

The Impact of Prevailing Wage on Military Veterans in Minnesota: An Economic and Labor Market Analysis



**By Frank Manzo, Robert
Bruno, Kevin Duncan, and
Jill Manzo**

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Report Fact Sheet

This study is a statistical exploration of the economic impact of prevailing wage on veterans in Minnesota's construction industry. The results are based on publicly available information and are reproducible.

Veterans are more likely to work in construction than non-veterans. Currently, veterans are more likely to be employed as blue-collar construction workers than non-veterans: Veterans account for 5.8 percent of the overall workforce nationwide but comprise 6.9 percent of all blue-collar construction workers. In addition, veterans account for 9.6 percent of all blue-collar construction workers in Minnesota compared to just 4.9 percent of Minnesota's overall workforce. Any given construction worker is 4.6 percentage-points more likely to be a military veteran than an individual in the overall economy in Minnesota.

The United States military promotes skilled trade apprenticeships. From 2014 to 2024, construction and extraction occupations are expected to grow faster than the average for all jobs in Minnesota. The U.S. military has responded to these employment projections through the United States Military Apprenticeship Program (USMAP). USMAP now accounts for 21.4 percent of all registered apprentices in the United States. Active military members are over 3.7 times more likely to be enrolled in a registered apprenticeship program than civilian workers. As the construction industry grows and replaces retiring workers, apprentices from the military will become an increasingly important source of skilled construction labor.

A veteran who returns home to become a blue-collar construction worker or to open a construction business benefits substantially from prevailing wage policies. Prevailing wage establishes local construction standards and ensures that blue collar construction workers earn livable wages that reflect the markets where they live. By preventing the government from undercutting privately-negotiated local wages, prevailing wage creates a level playing field for local businesses competing with out-of-area or foreign companies for bids. More than 75 percent of recent, peer-reviewed academic studies have concluded that prevailing wage laws do not increase the total cost of construction. Prevailing wage laws result in higher productivity and taxpayer savings on materials, fuel, and equipment costs.

Prevailing wage standards make construction employment more attractive for veterans and improve economic outcomes for veterans. Minnesota's prevailing wage law:

- Increases the annual incomes of veteran blue-color construction workers by 7.0 to 10.7 percent;
- Improves employer-provided health coverage for veterans in construction by 11.2 to 14.6 percent;
- Reduces veteran poverty by 23.7 to 31.4 percent for those working in construction; and
- Supports veteran-owned construction firms.

If Minnesota were to repeal its prevailing wage law, as many as 2,400 blue-collar veterans would separate from their jobs in construction occupations. The total income of all veterans employed in construction jobs would decline by \$126 million, approximately 500 veterans would lose their employer-provided health plan, and nearly 100 veteran workers would fall into poverty. The largest impacts would be experienced in Hennepin County and Anoka County.

There are significant costs to repealing prevailing wage for Minnesota's veterans. Weakening or repealing prevailing wage standards reduces the attractiveness of employment in a construction occupation for veteran workers. By reducing the number of veterans with employer-provided health insurance, worsening veteran poverty, and shrinking the market share of veteran-owned construction companies, repealing prevailing wage increases taxpayer burdens while reducing the incomes of veteran workers who served their country. Strengthening prevailing wage, on the other hand, promotes a middle-class, self-sufficient lifestyle for veterans choosing to work in construction.

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About the Authors

Frank Manzo IV, MPP is the Policy Director of the Midwest Economic Policy Institute (MEPI). He earned a Master of Public Policy from the University of Chicago Harris School of Public Policy, a Bachelor of Arts in Economics and Political Science from the University of Illinois at Urbana-Champaign, and an Advanced Certificate of Labor Studies from the University of Illinois. He specializes in labor market analysis, economic development, infrastructure investment, the low-wage labor force, and public finance. He can be contacted at fmanzo@midwestepi.org.

Robert Bruno, PhD is a Professor at the University of Illinois at Urbana-Champaign School of Labor and Employment Relations and the Director of the School's Labor Education Program. He also directs the Project for Middle Class Renewal at the University of Illinois at Urbana-Champaign. His research focuses broadly on working-class, middle-class, and union studies issues. He earned his Doctor of Philosophy in Political Theory from New York University and his Master of Arts in Political Science from Bowling Green State University. He can be contacted at bbruno@illinois.edu.

Kevin Duncan, PhD is a Professor of Economics at Colorado State University-Pueblo where he teaches business and regional economics in the Hassan School of Business. He has authored over 70 peer-reviewed academic papers and applied business and regional reports. His research on prevailing wage laws has appeared in leading national and international peer-reviewed academic journals such as *Construction Management and Economics*, *Industrial and Labor Relations Review*, and *Industrial Relations*. He received his PhD in Economics from the University of Utah and his BA in Economics from the University of California, Riverside. He can be contacted at kevin.duncan@csupueblo.edu.

Jill Manzo, is the Midwest Researcher of the Midwest Economic Policy Institute (MEPI). She earned a Bachelor of Arts in Political Science and International Studies from Iowa State University. Her research focuses broadly on transportation infrastructure, economic development, and social justice and inequality. She can be contacted at jmanzo@midwestepi.org.

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Background

Introduction

Over the past five years, more than 1 million veterans have exited the military and entered the civilian workforce. Ensuring that those who served our country are able to secure stable civilian employment is a priority for Minnesota. Military service enhances discipline, work ethic, teamwork, leadership, professionalism, and adaptive skills that can be applied in civilian careers. Construction, a fast-growing industry where employers report widespread skills shortages, is a vital option for veterans.

Registered apprenticeships help bridge the gap between military experience and civilian job requirements. The United States Military Apprenticeship Program (USMAP) offers registered apprenticeship programs for active duty service members. Apprenticeships in construction trades are among the most prominent in the USMAP. By promoting skills development while soldiers are still serving, the military helps to improve the job match between employers and veterans in the construction industry.

Across much of the country, prevailing wage laws impact blue-collar veterans who choose a construction occupation. A prevailing wage law establishes local construction standards, ensuring that workers are paid a local market rate that allows them to support families in the communities where they are building projects. A prevailing wage law enables local contractors to compete for projects on a level playing field with firms from other states or other countries. By preventing the government from undercutting privately-negotiated local wages, prevailing wage laws promote high-road economic development for veterans and other workers alike.

An emerging academic consensus that shows prevailing wage laws have no statistically significant impact on project costs while delivering vital benefits across all sectors of the economy. Ignoring this evidence, some local politicians have considered altering or weakening Minnesota's prevailing wage law.

Despite the fact that construction is a popular sector of employment for veterans when they return home and enter civilian life, no economic research has explicitly investigated the impacts that prevailing wage laws have on the economic and labor market outcomes of veterans. Commissioned by leading veterans advocacy organization VoteVets.org and conducted by researchers at the Midwest Economic Policy Institute (MEPI), the Project for Middle Class Renewal at the University of Illinois at Urbana-Champaign, and Colorado State University–Pueblo, this report is a statistical exploration of the impact of state prevailing wage laws on Minnesota's veterans.

The background section briefly analyzes information on veterans and how construction occupations present employment opportunities for blue-collar veterans. The next section then summarizes the impact of prevailing wage laws on veterans working in construction. This section first characterizes prevailing wage laws, discusses extant economic research on the costs of repealing prevailing wage laws, and describes the data and methodology used in this report. Subsequently, the impact of prevailing wage standards on both veteran blue-collar construction workers and veteran-owned businesses is assessed. An implications section utilizes findings to forecast economic impacts on veterans if Minnesota decided to repeal prevailing wage. The last section concludes the report by recapping key findings.

Veterans in Minnesota, Neighboring States, and the United States

Veterans are more likely to be employed as blue-collar construction workers than non-veterans (Figure 1). In 2014, an estimated 443,938 veterans worked as blue-collar construction employees, an occupation with total employment equal to 6,478,564 workers. Thus, veterans accounted for 6.9 percent of all blue-collar construction workers nationwide. By contrast, veterans comprised 5.8 percent of the overall workforce in the United States. The higher veteran share implies that broad policy changes impacting construction occupations would have disproportionate impacts on military

veterans. As will be discussed, this is particularly true for veteran construction workers in states that have prevailing wage laws.

Veterans make up an *even larger* share of the construction workforce in Minnesota. Approximately 9.6 percent of all blue-collar construction workers in Minnesota are military veterans, higher than any neighboring state and significantly above the 6.7-percent U.S. average. Among bordering states, North Dakota has the 2nd-highest veteran share of construction workers (9.5 percent) while Wisconsin has the lowest (8.3 percent). In Minnesota, any given construction worker is 4.6 percentage-points more likely to be a military veteran than any individual worker in the overall economy (Figure 1).

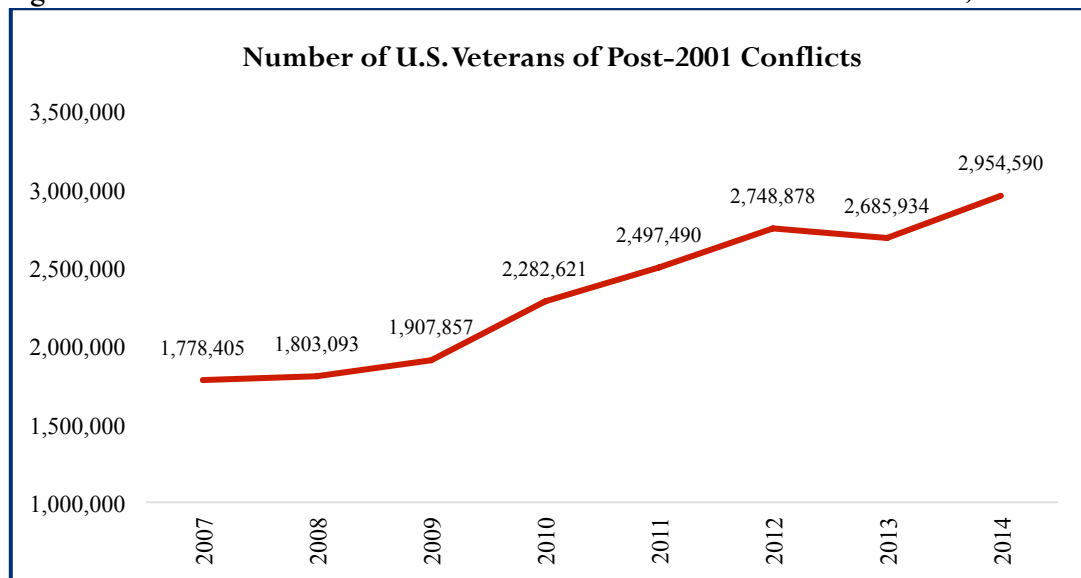
Figure 1: Share of Veterans Employed in the Workforce by Occupation, Minnesota vs. Neighboring States, 2014

State	Veteran Share of All Workers	Veteran Share of Construction Workforce	Veteran Share of Construction Workforce
Minnesota	4.94%	9.58%	+4.64%
North Dakota	6.67%	9.52%	+2.85%
South Dakota	7.34%	8.87%	+1.53%
Iowa	5.46%	8.40%	+2.94%
Wisconsin	5.48%	8.30%	+2.82%
<i>United States</i>	<i>5.78%</i>	<i>6.86%</i>	<i>+1.08%</i>

Source(s): Ruggles et al., 2015 – 2014 American Community Survey (1 Percent Sample). For the United States, the difference between the veteran share of the all workers and the veteran share of the construction workforce is statistically significant.

From 2007 to 2014, nearly 1.2 million veterans of the War in Afghanistan, the War in Iraq, and other post-2001 conflicts left the military and entered civilian life (Figure 2). In 2007, there were 1.8 million veterans of post-2001 conflicts; by 2014, the number of veterans had increased to nearly 3.0 million. Approximately 2.4 million veterans of post-2001 conflicts are under 35 years old.

Figure 2: Total Number of Veterans of Post-2001 Conflicts in the United States, 2007-2014



Source(s): Census, 2015 – 2007-2014 American Community Surveys (1-Year Estimate).

Veterans, the Construction Industry, and Apprenticeship Programs

After they separate or discharge from the military, most veterans typically enter the civilian workforce. Despite valuable programs that provide free or low-cost college education to veterans, not all veterans returning home will attend university. The Institute for Veterans and Military Families at Syracuse University finds that construction is the sixth-largest private-sector industry of employment for veterans ([Bradbard, 2016](#)).

For veterans who are unable to earn a college degree, construction and extraction occupations will be among the fastest growing careers in Minnesota (Figure 3). Construction occupations are already proportionately more likely to employ veterans. From 2014 to 2024, construction and extraction jobs are expected to be the sixth-fastest growing occupation in Minnesota. Over the next decade, construction and extraction occupations are projected to grow by 7.7 percent, adding 8,700 jobs. This growth is sixth to healthcare support occupations (17.6 percent), personal care and service occupations (13.8 percent), healthcare practitioner occupations (12.3 percent), community and social service occupations (9.1 percent), and computer and mathematical occupations (8.3 percent). However, construction and extraction occupations exceeds projected employment growth in all occupations (4.3 percent) by 3.4 percentage-points. Jobs in food preparation and serving or building cleaning and maintenance, other possibilities for veterans without college degrees, are lower paid and only expected to increase by 4.7 to 5.0 percent over the next decade.

Figure 3: Top 10 Fastest Growing Major Occupations in Minnesota, by Growth Rate, 2014-2024

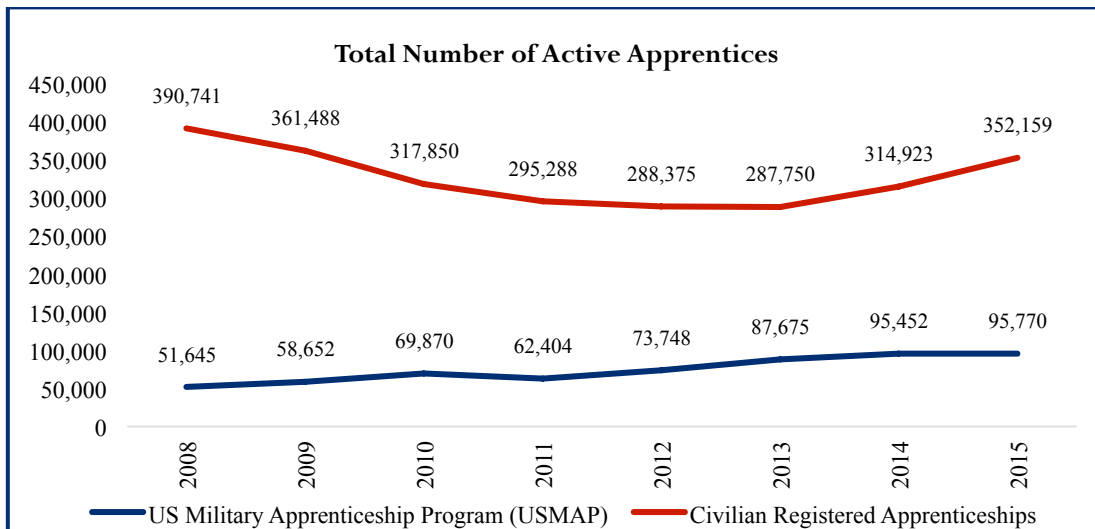
Rank	Occupation	Growth Rate: 2014-2024	New Jobs: 2014-2024
<i>US</i>	<i>Total</i>	4.3%	260,000
1	Healthcare Support	17.6%	16,100
2	Personal Care and Service	13.8%	21,800
3	Healthcare Practitioners	12.3%	20,100
4	Community and Social Service	9.1%	5,500
5	Computer and Mathematical	8.3%	7,800
6	Construction and Extraction	7.7%	8,700
7	Business and Financial Operations	5.6%	9,600
8	Life, Physical, and Social Science	5.2%	1,400
9	Food Preparation and Serving	5.0%	11,800
10	Building Cleaning and Maintenance	4.7%	4,700

Source(s): Minnesota DEED, 2016 – “Employment Outlook”

The U.S. military and active duty soldiers are responding to this trend. In the military, soldiers are assigned an occupational specialty and “service members are expected to master the skill requirements and task competencies in each occupational specialty” ([Lerman et al., 2015](#)). The military has expanded training in nearly 100 occupations to meet the formal standards of registered apprenticeship through the United States Military Apprenticeship Program (USMAP).

The United States Military Apprenticeship Program has gradually accounted for a larger share of registered apprenticeships in the United States (Figure 4). The U.S. Department of Labor Employment and Training Administration (DOLETA) reports that there were 442,386 active apprentices in registered programs across the country in 2008, of whom 51,645 were enlisted soldiers through USMAP (11.7 percent) and 390,741 were in civilian programs. By 2015, the total number of active apprentices marginally grew to 447,929. The number of active USMAP apprentices, however, significantly increased to 95,770, accounting for 21.4 percent of all apprentices ([DOLETA, 2015](#)). According to a study of USMAP, this “growth offset part of the sharp decline in civilian apprentices” ([Lerman et al., 2015](#)).

Figure 4: Number of Active Registered Apprentices in America, by Civilian and USMAP, 2008-2015



Source(s): DOLETA, 2015 – “Data and Statistics.”

Active military members are disproportionately represented in registered apprenticeship programs. While veterans account for 5.8 percent of the nation’s civilian workforce, active military account for 21.4 percent of all apprentices in nationally registered programs. All told, active military members are *at least* 3.7 times more likely to be enrolled in a registered apprenticeship program than civilians— since civilian apprenticeship programs also include veterans, but this breakdown is not reported in the DOLETA data.

Figure 5: USMAP Carpenter Requirements

USMAP Work Process Schedule: Carpenter Apprenticeship	
Description	Hours
Foundations, Walls, Floors, & Layout	1,600
Framing, Roofing, Finishing, & Millwork	4,700
Tools and Woodworking Machinery	1,000
Planning and Estimating	200
Safety	500
Total Hours	8,000

Figure 6: USMAP Operating Engineer Requirements

USMAP Work Process Schedule: Operating Engineer Apprenticeship	
Description	Hours
Technical Administration	500
General Administration	300
Safety	200
Heavy Equipment Operation	4,000
Construction Operations	3,000
Total Hours	8,000

Figure 7: USMAP Electrician Requirements

USMAP Work Process Schedule: Electrician Apprenticeship	
Description	Hours
Proper Use of Tools & Equipment	500
Administration & Handling of Material	4,800
Installation of Motors & Controls	1,000
Specialized Applications	700
Maintenance, Repairs, & Installations	1,000
Total Hours	8,000

Figure 8: USMAP Pipefitter Requirements

USMAP Work Process Schedule: Pipefitter Apprenticeship	
Description	Hours
Use of Tools and On the Job Safety	600
Cutting and Joining	3,700
Installation & Maintenance of Pipes	1,200
Installation & Maintenance of Equipment	2,000
Startup Service	500
Total Hours	8,000

Source(s): USMAP, 2016 – “All USMAP Trades.”

Figures 5 through 8 provide work process schedules for four USMAP registered apprentices in the construction trades—carpenters, electricians, operating engineers, and pipefitters (USMAP, 2016). All four registered apprenticeship programs require 8,000 total hours of on-the-job and classroom training. For example, the minimum standards to

complete the operating engineer apprenticeship program through USMAP require 4,000 hours of heavy equipment operation, 3,000 hours of construction operations, 500 hours of technical administration, 300 hours of general administration, and 200 hours of safety training. In comparison, the minimum requirements to receive a typical bachelor's degree are 5,760 hours ([Manzo, 2014](#)). Enlisted military members who complete registered apprenticeship programs in the trades are therefore receiving high levels of skill that can prepare them for lifelong careers in construction. Prevailing wage helps veterans capitalize on their apprenticeship training by improving their earnings and benefits when they return home to Minnesota.

Registered apprenticeship programs provide workers, veteran and non-veteran alike, significant personal financial benefits. Participants in a registered apprenticeship program “receive an average of \$123,906 more in compensation than nonparticipants over their careers” including health and other benefits ([Reed et al., 2012](#)). By participating in the program, blue-collar service members increase their chances of earning a middle-class lifestyle. Active duty military members can improve their employability and their long-term economic prospects while serving their country, without incurring additional debt.

Prevailing Wage Analysis

What Is Prevailing Wage?

A prevailing wage law specifies wage and benefit standards for construction projects paid for using public funds. The policy requires that workers employed on public construction projects receive compensation that is representative of the hourly earnings normally paid to workers on similar public and private projects in an area. In essence, a prevailing wage acts as a minimum wage for public construction. Contractors can, and often do, pay more than the prevailing wage and benefits package.

The main purpose of Minnesota's prevailing wage law is to protect local construction standards, local labor market institutions, and the local economy in the competitive public bidding process. Large infusions of government spending into an area, along with a contract award process that favors the lowest bidder, may attract contractors from areas where construction worker wage rates are lower and where the industry underinvests in skills development. Competition between local construction firms and these out-of-area contractors may result in the erosion of local compensation standards and institutions designed to foster skilled workers, and through less local spending, a weaker local economy overall.

Prevailing wage laws create a level playing field for all Minnesota contractors by ensuring that public works expenditures maintain local standards. Government agencies are not allowed to grant contracts directly to local contractors, due to valid concerns about patronage and corruption. Prevailing wage is a solution that promotes transparent bid competition without distorting local wage rates. A prevailing wage law incentivizes contractors to compete efficiently over factors other than labor costs— such as worker productivity, materials costs, technological advances and proficiencies, management practices, and profit margins. Because local standards are protected, public projects become more likely to be completed by contractors and construction workers from Minnesota.

Prevailing wage affects all workers the same regardless of race, gender, veteran status, or any other factor. The ascertained rate is the minimum compensation that employers must pay to all workers. However, for blue-collar veterans employed on public construction projects, Minnesota's prevailing wage standards help to promote a middle-class lifestyle and prevent units of government from undercutting their wages.

The Costs of Repealing or Weakening Prevailing Wage Laws

An extensive review of the research finds that weakening prevailing wage generates significant negative economic consequences, particularly for local contractors, workers, and taxpayers. Without an effective prevailing wage law, contractors from low-wage, low-skill regions enter the market, win public bids, and take taxpayer dollars back with them to their own states. Data from the 2012 *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, 2015a](#)).

This loss of income from local construction firms can have major impacts on the regional market. For example, after Indiana weakened its prevailing wage law in January 2013, southern Indiana counties along the Kentucky border lost 885 public works construction jobs and the earnings of public works construction employees fell by \$439 per month. Meanwhile, across the river, lower-paid Kentucky counties added 770 public works construction jobs and the earnings of public works construction employees improved by \$610 per month ([Manzo, 2016](#)). This case study demonstrates how weakening prevailing wage hurts local contractors and workers.

Weakening prevailing wage also has serious impacts on state economies. Recent peer-reviewed analysis finds that weakening prevailing wage in Wisconsin will 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, 2015a](#)). Similarly, weakening or repealing 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 concludes 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, 319,000 would lose health insurance coverage, and the corresponding loss of income tax revenue and increased reliance on public assistance would cost U.S. taxpayers at least \$4 billion per year ([Manzo et al., 2016a](#)).

Efforts to repeal or weaken prevailing wage laws across the country are predicated on the unsubstantiated claim that weakening prevailing wage will cut costs. Opponents of prevailing wage typically cite studies using an outdated and unscientific “wage differential” method ([Rosaen, 2013](#); [Kersey, 2007](#)). This approach focuses exclusively on wage differences. The studies fail to account for adjustments in labor productivity, material and fuel costs, contractor profit, and numerous other industry efficiencies that are catalyzed by changes in wages ([Philips, 2013](#)).

However, more than 75 percent of peer-reviewed research conducted in the last 15 years has found that weakening or repealing prevailing wage does not reduce 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. An independent report from the Wisconsin Legislative Fiscal Bureau ([Horton, 2015](#)) 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.”

Economists and researchers provide at least three reasons why weakening or repealing 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 material, fuel, rental, and equipment costs rise. 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, 2015a](#)).

Data Sources and Methodology

This report takes advantage of a policy phenomenon in the American public construction industry. Differences in the strength of state-level prevailing wage laws, as discussed in the previous section, provide a “national laboratory” to conduct research. Some states, such as Minnesota, have “strong” prevailing wage laws. Some states, such as Iowa, do not have prevailing wage standards for public works projects at all. Still other states fall somewhere in between the spectrum. These differences allow researchers to draw distinctions and to analyze the economic impacts that those distinctions have on blue-collar veterans working in the construction industry.

This report utilizes data from three sources. First, information on majority veteran-owned businesses was obtained from the 2012 *Survey of Business Owners* ([Census, 2015](#)). The *Survey of Business Owners* is a comprehensive, stratified sample of businesses and business owners by gender, ethnicity, race, and veteran status that is conducted by the U.S. Census Bureau every five years. The report also uses the 2012 *Economic Census of Construction*, which is a national survey of construction contractors conducted every five years by the U.S. Census Bureau and the Bureau of Economic Analysis at the U.S. Department of Commerce ([Census, 2015](#)).

However, the predominant dataset utilized in this report is the 2014 *American Community Survey* to analyze impacts on individual veteran workers. The *American Community Survey* information is an annual poll of approximately 1 percent of the American population by the U.S. Census Bureau. In 2014, the dataset comprised 3,132,610 observations of U.S. residents, including 218,668 responses from military veterans. Analytic weights are provided by the U.S. Census Bureau to match results to the actual American population. The Minnesota Population Center at the University of Minnesota generously makes the data publicly available in easily accessible extractions via the Integrated Public Use Microdata Series (IPUMS-USA) ([Ruggles et al., 2015](#)). In this report, a blue-collar construction occupation *excludes* first-line supervisors and those employed in extraction jobs such as mining and energy production. Typical blue-collar construction occupations include carpenters, electricians, operating engineers, laborers, plumbers, and pipefitters.

Data from the American Community Survey are used in “regression analyses,” which separate out the unique impact of strong or average prevailing wage laws from the influence of other factors. The model accounts for construction workers employed directly by the federal government, who earn a Davis-Bacon wage instead of a state-level prevailing wage. The constant term helps to determine percent changes, rather than percentage-point changes, in probabilistic analyses.

Prevailing Wage and Veteran Blue-Collar Construction Workers

Veterans are more likely to be employed as blue-collar construction workers in states with a strong or average prevailing wage law, despite fewer veterans residing in those states overall. A foundational national study by Manzo, Bruno, and Duncan used a “difference-in-differences” approach to find that strong or average prevailing wage laws statistically increase the veteran share of the blue-collar construction workforce by as much as 1.9 percentage points ([Manzo et al., 2016b](#)). Whereas veterans in states without prevailing wage laws tend to seek employment in construction at the same rate as other occupations, strong or average prevailing wage laws *encourage* more veterans to work in construction.

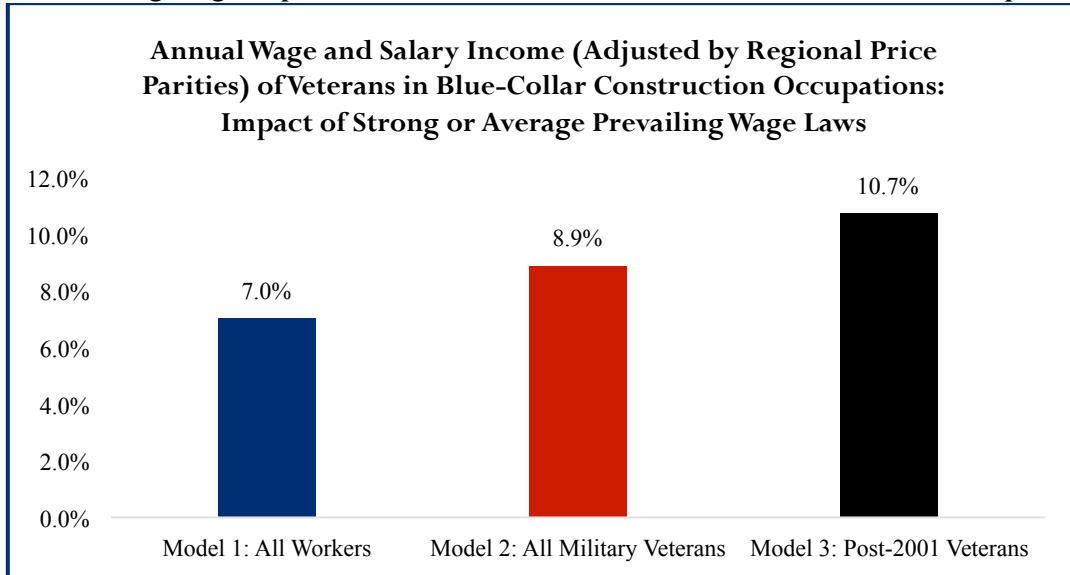
This effect *may* be even larger in Minnesota, where any given construction worker is 4.6 percentage-points more likely to be a military veteran than any individual worker in the overall state labor market (Figure 1). However, to provide conservative estimates, this analysis applies the 1.9 percentage-point estimate from the national study. In any case, the data indicates that, as career opportunities for veterans, construction occupations are more attractive when a state has a prevailing wage law.

The primary reason that a blue-collar construction occupation is more attractive with prevailing wage is that annual earnings are higher. Intuitively, prevailing wage converts what would otherwise tend to be low-wage, low-benefit jobs into more robust middle-class careers. Three statistical approaches are used to estimate the causal effect of strong or average prevailing wage laws on the average annual wage and salary income of blue-collar construction workers, after adjusting for the cost-of-living in each state through “regional price parities” reported by the Bureau of Economic Analysis at the U.S. Department of Commerce ([BEA, 2015](#)). The results are summarized in Figure 9 but reported in full in Appendix Table A.

On average, strong or average prevailing wage laws increase the annual wage and salary income of veteran blue-collar construction workers by between 7.0 percent and 10.7 percent (Figure 9). The first model, which returned the most

conservative estimate, is the full workforce model and controls for what similar non-veteran workers earn. The estimated impact of a strong or average prevailing wage law in the full workforce model is a 7.0 percent increase in annual wage and salary income on average. The second analysis, which limits the sample to all military veterans, reports that strong or average prevailing wage laws improve annual earnings by 8.9 percent for military veterans in blue-collar construction occupations. Finally, the third approach investigated only post-2001 veterans of the War in Afghanistan, the Iraq War, and similar conflicts who now have civilian employment. On average, adequate prevailing wage laws boost the annual incomes of recent war veterans in blue-collar construction jobs by 10.7 percent.

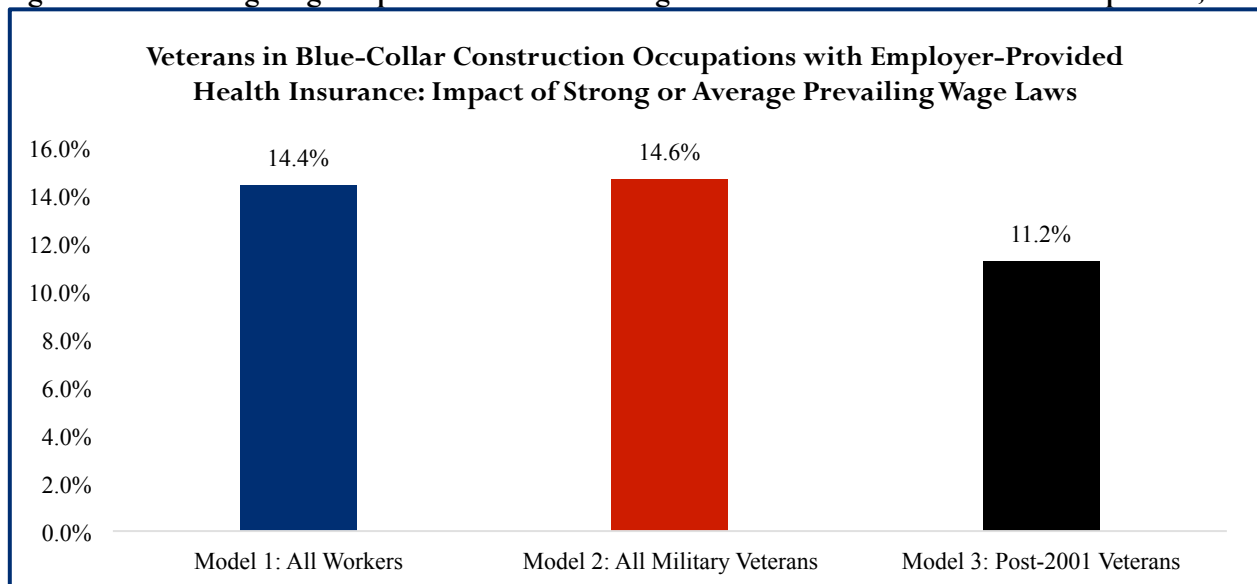
Figure 9: Prevailing Wage Impact on Annual Incomes of Veterans in Construction Occupations, 2014



Source(s): Authors' analysis of Ruggles et al., 2015 – 2014 American Community Survey (1 Percent Sample).

Prevailing wage also makes construction an attractive occupation for blue-collar veterans in Minnesota because the standards increase health care coverage. While many people assume that veterans automatically receive benefits from the Veterans Health Administration, fewer than half of all veterans are actually enrolled in the program because it is reserved primarily for certain groups. Veterans with disabilities, former prisoners of war (POWs), Purple Heart and Medal of Honor awardees, and low-income veterans are given priority ([Chokshi & Sommers, 2014](#)).

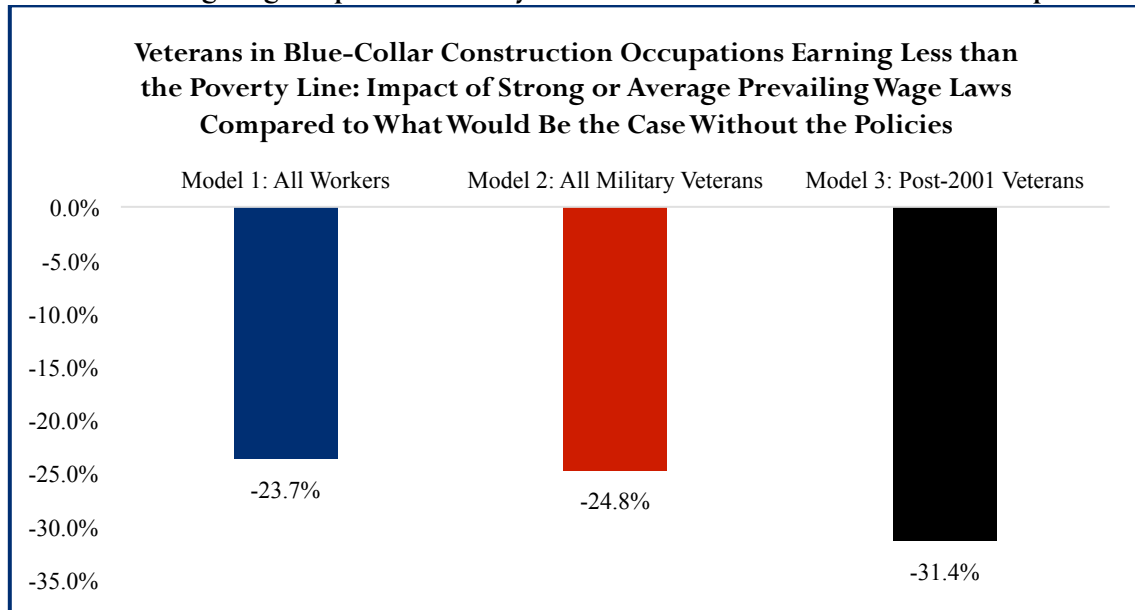
Figure 10: Prevailing Wage Impact on Health Coverage of Veterans in Construction Occupations, 2014



Source(s): Authors' analysis of Ruggles et al., 2015 – 2014 American Community Survey (1 Percent Sample).

Figure 10 presents the impact of prevailing wage on the number of veterans with employer-provided health insurance coverage, based on 2014 data. After controlling for other observable characteristics, an effective prevailing wage law increases the total number of veteran blue-collar construction workers with employer-provided health insurance by between 11.2 percent and 14.6 percent. The effect of prevailing wage on the employer-provided health coverage of post-2001 veterans may be smaller because those veterans are younger and more likely to opt out of health coverage.

Figure 11: Prevailing Wage Impact on Poverty Status of Veterans in Construction Occupations, 2014



Source(s): Authors' analysis of Ruggles et al., 2015 – 2014 American Community Survey (1 Percent Sample).

As prevailing wage increases the earnings and health insurance coverage of veterans working in Minnesota's construction trades, the policy simultaneously reduces veteran poverty in the state (Figure 11). On average, prevailing wage is associated with a 23.7 percent to 31.4 percent reduction in veteran poverty for veterans working in construction. An analysis of the entire U.S. labor market finds that a veteran worker has an 8.3 percent chance of earning an income that is below the official poverty line, independent of his or her occupation, industry, age, race, gender, and other items. Prevailing wage reduces the likelihood that a veteran will be impoverished by at least 2.0 percentage points, which translates into a 23.7 percent drop in working poverty for veteran blue-collar construction workers at minimum. Prevailing wage safeguards veterans working in construction from falling below the poverty line when they return home to work in the civilian labor market.

Prevailing Wage and Veteran-Owned Construction Firms

An evaluation of economic data finds that construction companies are more likely to be owned by veterans than non-construction businesses in Minnesota. Information from the 2012 *Survey of Business Owners* reveals that 10.9 percent of all construction firms with paid employees in Minnesota are owned by veterans. By contrast, veteran business owners only account for 8.0 percent of non-construction companies throughout the state, a 2.9 percentage-point difference (Figure 12).

Previous analysis by Manzo, Bruno, and Duncan finds that the state's prevailing wage law is responsible for up to 0.5 percentage points of this difference ([Manzo et al., 2016b](#)). This is because prevailing wage reinforces local construction standards and improve the likelihood that local veteran contractors will win bids on public projects over out-of-area or

foreign companies that may employ lower-skilled workers. In any case, the higher veteran share in construction means that prevailing wage changes would have disproportionate impacts on veteran owners.

Figure 12: Veteran-Owned Share of Businesses in Minnesota, Construction vs. Non-Construction, 2012

Veteran-Owned Share of Businesses	Difference
Construction Firms with Paid Employees	10.93%
Non-Construction Firms with Paid Employees	8.02%
Difference in Veteran Share of Businesses	+2.91%

Source(s): Authors' analysis of Census, 2015 – 2012 Survey of Business Owners.

Implications

Economic Impacts of Repealing Prevailing Wage on Veterans

The economic outcomes of Minnesota’s veterans would be significantly altered if the state decided to weaken or outright repeal its prevailing wage standards. Prevailing wage improves the attractiveness of a career in a construction trade for veterans because it increases earnings, expands employer-provided health coverage, and reduces the working poverty rate for blue-collar workers without bachelor’s degrees. By protecting market share and bolstering local apprenticeship programs to prevent skills shortages, prevailing wages also support local veteran-owned construction companies. If Minnesota suddenly eliminated prevailing wage, these economic benefits would be jettisoned as well.

Minnesota has a “strong” prevailing wage law with expansive coverage among trades and a contract coverage threshold of \$25,000 when more than one trade is involved. As a result, veterans comprise approximately 9.6 percent of the blue-collar construction workforce in the state, despite only accounting for 4.9 percent of overall employment in the state (see Figure 1). Construction provides a good middle-class wage to blue-collar veterans in Minnesota. The average veteran in a blue-collar construction occupation in Minnesota (with non-zero earnings) takes home \$49,300 in annual wages.

Figure 13: Forecast of the Economic Impacts of Repealing Prevailing Wage on Minnesota’s Veterans

Economic Impact on Minnesota Veterans	Current Value	Projected Value	Total Change
Employed as Blue-Collar Construction Worker	10,570	8,201	-2,369
Total Wage and Salary Income	\$454.1 million	\$327.6 million	\$126.4 million
Total without Health Insurance Coverage	3,155	3,609	+454
Total Earning Less than the Official Poverty Line	116	210	+94

Source(s): Authors’ analysis of Ruggles et al., 2015 – 2014 American Community Survey (1 Percent Sample).

Figure 14: Estimated Number of Veterans Employed in Construction Occupations, Minnesota Counties, 2014

Minnesota County	Estimated Veterans Employed in Blue-Collar Construction Occupations
Hennepin	1,200
Anoka	1,000
Ramsey	500
Washington	500
Dakota	500
Wright	300
Olmsted	200
St. Louis	200
Stearns	200
All Other Counties	6,000

Source(s): Ruggles et al., 20145– 2014 American Community Survey (5 Year Estimates)

Some counties would have more affected veterans than others. Figure 14 reports the estimated number of veterans employed in blue-collar construction jobs in 9 large Minnesota counties, based upon five-year estimates from the 2014 *American Community Survey*. Hennepin County and Anoka County are both home to over 1,000 Minnesota veterans working in construction (approximately 21.0 percent of all veterans in construction occupations in the state). Ramsey County, Washington County, and Dakota County all have about 500 military veterans working as blue-collar construction workers. At least 200 veteran construction workers also live in Wright County, Olmsted County, St. Louis County, and Stearns County.

These economic impacts would have broader effects that are addressed in other economic research ([Manzo et al., 2016a](#); [Duncan & Lantsberg, 2015a](#); [Kelsay, 2015](#); [Philips, 2014](#)). For veterans specifically, repeal of prevailing wage laws would reduce earnings and shrink consumer demand, resulting in fewer dollars spent in local economies at grocery stores or on health services or on buying a new home. As the productivity of veterans working in construction falls, the number of veterans that rely on government assistance programs increases. The net result is millions of dollars in new taxpayer costs, and— due to lower income tax and sales tax revenues— fewer public dollars to pay for them.

These predictions generally align with a previous forecast on the impact of repealing prevailing wage in Minnesota. In the 2006 study, *An Evaluation of Prevailing Wage in Minnesota: Implementation, Comparability and Outcomes*, researchers from Brevard College, the University of Illinois, the University of Minnesota, and Indiana University— South Bend estimated that a statewide repeal of Minnesota’s prevailing wage law would shrink result in a net loss in construction worker income of up to \$900.7 million per year and would reduce state tax revenues by between \$38 million and \$178 million annually. Repeal would also cause a drop in apprenticeship training, resulting in an increase in injury rates and an increase in project cost overruns ([Dickson Jordan et al., 2006](#)). As this report has shown, veterans are one group that would be disproportionately affected by these changes, accounting for as much as \$126 million of the net loss in economic output.

Conclusions

This study is a statistical exploration of the economic impact of prevailing wage on veterans in Minnesota’s construction industry. Over the past five years, more than 1 million veterans have exited the military and entered the civilian workforce nationwide. Additionally, hundreds of thousands of today’s active duty military members will become jobseekers over the next decade.

For veterans who are unable to earn a college degree, construction and extraction occupations will be one of the fastest growing careers in Minnesota. The U.S. military has responded through the United States Military Apprenticeship Program (USMAP), with apprenticeships in construction that typically require 8,000 total hours of on-the-job and classroom training. USMAP now accounts for 21.4 percent of all registered apprentices in the United States. Active military members are over 3.7 times more likely to be enrolled in a registered apprenticeship program than civilian workers. By 2022, construction and extraction occupations are projected to grow by 7.7 percent, adding 8,700 jobs.

Veterans in Minnesota disproportionately join the construction industry at a higher rate than other industries. In fact, veterans account for 6.9 percent of blue-collar construction workers nationwide, while veterans account for only 5.8 percent of the overall workforce. Veterans account for 9.6 percent of all blue-collar construction workers in Minnesota, and only 4.9 percent of Minnesota’s overall workforce. Any given construction worker is 4.6 percentage-points more likely to be a military veteran than any individual in the overall economy in Minnesota.

Veterans who return home to become blue-collar construction workers benefit substantially from prevailing wage. A prevailing wage law protects local construction standards and ensures that veterans earn living wages that allow them to support families. By creating a level playing field in public construction and preventing the government from undercutting privately-negotiated local wages, prevailing wage laws support local veteran contractors and raise their chances of being awarded a bid over an out-of-area or foreign company. In addition, the preponderance of the evidence finds that prevailing wage laws have no statistical impact on the total cost of construction.

Prevailing wage standards make construction employment more attractive for veterans and improve economic outcomes for veterans. Minnesota's prevailing wage law:

- Increases the annual incomes of veteran blue-color construction workers by 7.0 to 10.7 percent;
- Improves employer-provided health coverage for veterans in construction by 11.2 to 14.6 percent;
- Reduces veteran poverty by 23.7 to 31.4 percent for those working in construction; and
- Supports veteran-owned construction firms.

If Minnesota were to repeal its prevailing wage law, as many as 2,400 blue-collar veterans would separate from their jobs in construction. The total wage and salary income of all veterans employed in construction jobs would decline by \$126 million, approximately 500 veterans would lose their employer-provided health plan, and nearly 100 veteran workers would fall into poverty. The largest impacts would be experienced in Hennepin County and Anoka County, although there are over 200 veterans employed in construction occupations in at least seven other counties.

There are significant costs to repealing prevailing wage for Minnesota's veterans. Construction will increasingly offer blue-collar veterans the best opportunity to earn a middle-class lifestyle as the manufacturing industry continues to experience long-term decline. Weakening or repealing prevailing wage standards reduces the attractiveness of employment in construction occupations for veteran workers. By decreasing veteran worker incomes, reducing the number of veterans with employer-provided health insurance, worsening veteran poverty, hindering apprenticeship training, and shrinking the market share of veteran-owned construction companies, repealing state prevailing wage laws increases taxpayer costs on the backs of veteran workers who served their country. Strong prevailing wage laws, on the other hand, promote a middle-class economy. Introducing or strengthening a prevailing wage law would disproportionately benefit veterans who are populating the construction trades at higher rates than non-veterans, and who are increasingly utilizing apprenticeship programs to transition into civilian careers in this fast-growing field.

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Appendix

TABLE A: THE IMPACT OF STRONG OR AVERAGE STATE PREVAILING WAGE LAWS ON THE ANNUAL WAGE (ADJUSTED FOR REGIONAL PRICE PARITIES) OF A VETERAN BLUE-COLLAR CONSTRUCTION WORKER

Ln(Wage)	(1) Full Workforce		(2) All Veterans		(3) Post-2001 Veterans	
	Coefficient	(St. Err.)	Coefficient	(St. Err.)	Coefficient	(St. Err.)
Strong or Average PWL	-0.00682***	(0.00014)	-0.01191***	(0.00057)	-0.01800***	(0.00103)
Veteran*(Strong or Average PWL)	-0.00363***	(0.00056)				
Construction*(Strong or Average PWL)	0.08071***	(0.00067)	0.10077***	(0.00265)	0.12545***	(0.00493)
Veteran	0.03887***	(0.00044)				
Veteran*Construction	-0.03554***	(0.00134)				
Construction Occupation	-0.00485***	(0.00051)	-0.06344***	(0.00196)	-0.04428***	(0.00356)
Post-2001 Veteran	-0.13760***	(0.00052)	-0.03944***	(0.00088)		
Federal Government	0.23413***	(0.00040)	0.24669***	(0.00087)	0.19637***	(0.01913)
Less than a High School Degree	-0.27518***	(0.00027)	-0.19685***	(0.00202)	-0.23819***	(0.00518)
Some College or Associate's	0.18218***	(0.00017)	0.12009***	(0.00069)	0.07683***	(0.00169)
Bachelor's Degree	0.47408***	(0.00019)	0.38053***	(0.00083)	0.30242***	(0.00182)
Advanced Degree	0.67184***	(0.00023)	0.61066***	(0.00097)	0.65615***	(0.00181)
Lives in a Metro Area	0.11315***	(0.00017)	0.13212***	(0.00066)	0.11704***	(0.00121)
Head of Household	0.15049***	(0.00014)	0.13501***	(0.00059)	0.18582***	(0.00104)
Female	-0.17115***	(0.00014)	-0.15452***	(0.00091)	-0.13877***	(0.00140)
Married	0.17079***	(0.00015)	0.20589***	(0.00061)	0.19481***	(0.00107)
Latino/a	-0.05059***	(0.00029)	-0.05924***	(0.00164)	0.01650***	(0.00243)
White, Non-Latino	0.09562***	(0.00025)	0.09908***	(0.00135)	0.10109***	(0.00205)
African-American, Non-Latino	-0.04351***	(0.00031)	-0.05924***	(0.00152)	-0.01518***	(0.00234)
Usual Weekly Hours Worked	0.03987***	(0.00000)	0.03566***	(0.00002)	0.02848***	(0.00004)
In School	-0.24357***	(0.00024)	-0.15515***	(0.00115)	-0.17259***	(0.00137)
Age	0.07919***	(0.00003)	0.07511***	(0.00014)	0.10707***	(0.00037)
Age ²	-0.00078***	(0.00000)	-0.00074***	(0.00000)	-0.00110***	(0.00000)
Constant	6.5050***	(0.00069)	6.7941***	(0.00409)	5.8720***	(0.02042)
R ²	0.5196		0.3691		0.3994	
Observations	139,981,107		8,068,043		2,232,812	

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

TABLE B: THE IMPACT OF STRONG OR AVERAGE STATE PREVAILING WAGE LAWS ON THE PROBABILITY THAT A GIVEN VETERAN CONSTRUCTION WORKER HAS EMPLOYER-PROVIDED HEALTH COVERAGE – PROBITS

Prob(Employer Health Insurance)	(1) Full Workforce		(2) All Veterans		(3) Post-2001 Veterans	
	AME, DY/DX	(St. Err.)	AME, DY/DX	(St. Err.)	AME, DY/DX	(St. Err.)
Strong or Average PWL	0.03194***	(0.00007)	0.05262***	(0.00031)	0.04285***	(0.00065)
Veteran*(Strong or Average PWL)	0.01305***	(0.00029)				
Construction*(Strong or Average PWL)	0.05424***	(0.00032)	0.04597***	(0.00133)	0.02534***	(0.00299)
Veteran	-0.00211***	(0.00023)				
Veteran*Construction	0.09365***	(0.00065)				
Construction Occupation	-0.11087***	(0.00025)	-0.05152***	(0.00097)	-0.03991***	(0.00213)
Post-2001 Veteran	-0.23653***	(0.00027)	-0.12882***	(0.00047)		
Federal Government	0.28007***	(0.00084)	0.13284***	(0.00351)	0.23399***	(0.01311)
Less than a High School Degree	-0.27171***	(0.00017)	-0.10781***	(0.00108)	-0.06562***	(0.00312)
High School Degree	-0.14467***	(0.00013)	-0.03526***	(0.00052)	-0.04126***	(0.00114)
Some College or Associate's	-0.09627***	(0.00013)	-0.01900***	(0.00052)	-0.01904***	(0.00107)
Bachelor's Degree	-0.02618***	(0.00014)	0.01309***	(0.00057)	0.03623***	(0.00116)
Lives in a Metro Area	0.02618***	(0.00009)	0.02946***	(0.00035)	0.02460***	(0.00076)
Head of Household	-0.00309***	(0.00007)	0.02157***	(0.00032)	0.03195***	(0.00065)
Female	0.00413***	(0.00007)	-0.00672***	(0.00049)	0.00725***	(0.00088)
Married	0.10934***	(0.00008)	0.09717***	(0.00032)	0.02607***	(0.00067)
Latino/a	-0.05566***	(0.00015)	0.00073	(0.00088)	0.00977***	(0.00152)
White, Non-Latino	0.08078***	(0.00013)	0.01863***	(0.00073)	0.02662***	(0.00128)
African-American, Non-Latino	0.01938***	(0.00016)	-0.00804***	(0.00082)	-0.02642***	(0.00146)
Usual Weekly Hours Worked	0.00432***	(0.00000)	0.00385***	(0.00001)	0.00377***	(0.00003)
In School	0.06132***	(0.00013)	-0.03348***	(0.00061)	-0.04547***	(0.00086)
Age	0.01014***	(0.00002)	0.01686***	(0.00007)	0.03113***	(0.00022)
Age ²	-0.00011***	(0.00000)	-0.00020***	(0.00000)	-0.00037***	(0.00000)
Constant	0.68933***	(0.00003)	0.67314***	(0.00015)	0.60608***	(0.00031)
R ²	0.1463		0.1043		0.0567	
Observations	1,417,043		88,554		19,964	
	(weighted)		(weighted)		(weighted)	

*** $P \leq 0.01$; ** $P \leq 0.05$; * $P \leq 0.10$. Source: American Community Survey (1 Percent Sample). Ruggles et al., 2015. NOTE: To convert the values into a percent change, rather than a percentage-point change, the bolded coefficients of interest are summed together and then divided by the respective constant term – which is the probability that any given work has employer-provided health insurance independent of all other factors.

TABLE C: THE IMPACT OF STRONG OR AVERAGE STATE PREVAILING WAGE LAWS ON THE PROBABILITY THAT A GIVEN VETERAN CONSTRUCTION WORKER IS BELOW THE OFFICIAL POVERTY LINE – PROBITS

Prob(Below Poverty)	(1) Full Workforce		(2) All Veterans		(3) Post-2001 Veterans	
	AME, DY/DX	(St. Err.)	AME, DY/DX	(St. Err.)	AME, DY/DX	(St. Err.)
Strong or Average PWL	-0.07089***	(0.00004)	-0.00464***	(0.00012)	-0.00473***	(0.00020)
Veteran*(Strong or Average PWL)	0.00274***	(0.00024)				
Construction*(Strong or Average PWL)	-0.01529***	(0.00018)	-0.00337***	(0.00043)	-0.01148***	(0.00113)
Veteran	-0.06522***	(0.00020)				
Veteran*Construction	0.01737***	(0.00045)				
Construction Occupation	0.01907***	(0.00013)	0.00891***	(0.00031)	0.01869***	(0.00078)
Post-2001 Veteran	0.09149***	(0.00018)	-0.00579***	(0.00019)		
Federal Government	-0.03557***	(0.00044)	-0.05488***	(0.00103)	-0.06714***	(0.00359)
Less than a High School Degree	0.11815***	(0.00012)	0.04860***	(0.00041)	0.08056***	(0.00122)
High School Degree	0.08051***	(0.00011)	0.02950***	(0.00028)	0.05067***	(0.00075)
Some College or Associate's	0.06331***	(0.00011)	0.02119***	(0.00028)	0.03636***	(0.00073)
Bachelor's Degree	0.02129***	(0.00011)	0.01128***	(0.00031)	0.02511***	(0.00079)
Lives in a Metro Area	-0.01805***	(0.00005)	-0.00836***	(0.00013)	-0.01727***	(0.00037)
Head of Household	0.03974***	(0.00005)	0.00190***	(0.00012)	0.00515***	(0.00029)
Female	0.00663***	(0.00004)	-0.00021	(0.00017)	0.00361***	(0.00037)
Married	-0.05535***	(0.00009)	-0.02916***	(0.00012)	-0.02368***	(0.00030)
Latino/a	0.00983***	(0.00009)	0.00225***	(0.00031)	0.00151**	(0.00066)
White, Non-Latino	-0.02649***	(0.00008)	-0.00724***	(0.00026)	-0.00720***	(0.00057)
African-American, Non-Latino	0.00844***	(0.00009)	0.00725***	(0.00029)	0.01182***	(0.00064)
Usual Weekly Hours Worked	-0.00339***	(0.00000)	-0.00168***	(0.00000)	-0.00227***	(0.00001)
In School	0.01985***	(0.00007)	0.00397***	(0.00020)	0.00367***	(0.00037)
Age	0.00081***	(0.00001)	-0.00098***	(0.00003)	-0.00464***	(0.00011)
Age ²	-0.00004***	(0.00000)	-0.00000***	(0.00000)	0.00003***	(0.00000)
Constant	0.08282***	(0.00002)	0.03235***	(0.00006)	0.05160***	(0.00014)
R ²	0.1959		0.1681		0.1456	
Observations	1,417,043		88,554		19,964	
	(weighted)		(weighted)		(weighted)	

*** $P \leq 0.01$; ** $P \leq 0.05$; * $P \leq 0.10$. Source: American Community Survey (1 Percent Sample). Ruggles et al., 2015. NOTE: To convert the values into a percent change, rather than a percentage-point change, the bolded coefficients of interest are summed together and then divided by the respective constant term – which is the probability that any given worker earns less than the poverty line independent of all other factors.