

THE MAJOR VICTIMS OF RIGHT-TO-WORK LAWS CONSTRUCTION WORKERS



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THE MAJOR VICTIMS OF RIGHT-TO-WORK LAWS: CONSTRUCTION WORKERS ILEPI Economic Commentary #18

EXECUTIVE SUMMARY

“Right-to-work” laws have the largest negative impacts on construction workers. By weakening labor unions, right-to-work laws reduce investment in worker training and safety programs in the industry. Consequently, construction workers in right-to-work states are less productive and more prone to fatal workplace injuries – undesirable outcomes from both an economic and a moral perspective. Right-to-work laws also significantly reduce wages for construction workers.

This Economic Commentary finds that “right-to-work” laws:

- reduce the average hourly wage of laborers by 24.3 percent;
- reduce the average hourly wage of carpenters by 23.7 percent;
- reduce the average hourly wage of electricians by 18.6 percent;
- reduce the average hourly wage of plumbers by 23.8 percent;
- reduce the average hourly wage of operating engineers by 23.9 percent; and
- even reduce the average hourly wage of first-line supervisors by 13.1 percent.

The results are consistent with previous research. Given that right-to-work’s impact is less negative for (higher-paid) nonunion supervisors than for blue-collar construction workers, the conclusion is that right-to-work laws reduce worker wages while simultaneously increasing income inequality in construction.

INTRODUCTION AND PREVIOUS RESEARCH

“Right-to-work” laws have the largest negative impacts on workers in the construction industry. While economic research generally finds that right-to-work laws lower worker incomes by 3 percent and reduce the share of workers with health and pension plans ([Gould & Kimball, 2015](#); [Manzo & Bruno, 2014a](#); [Gould & Shierholz, 2011](#); [Stevans, 2009](#)), the economic burdens of right-to-work are not shared by all. Under a right-to-work law, income is redistributed from workers to owners and good middle-class jobs are lost, replaced by low-wage positions without benefits. In producing this additional income inequality, right-to-work increases the number of workers relying on government assistance programs (Manzo & Bruno, 2014a).

The major victims of right-to-work laws have been found to be construction workers. Construction is blue-collar work that uniquely requires a high level of skill. While most construction workers did not attend college, the majority completed a three- to five-year apprenticeship program to increase their human capital. Due to the seasonal and job-to-job nature of construction work, contractors have very little incentive to invest in this training for workers, who may leave for a competitor on the next project. At the same time, workers have very little incentive to pay for this training out-of-pocket, because the risk of long unemployment spells could mean that the investment will not pay off ([Philips, 2015](#)). Across the country, construction trades unions have stepped in to address this market failure and provide stability to the industry. Joint labor-employer apprenticeship programs– which, in northern Illinois, require more hours of training than a typical four-year bachelor’s degree from the University of Illinois ([Manzo, 2015](#))– experience declines in funding under right-to-work policies. The result is a construction industry which transforms from a high-skilled and productive industry that pays good wages to a low-skill, low-wage sector with workers of inferior quality ([Kelsay et al., 2011](#)).

It may not be a surprise, then, that estimates by the University of Illinois and the Illinois Economic Policy Institute find that right-to-work laws reduce construction worker earnings by between 13 percent 22 percent. In addition, right-to-work laws are found to increase income inequality in the construction industry by 2 to 8 percent, corroborating the redistribution story (Manzo & Bruno, 2014b; Manzo et al., 2013). Zullo has estimated that RTW laws “result in the underfunding of union safety training or accident preservation activities,” statistically increasing the construction fatality rate by 0.3 to 0.7 per 100 workers compared to states with high union density and without right-to-work laws (Zullo, 2011). From 2008 to 2010, the fatal injury rate for construction sectors averaged 13.1 deaths per 100,000 workers in right-to-work states but just 9.4 deaths per 100,000 workers in collective-bargaining states (Manzo et al., 2013).

This Illinois Economic Policy Institute (ILEPI) Economic Commentary further investigates the impact of right-to-work legislation on construction workers. What is the effect of right-to-work on the average wage for the largest occupations in construction? Data is obtained from the Bureau of Labor Statistics at the U.S. Department of Labor for all 50 states plus Washington, D.C. The dataset used is the May 2014 “Occupational Employment Statistics” file with all data (BLS, 2015).

DATA ANALYSIS

Data from the Bureau of Labor Statistics indicate that the top five blue-collar occupations in construction are laborers; carpenters; electricians; plumbers, pipefitters, and steamfitters; and operating engineers and other equipment operators (Figure 1). Nationwide, each of these job classifications includes over 300,000 workers and pays an average hourly wage between \$17.19 and \$26.26 per hour (excluding benefits and training). In addition, first-line supervisors of construction workers account for nearly 500,000 jobs in the U.S. economy. Although supervisors are not union members, they are included in this analysis for comparison. Together, these six occupations comprise 3,250,310 jobs, or 64.7 percent of all construction workers in America.

FIGURE 1: TOP CONSTRUCTION OCCUPATIONS BY EMPLOYMENT IN THE UNITED STATES, MAY 2014

May 2014 Occupational Group (Detail)	Total U.S. Employment	Average Hourly Wage
Construction Laborers	852,870	\$17.19
Carpenters	617,060	\$21.92
Electricians	566,930	\$26.21
First-Line Supervisors	496,370	\$31.32
Plumbers, Pipefitters, and Steamfitters	372,570	\$26.26
Operating Engineers and Other Equipment Operators	344,510	\$23.09
All Other Construction Occupations	1,770,290	\$20.41

Source: BLS (2015). Occupational Employment Statistics: May 2014, available at <http://www.bls.gov/oes/tables.htm>.

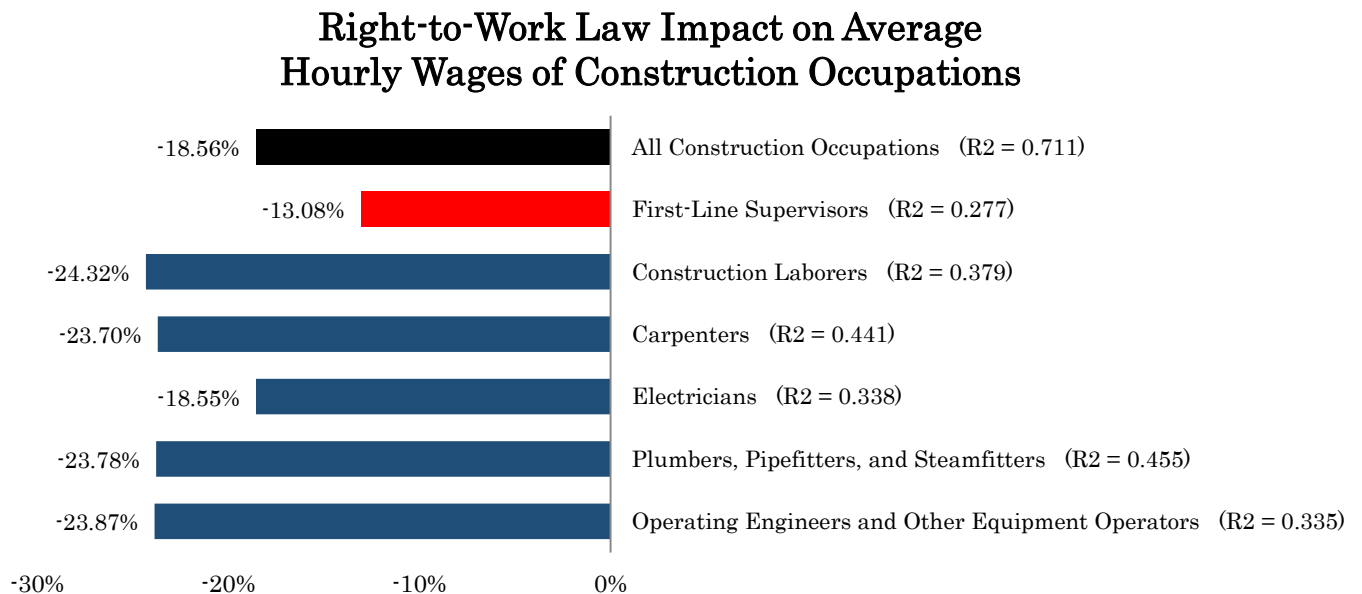
Figure 2 reports results from a statistical tool called a “regression model.” The analysis seeks to explain the independent impact of right-to-work laws on construction worker wages. The dependent variable is the natural log of hourly wages, which essentially converts dollar estimates into percentage terms. Note that, in May 2014, Wisconsin was not a right-to-work state. The analysis is performed on occupational wages at the state-level. Full regression analyses are available in the Data Appendix at the conclusion of this Economic Commentary.

The results align with previous economic research (Figure 2). After accounting for the average base wage in all occupations, right-to-work laws are found to lower hourly wages by 18.6 percent

for construction workers. However, while this is the average effect on all construction workers, blue-collar employees are actually hit hardest. Right-to-work is statistically associated with respective average reductions in hourly wages of 24.3 percent for laborers, 23.7 percent for carpenters, 18.6 percent for electricians, 23.8 percent for plumbers, and 23.9 percent for operating engineers. While right-to-work also has a detrimental impact on first-line supervisors, the estimated 13.1 percent drop in wages is less negative than the prominent effects for blue-collar workers. Once again, right-to-work is found to reduce worker wages while simultaneously increasing income inequality.

In all occupational analyses, right-to-work laws account for at least 27.7 percent of the variation in hourly wages across the country (Figure 2). For a single public policy, right-to-work has significant explanatory power in the construction labor market. The takeaway is that, even if construction workers in right-to-work states were to develop a system of acquiring better skills than their counterparts in collective-bargaining states, the independent impact of right-to-work would still exert tremendous downward pressure on hourly wages.

FIGURE 2: REGRESSION RESULTS OF RIGHT-TO-WORK’S IMPACT ON CONSTRUCTION HOURLY WAGES



Source: Author’s analysis of BLS (2015). Occupational Employment Statistics: May 2014. For full regression analyses, see the Data Appendix at the conclusion of this Economic Commentary.

CONCLUSION

“Right-to-work” laws have the largest negative impacts on construction workers. By weakening unions, right-to-work laws reduce investment in worker training and safety programs in the industry. Consequently, construction workers in right-to-work states are less productive and more prone to fatal workplace. Right-to-work laws also significantly reduce wages for construction workers. The results are consistent with previous research. Given that right-to-work’s impact is less negative for (higher-paid) nonunion supervisors than for blue-collar construction workers, the conclusion is that right-to-work laws reduce worker wages while simultaneously increasing income inequality in construction.

SOURCES

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DATA APPENDIX

TABLE A: REGRESSION OF NATURAL LOG OF AVERAGE OCCUPATIONAL HOURLY WAGE, STATE-LEVEL OBSERVATIONS, MAY 2014

ln(average hourly wage)	Coefficient	(St. Err.)	<i>t</i> value
Right-to-work law	-0.1856***	(0.0071)	-26.09
Occupation dummies	Y		
Constant	2.8384***	(0.07)04	40.29
R ²		0.711	
Observations		2,025	

Three asterisks (***) indicate significance at the 1% level, two asterisks (**) indicates significance at the 5% level, and one asterisk (*) indicates significance at the 10% level. Source: May 2015 Occupational Employment Statistics (OES) from the Bureau of Labor Statistics (BLS) at the U.S. Department of Labor. Observations are average hourly wage estimates for each “detail” construction occupation (cross-industry) in all 50 states plus Washington, D.C. In this regression, dummy variables are used for all 47 available occupations to control for across-occupation wage differences.

TABLE B: REGRESSION OF NATURAL LOG OF AVERAGE FIRST-LINE SUPERVISOR HOURLY WAGE, MAY 2014

ln(average hourly wage)	Coefficient	(St. Err.)	<i>t</i> value
Right-to-work law	-0.1308***	(0.0302)	-4.34
Constant	3.4856***	(0.0207)	168.40
R ²		0.277	
Observations		51	

Three asterisks (***) indicate significance at the 1% level, two asterisks (**) indicates significance at the 5% level, and one asterisk (*) indicates significance at the 10% level. Source: May 2015 Occupational Employment Statistics (OES) from the Bureau of Labor Statistics (BLS) at the U.S. Department of Labor. Observations are average hourly wage estimates for the “detail” construction occupation referenced in the title (cross-industry) in all 50 states plus Washington, D.C.

TABLE C: REGRESSION OF NATURAL LOG OF AVERAGE CARPENTER HOURLY WAGE, MAY 2014

ln(average hourly wage)	Coefficient	(St. Err.)	<i>t</i> value
Right-to-work law	-0.2370***	(0.0381)	-6.22
Constant	3.1304***	(0.0262)	119.69
R ²		0.441	
Observations		51	

Three asterisks (***) indicate significance at the 1% level, two asterisks (**) indicates significance at the 5% level, and one asterisk (*) indicates significance at the 10% level. Source: May 2015 Occupational Employment Statistics (OES) from the Bureau of Labor Statistics (BLS) at the U.S. Department of Labor. Observations are average hourly wage estimates for the “detail” construction occupation referenced in the title (cross-industry) in all 50 states plus Washington, D.C.

TABLE D: REGRESSION OF NATURAL LOG OF AVERAGE CONSTRUCTION LABORER HOURLY WAGE, MAY 2014

ln(average hourly wage)	Coefficient	(St. Err.)	<i>t</i> value
Right-to-work law	-0.2432***	(0.0445)	-5.47
Constant	2.9185***	(0.0305)	95.65
R ²		0.379	
Observations		51	

Three asterisks (***) indicate significance at the 1% level, two asterisks (**) indicates significance at the 5% level, and one asterisk (*) indicates significance at the 10% level. Source: May 2015 Occupational Employment Statistics (OES) from the Bureau of Labor Statistics (BLS) at the U.S. Department of Labor. Observations are average hourly wage estimates for the “detail” construction occupation referenced in the title (cross-industry) in all 50 states plus Washington, D.C.

TABLE E: REGRESSION OF NATURAL LOG OF AVERAGE OPERATING ENGINEER HOURLY WAGE, MAY 2014

ln(average hourly wage)	Coefficient	(St. Err.)	<i>t</i> value
Right-to-work law	-0.2387***	(0.0481)	-4.97
Constant	3.2227***	(0.0330)	97.76
R ²		0.335	
Observations		51	

Three asterisks (***) indicate significance at the 1% level, two asterisks (**) indicates significance at the 5% level, and one asterisk (*) indicates significance at the 10% level. Source: May 2015 Occupational Employment Statistics (OES) from the Bureau of Labor Statistics (BLS) at the U.S. Department of Labor. Observations are average hourly wage estimates for the “detail” construction occupation referenced in the title (cross-industry) in all 50 states plus Washington, D.C.

TABLE F: REGRESSION OF NATURAL LOG OF AVERAGE ELECTRICIAN HOURLY WAGE, MAY 2014

ln(average hourly wage)	Coefficient	(St. Err.)	<i>t</i> value
Right-to-work law	-0.1855***	(0.0371)	-5.00
Constant	3.3196***	(0.0255)	130.36
R ²		0.338	
Observations		51	

Three asterisks (***) indicate significance at the 1% level, two asterisks (**) indicates significance at the 5% level, and one asterisk (*) indicates significance at the 10% level. Source: May 2015 Occupational Employment Statistics (OES) from the Bureau of Labor Statistics (BLS) at the U.S. Department of Labor. Observations are average hourly wage estimates for the “detail” construction occupation referenced in the title (cross-industry) in all 50 states plus Washington, D.C.

TABLE G: REGRESSION OF NATURAL LOG OF AVERAGE PLUMBER, PIPEFITTER, AND STEAMFITTER HOURLY WAGE, MAY 2014

ln(average hourly wage)	Coefficient	(St. Err.)	<i>t</i> value
Right-to-work law	-0.2378***	(0.0372)	-6.39
Constant	3.3304***	(0.0255)	130.55
R ²		0.455	
Observations		51	

Three asterisks (***) indicate significance at the 1% level, two asterisks (**) indicates significance at the 5% level, and one asterisk (*) indicates significance at the 10% level. Source: May 2015 Occupational Employment Statistics (OES) from the Bureau of Labor Statistics (BLS) at the U.S. Department of Labor. Observations are average hourly wage estimates for the “detail” construction occupation referenced in the title (cross-industry) in all 50 states plus Washington, D.C.