractors	2.1%	\$237,422,000
Poured concrete foundation and structure contractors	1.9%	\$215,609,000
Masonry contractors	1.7%	\$198,749,000
Finish carpentry contractors	1.4%	\$160,944,000
Roofing contractors	1.3%	\$149,231,000
Power and communication line and related structures construction	1.3%	\$144,814,000
Drywall and insulation contractors	1.0%	\$119,544,000
Miscellaneous	5.9%	\$683,614,500

Source(s): Authors’ analysis of Census, 2015.

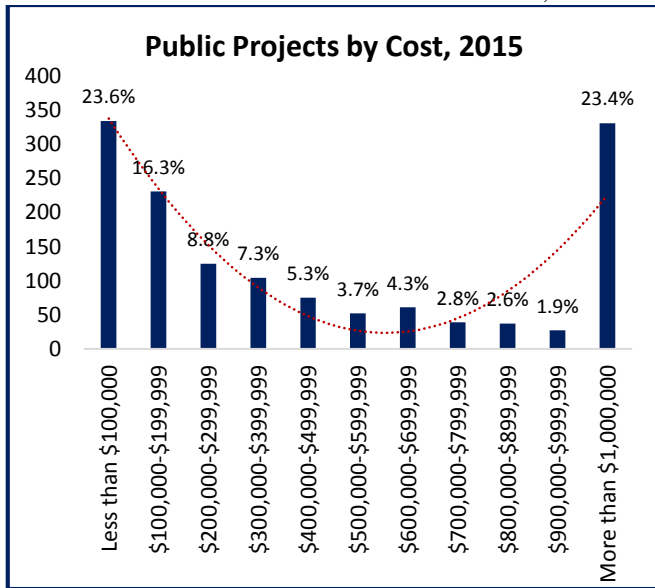
To understand the typical cost of public construction projects in Illinois, information was obtained from two additional sources. First, all recent public bid data for northeastern Illinois on work that involves operating engineers was examined (IIFFC, 2016). Operating engineers are skilled craftsmen and craftswomen who typically complete a four or five year apprenticeship program in Illinois. Operating engineers run the heavy equipment, machines, and cranes on construction projects– particularly on highway, street, bridge, water line, sewer line, and other civil engineering projects. Overall, the dataset contains information on 1,416 public lettings in 2015 in 11 northeastern Illinois counties: Cook, DuPage, Grundy, Kane, Kankakee, Kendall, Lake, LaSalle, Livingston, McHenry, and Will. The total construction value of the public projects was \$3.02 billion.



Second, data on public projects funded by the Illinois Capital Development Board (CDB) was obtained through a Freedom of Information Act request (CDB, 2015). The dataset comprises 418 projects awarded across the state from 2011 through 2013. CDB projects typically fall under the “commercial and institutional building construction” classification listed in Figure 12. Projects range in scope from small jobs, such as a \$95,562 emergency underground electrical cable replacement at the Dixon Correctional Center in Lee County, Illinois, all the way up to a \$45.6 million project to construct a 185,000 square foot, state-of-the-art Transportation Education Center at Southern Illinois University–Carbondale that houses the Automotive Technology, Aviation Technologies, and Aviation Management & Flight programs (SIUC, 2016). In total, the projects amounted to \$284.5 million in state-funded value.

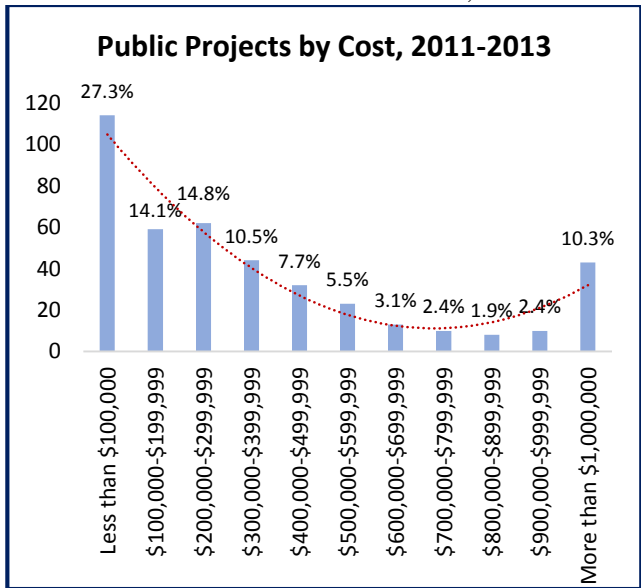
Figures 13 and 14 visually depict data on the apparent winning bids of public projects in both datasets. Public construction projects in Illinois are generally characterized by costs at either end of a two-tailed spectrum. While many infrastructure projects are small jobs costing less than \$100,000, there are nearly just as many that are mega-projects costing over \$1 million. In 2015, 23.6 percent of public projects involving operating engineers in northeastern Illinois cost less than \$100,000 and another 16.3 percent were awarded to a low bid of between \$100,000 and \$199,999. Projects costing over \$1 million, conversely, accounted for 23.4 percent of the 1,416 public projects (Figure 13). Capital Development Board projects throughout the state follow the same two-tailed trend, although they tend to be a little smaller. From 2011 through 2013, 27.3 percent of CDB project cost less than \$100,000, 14.1 percent cost between \$100,000 and \$199,999, and 14.8 percent cost between \$200,000 and \$299,999. Mega-projects of over \$1 million accounted for 10.3 percent of the 418 projects statewide (Figure 14).

FIGURE 13: BREAKDOWN OF PROJECTS BY COST, ALL PUBLIC PROJECTS INVOLVING OPERATING ENGINEERS IN 11 NORTHEASTERN ILLINOIS COUNTIES, 2015



Source(s): Authors' analysis of IIFFC, 2016.

FIGURE 14: BREAKDOWN OF PROJECTS BY COST, ALL PUBLIC PROJECTS FUNDED BY THE CAPITAL DEVELOPMENT BOARD IN ILLINOIS, 2011-2013



Source(s): Authors' analysis of CDB, 2016.

The project data are further summarized in Figure 15. Due to the influence of large transportation and civil engineering projects, the average cost of the public projects involving operating engineers in northeastern Illinois was \$2.13 million in 2015. The average cost of Capital Development Board projects, on the other hand, was \$609,717. However, both datasets have a similar distribution of project size. The 25<sup>th</sup> percentile of total cost was \$108,303 for the heavy and civil projects in northeastern Illinois and \$95,598 for the statewide building projects. This means that about one-fourth of public projects cost around \$100,000 or less. Similarly, the median cost was \$317,877 for the northeastern Illinois projects and \$263,052 for the statewide projects. Therefore, it is reasonable to assert (especially given construction cost inflation since 2011-2013) that about half of all public projects cost \$300,000 or less, the other half costs \$300,000 or more and about 10 percent of public projects cost less than \$50,000 (Figure 15).

FIGURE 15: SUMMARY AND DISTRIBUTION OF ILLINOIS PUBLIC PROJECTS BY COST

	Northeastern Illinois Projects Using Operating Engineers: 2015	Capital Development Board Projects: 2011-2013
N=	1,416	418
Total Value	\$3,019,287,076	\$284,531,254
Average	\$2,132,265	\$609,717
25th Percentile	\$108,303	\$95,598
50th Percentile	\$317,877	\$263,052
75th Percentile	\$921,385	\$506,975
Below \$50,000	10.7%	8.4%

Source(s): Authors' analysis of IIFFC, 2016; CDB, 2015.

### ***What If Illinois Introduced a Threshold?***

Data on Illinois' public construction industry indicates that introducing a contract threshold for coverage under Illinois' prevailing wage law would impact numerous projects every year. In 2015, the total value of public projects costing less than \$100,000 (23.6 percent of projects) was \$18.6 million in northeastern Illinois. In 2012, construction worker annual wages plus proportionate fringe benefits (i.e., labor costs) accounted for 24 percent of the net value of construction work for highway, street, and bridge construction in Illinois (Census, 2015). The net value excludes the costs of work subcontracted out to other companies. Assuming that labor costs account for 24 percent of total costs, a \$100,000 contract threshold would affect \$4.5 million worth of worker earnings in 11 northeastern Illinois counties alone.

A \$100,000 threshold for prevailing wage coverage would also impact the entire public construction industry throughout the state. Figure 16 uses the previous estimates to forecast economic impacts on the industry if Illinois were to establish a \$100,000 threshold. The forecast uses data from 2012 and 2013. Given that the state's construction industry has expanded since then, this serves as a *conservative* prediction for the state.

If Illinois introduced a threshold of \$100,000 for coverage under the state's prevailing wage law, the state would be predicted to lose over \$190 million in total income for contractors and workers annually (Figure 16). About 25 percent of all public construction projects would be affected. Assuming that more out-of-state contractors would enter Illinois' state and locally-funded public construction industry and capture an additional market share of 1.2 percent, local Illinois contractors would be expected to lose \$138.9 million in business revenue every year. For blue-collar construction employees in Illinois, annual worker wages would decline by \$216 on average and over 600 construction workers would lose their health coverage at work. The impact is a \$52.6 million annual loss in labor income for Illinois' blue-collar construction workers. A portion of this drop in labor income is redistributed from overall labor costs to residual contractor earnings, but the majority is transferred to out-of-state workers (Duncan & Lantsberg, 2015; Manzo, 2015). The decreases in local contractor business revenues and local worker income amount to \$191.5 million lost from the Illinois economy per year.

Figure 17 also assesses annual impacts if Illinois instituted three other arbitrary coverage thresholds: \$25,000; \$50,000; and \$300,000. A prevailing wage threshold of \$25,000 would reduce the market share of in-state contractors by \$34.7 million and decrease worker earnings by \$13.2 million. A \$50,000 threshold would affect about 10 percent of public projects in Illinois, transfer \$69.4 million to out-of-state contractors, and result in an additional \$26.3 million lost for blue-collar construction workers in Illinois. Finally, a coverage threshold of \$300,000 would impact about half of all state and local construction projects and result in \$416.6 million in business revenue lost for Illinois' contractors. Blue-collar construction workers in Illinois would also see their wages fall by approximately \$648 per year on average—resulting in a net loss of \$157.9 million in labor income

in Illinois. At least 1,826 employed construction workers in Illinois would also lose their health insurance coverage due to a \$300,000 threshold (Figure 17).

FIGURE 16: PREDICTED ANNUAL IMPACTS IF ILLINOIS INTRODUCED A \$100,000 CONTRACT THRESHOLD

Illinois Data	Actual Values	Predicted Impacts	Overall Change
2012 Value of Projects Owned by State and Local Governments: Illinois Contractor Share	\$11.57 billion	-0.012	-\$138.9 million
2013 Annual Worker Wages: Average Per Worker	\$47,992	-0.0045	-\$216
2013 Health Insurance Coverage: Workers Covered	184,408	-0.0033 to -0.0111	-609 to -2,040
2013 Labor Income: All Construction Workers	\$11.70 billion	\$11.64 billion	-\$52.6 million
<b>In-State Contractor Revenue + Total Labor Income</b>		<b>-\$191.5 million</b>	

Source(s): Authors' analysis of Ruggles et al., 2015; Census, 2015.

These predictions align with a previous forecast on the impact of weakening prevailing wage in Illinois. In *A Weakened State: The Economic and Social Impacts of Repeal of the Prevailing Wage Law in Illinois*, researchers from the University of Illinois, Michigan State University, and the Illinois Economic Policy Institute estimated that a statewide repeal of Illinois' prevailing wage law would shrink Illinois' gross domestic product by \$1.1 billion per year, reduce state and local tax revenues by \$44 million annually, and decrease total employment by about 3,300 jobs. Repeal would also cause a drop in apprenticeship training, resulting in more work-related deaths among construction workers (Dickson Quesada et al., 2013).

FIGURE 17: PREDICTED ANNUAL IMPACTS IN ILLINOIS, BY ARBITRARY CONTRACT THRESHOLD HIKE

Illinois Data	\$25,000	\$50,000	\$300,000
Value of Projects Owned by State and Local Governments: Illinois Contractor Share	-\$34.7 million	-\$69.4 million	-\$416.6 million
Annual Worker Wages: Average Per Worker	-\$54	-\$108	-\$648
Health Insurance Coverage: Workers Covered	-152 (minimum)	-304 (minimum)	-1,826 (minimum)
Labor Income: All Construction Workers	-\$13.2 million	-\$26.3 million	-\$157.9 million
<b>In-State Contractor Revenue + Labor Income</b>	<b>-\$47.9 million</b>	<b>-\$95.7 million</b>	<b>-\$574.5 million</b>

Source(s): Authors' analysis of Ruggles et al., 2015; Census, 2015.

Introducing a prevailing wage contract threshold would weaken the state's prevailing wage law. In each of the threshold forecasts, the loss in the incomes of Illinois contractors and workers is less than the expected contraction in Illinois' economy from outright repeal of the state's prevailing wage law. However, with an expected \$574.5 million total income loss, the negative consequences of a \$300,000 threshold equate to about 54 percent of the effect associated with full-scale repeal. Moreover, a \$100,000 contract threshold would amount to approximately 18 percent of the total effect of eliminating the law.

## CONCLUSIONS

Threshold increases do not foster strong construction industries in states with prevailing wage laws. Based on data from across the country and the experience of Illinois' neighbors, contract thresholds tend to reduce the market share of in-state contractors. As business revenues decline for local contractors and lower-paid workers from other states enter the market, local workers suffer from a loss in earnings and health coverage.

Attempts to either introduce a prevailing wage contract threshold or raise the current threshold are based on the unsubstantiated claim that the change would allow governments to cut costs. The preponderance of peer-reviewed economic research, however, finds no evidence that weakening prevailing wage laws reduces construction costs. Prevailing wage rates are reflective of local labor standards and encourage the use of skilled contractors. Previous research also finds that weakening prevailing wage laws creates an influx of out-of-state contractors performing public construction work, a drop in economic output, and losses in earnings that push the lowest-paid construction workers into poverty and result in increased reliance on government programs.

Results from this analysis on threshold increases generally corroborate the findings of previous research. Raising a prevailing wage threshold does not improve competition by increasing the number of bids. Every \$100,000 increase in a state's prevailing wage contract threshold is associated with about a 1.2 percentage-point drop in the market share of in-state contractors, plus or minus half a percentage point. For blue-collar construction workers, a \$100,000 threshold hike reduces annual wage and salary incomes by between 0.4 percent and 5 percent on average. Threshold increases also reduce health insurance coverage by as much as 1.1 percent for construction workers and tend to result in an in-state drop in construction worker employment. As a result, if Illinois established a threshold of \$100,000 for coverage under its prevailing wage law, in-state contractors would annually lose \$139 million in market share to out-of-state firms and local blue-collar construction workers would suffer \$53 million in annual labor income losses. Higher thresholds would impact even more projects and result in greater economic consequences.

Weakening prevailing wage laws by introducing or raising coverage thresholds has negative impacts on local contractors, construction workers, and state economies.

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## APPENDIX

TABLE A: TOTAL VALUE OF CONSTRUCTION WORK AND MARKET SHARE OF IN-STATE CONTRACTORS, 2012

State	Value of Construction Work Completed	Value Completed By In-State Contractors	In-State Contractor Share	Prevailing Wage: Strong/Ave	Prevailing Wage: Any
Alaska	\$6,956,729,000	\$6,385,918,000	91.79%	1	1
California	\$149,171,349,000	\$144,050,890,000	96.57%	1	1
Connecticut	\$15,344,273,000	\$13,999,952,000	91.24%	1	1
Delaware	\$4,177,034,000	\$3,298,043,000	78.96%	1	1
Hawaii	\$8,525,081,000	\$7,871,733,000	92.34%	1	1
Illinois	\$53,801,546,000	\$50,110,656,000	93.14%	1	1
Indiana	\$27,516,249,000	\$24,149,179,000	87.76%	1	1
Kentucky	\$13,699,988,000	\$11,412,437,000	83.30%	1	1
Massachusetts	\$33,593,555,000	\$31,204,815,000	92.89%	1	1
Michigan	\$32,132,596,000	\$30,673,245,000	95.46%	1	1
Minnesota	\$29,988,672,000	\$28,543,859,000	95.18%	1	1
Missouri	\$23,273,733,000	\$20,970,929,000	90.11%	1	1
Montana	\$4,786,179,000	\$4,461,288,000	93.21%	1	1
Nevada	\$12,423,102,000	\$11,260,164,000	90.64%	1	1
New Jersey	\$37,483,524,000	\$34,253,442,000	91.38%	1	1
New Mexico	\$7,595,468,000	\$6,527,853,000	85.94%	1	1
New York	\$89,482,485,000	\$84,065,115,000	93.95%	1	1
Ohio	\$41,253,387,000	\$38,516,548,000	93.37%	1	1
Oregon	\$16,481,032,000	\$15,075,019,000	91.47%	1	1
Pennsylvania	\$51,793,207,000	\$48,366,302,000	93.38%	1	1
Rhode Island	\$4,508,380,000	\$3,816,596,000	84.66%	1	1
Washington	\$32,133,289,000	\$30,310,433,000	94.33%	1	1
West Virginia	\$6,328,204,000	\$4,461,844,000	70.51%	1	1
Wisconsin	\$23,801,606,000	\$22,826,538,000	95.90%	1	1
Wyoming	\$4,865,927,000	\$3,975,482,000	81.70%	1	1
Arkansas	\$9,235,671,000	\$7,941,031,000	85.98%	0	1
Maine	\$4,572,347,000	\$4,234,344,000	92.61%	0	1
Maryland	\$31,284,236,000	\$27,841,911,000	89.00%	0	1
Nebraska	\$8,629,229,000	\$7,807,524,000	90.48%	0	1
Tennessee	\$22,019,825,000	\$19,513,521,000	88.62%	0	1
Texas	\$141,419,418,000	\$134,351,620,000	95.00%	0	1
Vermont	\$3,030,154,000	\$2,681,396,000	88.49%	0	1
Alabama	\$16,705,474,000	\$14,812,852,000	88.67%	0	0
Arizona	\$26,483,270,000	\$24,166,135,000	91.25%	0	0
Colorado	\$27,511,225,000	\$26,234,243,000	95.36%	0	0
Florida	\$65,346,321,000	\$62,325,749,000	95.38%	0	0
Georgia	\$33,130,499,000	\$30,888,180,000	93.23%	0	0
Idaho	\$6,329,245,000	\$5,729,388,000	90.52%	0	0
Iowa	\$15,983,658,000	\$13,686,756,000	85.63%	0	0
Kansas	\$12,961,277,000	\$10,673,422,000	82.35%	0	0
Louisiana	\$26,630,275,000	\$23,446,261,000	88.04%	0	0
Mississippi	\$9,380,514,000	\$7,404,403,000	78.93%	0	0
New Hampshire	\$4,563,722,000	\$3,767,359,000	82.55%	0	0
North Carolina	\$36,854,209,000	\$32,892,609,000	89.25%	0	0
North Dakota	\$7,818,105,000	\$5,920,749,000	75.73%	0	0
Oklahoma	\$16,619,663,000	\$14,652,126,000	88.16%	0	0
South Carolina	\$16,352,678,000	\$13,476,754,000	82.41%	0	0
South Dakota	\$4,242,250,000	\$3,630,192,000	85.57%	0	0
Utah	\$14,903,327,000	\$14,419,335,000	96.75%	0	0
Virginia	\$44,642,395,000	\$37,436,311,000	83.86%	0	0

Source(s): Authors' analysis of Census, 2015.

TABLE B: THE IMPACT OF HIGHER THRESHOLDS ON THE ANNUAL WAGE OF A BLUE-COLLAR CONSTRUCTION WORKER – OLS REGRESSIONS USING THE NATURAL LOGARITHM (LN)

Ln(Wage)	(1) Across: 2012-2013		(2) Within: 2013		(3) D-I-D: 2012-2013	
	Coefficient	(St. Err.)	Coefficient	(St. Err.)	Coefficient	(St. Err.)
(Changed Threshold)*(Year = 2013)					<b>-0.00440***</b>	(0.00016)
In State that Changed Threshold					<b>-0.00801***</b>	(0.00057)
Year = 2013					<b>0.01332***</b>	(0.00116)
Change in 2013 (Every \$100,000)			<b>-0.04896***</b>	(0.00096)		
Threshold in 2012 (Every \$100,000)			<b>0.00536***</b>	(0.00037)		
Threshold (Every \$100,000)	<b>-0.00451***</b>	(0.00024)				
Right-to-work law	<b>-0.10696***</b>	(0.00064)	<b>-0.10119***</b>	(0.00089)	<b>-0.10846***</b>	(0.00065)
Usual hours worked	<b>0.03180***</b>	(0.00003)	<b>0.03191***</b>	(0.00004)	<b>0.03180***</b>	(0.00003)
Age	<b>0.07710***</b>	(0.00014)	<b>0.07833***</b>	(0.00020)	<b>0.07712***</b>	(0.00014)
Age <sup>2</sup>	<b>-0.00077***</b>	(0.00000)	<b>-0.00078***</b>	(0.00000)	<b>-0.00077***</b>	(0.00000)
White	<b>0.17618***</b>	(0.00142)	<b>0.21765***</b>	(0.00206)	<b>0.17616***</b>	(0.00142)
African-American	<b>0.06154***</b>	(0.00188)	<b>0.13944***</b>	(0.00271)	<b>0.05983***</b>	(0.00188)
Latino	<b>0.02027***</b>	(0.00147)	<b>0.06403***</b>	(0.00213)	<b>0.02049***</b>	(0.00147)
Female	<b>-0.21261***</b>	(0.00166)	<b>-0.20560***</b>	(0.00237)	<b>-0.21232***</b>	(0.00166)
Foreign-born	<b>-0.04972***</b>	(0.00083)	<b>-0.05493***</b>	(0.00116)	<b>-0.05001***</b>	(0.00083)
Military veteran	<b>0.01894***</b>	(0.00106)	<b>0.01256***</b>	(0.00154)	<b>0.01891***</b>	(0.00106)
Married	<b>0.20506***</b>	(0.00058)	<b>0.20346***</b>	(0.00082)	<b>0.20532***</b>	(0.00058)
Enrolled in school	<b>-0.34745***</b>	(0.00146)	<b>-0.30611***</b>	(0.00210)	<b>-0.34745***</b>	(0.00146)
Less than high school	<b>-0.20185***</b>	(0.00079)	<b>-0.18822***</b>	(0.00111)	<b>-0.20213***</b>	(0.00079)
Some college	<b>0.09477***</b>	(0.00069)	<b>0.10554***</b>	(0.00099)	<b>0.09529***</b>	(0.00069)
Associates	<b>0.20420***</b>	(0.00115)	<b>0.21983***</b>	(0.00164)	<b>0.20482***</b>	(0.00115)
Bachelors or more	<b>0.15243***</b>	(0.00117)	<b>0.16203***</b>	(0.00166)	<b>0.15255***</b>	(0.00117)
Works for federal government	<b>0.25583***</b>	(0.00260)	<b>0.27453***</b>	(0.00394)	<b>0.25403***</b>	(0.00260)
Yearly trend	<b>0.01329***</b>	(0.00053)				
Urban status dummies	Y		Y		Y	
Constant	<b>6.9771***</b>	(0.00378)	<b>6.9583***</b>	(0.00468)	<b>7.0156***</b>	(0.00331)
R <sup>2</sup>	0.3017		0.2949		0.3017	
Observations	88,112		43,871		88,112	
Weighted	Y		Y		Y	

\*\*\* $P \leq 0.01$ ; \*\* $P \leq 0.05$ ; \* $P \leq 0.10$ . Source: American Community Survey (1-Year Estimates). Ruggles et al., 2015.

TABLE C: THE IMPACT OF HIGHER THRESHOLDS ON THE PROBABILITY THAT A GIVEN CONSTRUCTION WORKER HAS HEALTH INSURANCE COVERAGE – PROBIT REGRESSIONS WITH AVERAGE MARGINAL EFFECTS

Prob(Has Health Insurance)	(1) Across: 2012-2013		(2) Within: 2013		(3) D-I-D: 2012-2013	
	AME, DY/DX	(St. Err.)	AME, DY/DX	(St. Err.)	AME, DY/DX	(St. Err.)
(Changed Threshold)*(Year = 2013)					<b>-0.00726***</b>	(0.00083)
In State that Changed Threshold					0.01216***	(0.00060)
Year = 2013					0.00799***	(0.00028)
Change in 2013 (Every \$100,000)			<b>-0.00217***</b>	(0.00048)		
Threshold in 2012 (Every \$100,000)			-0.00124***	(0.00019)		
Threshold (Every \$100,000)	<b>-0.00183***</b>	(0.00012)				
Right-to-work law	-0.10876***	(0.00030)	-0.09965***	(0.00041)	-0.09811***	(0.00031)
Usual hours worked	0.00306***	(0.00001)	0.00281***	(0.00002)	0.00308***	(0.00001)
Age	-0.01310***	(0.00008)	-0.01214***	(0.00011)	-0.01338***	(0.00008)
Age <sup>2</sup>	0.00020***	(0.00000)	0.00019***	(0.00000)	0.00020***	(0.00000)
White	0.02775***	(0.00070)	0.05139***	(0.00099)	0.02267***	(0.00070)
African-American	0.02989***	(0.00093)	0.04354***	(0.00131)	0.02417***	(0.00093)
Latino	-0.10428***	(0.00071)	-0.09015***	(0.00101)	-0.10918***	(0.00071)
Female	0.05180***	(0.00085)	0.06286***	(0.00121)	0.05262***	(0.00085)
Foreign-born	-0.15740***	(0.00038)	-0.15732***	(0.00524)	-0.15964***	(0.00038)
Military veteran	0.06412***	(0.00060)	0.07558***	(0.00088)	0.06507***	(0.00060)
Married	0.16276***	(0.00027)	0.15462***	(0.00039)	0.16266***	(0.00027)
Enrolled in school	0.11521***	(0.00078)	0.12407***	(0.00112)	0.11330***	(0.00078)
Less than high school	-0.10381***	(0.00036)	-0.10766***	(0.00051)	-0.10167***	(0.00036)
Some college	0.05336***	(0.00035)	0.05014***	(0.00050)	0.05287***	(0.00035)
Associates	0.11184***	(0.00064)	0.11400***	(0.00092)	0.11208***	(0.00064)
Bachelors or more	0.08050***	(0.00060)	0.08357***	(0.00086)	0.07903***	(0.00060)
Works for federal government	0.25801***	(0.00027)	0.25905***	(0.00346)	0.25692***	(0.00022)
Yearly trend	0.00778***	(0.00027)				
Urban status dummies	Y		Y		Y	
Constant	0.65608***	(0.00013)	0.65557***	(0.00019)	0.65618***	(0.00013)
R <sup>2</sup>	0.2066		0.2066		0.2091	
Observations	88,112		43,871		88,112	
Weighted	Y		Y		Y	

\*\*\*P≤[0.01]; \*\*P≤[0.05]; \*P≤[0.10]. Source: American Community Survey (1-Year Estimates). Ruggles et al., 2015. NOTE: To convert the values into a percent change, rather than a percentage-point change, the coefficient of interest (1. Threshold every \$100,000, 2. Change in 2013 for every \$100,000, and 3. The interaction of the threshold change and the year) was divided by the respective constant term – which is the probability that any given blue-collar construction worker has health insurance independent of all other factors.

TABLE D: THE IMPACT OF HIGHER THRESHOLDS ON THE PROBABILITY THAT A GIVEN INDIVIDUAL CONNECTED TO THE CONSTRUCTION LABOR FORCE HAS A JOB – PROBIT REGRESSIONS WITH AVERAGE MARGINAL EFFECTS

Prob(Employed   In Labor Force)	(1) Across: 2012-2013		(2) Within: 2013		(3) D-I-D: 2012-2013	
	AME, DY/DX	(St. Err.)	AME, DY/DX	(St. Err.)	AME, DY/DX	(St. Err.)
(Changed Threshold)*(Year = 2013)					<b>-0.00129**</b>	(0.00058)
In State that Changed Threshold					-0.00667***	(0.00041)
Year = 2013					0.02157***	(0.00022)
Change in 2013 (Every \$100,000)			<b>-0.00575***</b>	(0.00034)		
Threshold in 2012 (Every \$100,000)			0.00548***	(0.00014)		
Threshold (Every \$100,000)	<b>0.00403***</b>	(0.00009)				
Right-to-work law	0.03488***	(0.00025)	0.02126***	(0.00033)	0.03336***	(0.00026)
Age	-0.00055***	(0.00005)	0.00034***	(0.00007)	-0.00055***	(0.00005)
Age <sup>2</sup>	0.00000***	(0.00000)	-0.00000***	(0.00000)	0.00000***	(0.00000)
White	0.03354***	(0.00051)	0.02847***	(0.00071)	0.03506***	(0.00051)
African-American	-0.05110***	(0.00063)	-0.05817***	(0.00087)	-0.04822***	(0.00063)
Latino	0.03954***	(0.00054)	0.04315***	(0.00075)	0.03950***	(0.00054)
Female	-0.02056***	(0.00058)	-0.02773***	(0.00078)	-0.02032***	(0.00058)
Foreign-born	0.05728***	(0.00032)	0.05304***	(0.00044)	0.05714***	(0.00032)
Military veteran	-0.00614***	(0.00039)	0.00300***	(0.00055)	-0.00605***	(0.00039)
Married	0.07371***	(0.00021)	0.06871***	(0.00029)	0.07375***	(0.00021)
Enrolled in school	-0.04068***	(0.00051)	-0.04640***	(0.00069)	-0.04057***	(0.00051)
Less than high school	-0.02849***	(0.00029)	-0.02613***	(0.00040)	-0.02821***	(0.00029)
Some college	0.02356***	(0.00026)	0.02445***	(0.00036)	0.02318***	(0.00026)
Associates	0.04156***	(0.00047)	0.04520***	(0.00065)	0.04103***	(0.00047)
Bachelors or more	0.05914***	(0.00048)	0.05062***	(0.00065)	0.05876***	(0.00048)
Yearly trend	0.02070***	(0.00020)				
Urban status dummies	Y		Y		Y	
Constant	0.86717***	(0.00010)	0.87828***	(0.00014)	0.86717***	(0.00010)
R <sup>2</sup>	0.0387		0.0408		0.0386	
Observations	101,818		50,085		101,818	
Weighted	Y		Y		Y	

\*\*\* $P \leq 0.01$ ; \*\* $P \leq 0.05$ ; \* $P \leq 0.10$ . Source: American Community Survey (1-Year Estimates). Ruggles et al., 2015. NOTE: To convert the values into a percent change, rather than a percentage-point change, the coefficient of interest (1. Threshold every \$100,000, 2. Change in 2013 for every \$100,000, and 3. The interaction of the threshold change and the year) was divided by the respective constant term – which is the probability that any given individual is employed independent of all other factors.