
Kentucky's Prevailing Wage Law

Its History, Purpose and Effect

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About the Author

Peter Philips grew up in Compton and Pomona, California. He received his B.A. from Pomona College in 1970 where received the Leland Backstrand Graduating Senior Award in Economics. Philips received his MA. (1976) and his Ph.D. (1980) from Stanford University. Philips is a Professor of Economics at the University of Utah. He is co-editor of *Three Worlds of Labor Economics* (M.E. Sharpe, 1986) and co-author of *Portable Pensions for Casual Labor Markets* (Quorum Books, 1995). Philips has published widely on the canning and construction industries in journals such as *Industrial and Labor Relations Review*, *Industrial Relations*, *Business History*, the *Journal of Economic History*, *The Journal of Economic Literature* and the *Cambridge Journal of Economics*. Philips has been a consultant for the U.S. Labor Department analyzing the supply of cannery labor in California, and he has worked as an expert on the Davis-Bacon Act for the U.S. Justice Department. The Davis-Bacon Act regulates wage payments to construction workers on federal public works. Philips is a respected expert on prevailing wage laws and on employment, training wages and benefits in the construction industry. He has testified before state legislative committees in Ohio, Indiana, Oklahoma, New Mexico and California on their state prevailing wage laws. Along with other researchers at the University of Utah, Philips has analyzed the effects of prevailing wage laws on public construction costs, construction worker incomes, apprenticeship training, worker safety and minority access to construction work. Philips is currently working with Anthony Suruda, M.D., M.P.H., of the University of Utah Department of Family and Preventative Medicine on a National Institute of Occupational Safety and Health funded study of child labor fatalities in construction.

Philips has received awards for his teaching and community service, including the University of Utah Lowell Bennion Public Service Professorship, the University of Utah Presidential Teaching Scholar Award and the University of Utah, College of Social and Behavior Science Superior Teacher Award. Philips is married with two children.

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Executive Summary--The Main Points

- **History**—the first federal prevailing wage law was passed by the Republican Congress of 1868 and enforced by President Ulysses Grant. The first state prevailing wage law was enacted in 1891 by the Republican and Populist legislature of Kansas. The current federal law—the Davis Bacon Act—was passed by the Republican Congress of 1931 and signed by Herbert Hoover. The Kentucky law dates to 1940. In 1982 Kentucky schools and some municipal work were exempted from the law’s coverage but in 1996 the law was re-applied to school and municipal construction. Currently, collectively bargained wage rates are required to be paid on public works when a majority of workers of a particular trade in a local labor market are receiving those wages. When less than half of an occupation is receiving the collectively bargained rate, then the prevailing wage is the weighted average of all wage rates for the trade in the area.
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- **The Purpose of Prevailing Wage Laws**—Prevailing wage laws were originally intended to encourage the development of a high-skill, high-wage growth path for the labor market in general, and the construction labor market in particular. Where prevailing wage regulations are applied, union and nonunion contractors win public works jobs based on having the most productive, best equipped and best managed workforce. Under prevailing wage regulations, wages established in the market through collective bargaining are not undercut through the power of government. Critics of prevailing wage regulations argue that the government should use its bargaining power to cut local wage rates. They contend that local wage rates could be cut by as much as 50%. And they contend that such a race to the bottom can cut public construction costs substantially. But you get what you pay for. When wages are cut substantially, worker skills, experience and motivation also fall off. Contractors no longer compete on the basis of who can best train, best equip and best manage a construction crew. Rather they compete on who can find the cheapest workers

either locally or through importing labor from elsewhere. This puts the quality of construction at risk. It may lead to increased cost overruns. It may lead to downstream increases in building and road maintenance costs. And it does lead to an increase in construction injuries and a decline in the health and pension coverage of construction workers. This puts pressure on worker compensation costs. And it puts pressure on social services—as family health needs go unmet and retired workers cannot make ends meet. The original prevailing wage laws were passed at the same time and often in tandem with compulsory schooling and child labor laws. All these laws share a similar philosophy. In the short run, some employers can turn a profit based on cheaper labor. Indeed, that was the claim of those who hired child labor and opposed compulsory public schooling. But in the long run, society is better off supporting regulations that encourage skill formation and competition based on increased worker productivity. Prevailing wage regulations, by not undercutting collective bargaining, support the largest privately financed system of higher education in the country—apprenticeship training. Three, four and five year apprenticeship training in construction is the foundation of a productive construction workforce and quality workmanship. When apprenticeship and journey-worker training is cut back, productivity falls. That is why you can cut wages 50% and show little or no effect in overall labor costs. The philosophy underlying prevailing wage regulations is that a community is better off in the long run by encouraging competition that builds skills, builds productivity, pays decent wages and provides for the health and old age needs of its citizens. That is the philosophy and that is what prevailing wage regulations do.

- **Race**—Some claim that prevailing wage laws were originally Jim Crow laws designed to keep blacks out of construction. There is no evidence to support this in the case of Kentucky. Nor does it square with what we know about those who supported the early federal and state laws. The first federal law in 1868 was passed by the same Republican Congress that enacted the 13th, 14th and 15th Amendments to the Constitution—the legal bases for equal rights in this country. The first state law was declared constitutional by U.S. Supreme Court Justice John Marshall Harlan—the leading judicial critic of Jim Crow laws in his day. The current federal law was vigorously supported by NY Republican Congressman Fiorello LaGuardia who subsequently, as mayor of New York, played a strong supportive role in bringing Jackie Robinson to the Brooklyn Dodgers.

Critics nonetheless claim that prevailing wage laws keep blacks and other minorities off public construction. They claim that blacks are less skilled and prevailing wage rates require that contractors staff public construction with their best workers. So, because blacks are second rate, they are kept off the job. But the claim that black construction workers are less capable is unsupported. An

econometric analysis of the relationship between prevailing wage regulations and the presence of blacks in construction fails to find support for this claim.

Furthermore, in states with prevailing wage laws, the proportion of minorities in construction apprenticeship programs reflect the percentage of minorities in those states' populations. In contrast, in states that do not have prevailing wage laws, minorities are under-represented in construction apprenticeships. In states without prevailing wage regulations there are 18% to 19% fewer minorities in construction apprenticeship than one would expect from those states' minority populations. The probable reason for this divergence in representation is the size of apprenticeship programs. Under collective bargaining, apprenticeship programs are typically multi-employer programs of considerable size. Many merit shop apprenticeship programs are single-employer programs with only two or three apprentices. Affirmative action regulations in apprenticeship only apply to programs of five or more apprentices. So union apprenticeship programs almost always fall under regulations prohibiting discrimination, while many open shop apprenticeship programs do not. Finally, when it comes to graduating minorities from construction apprenticeship programs, the graduation rates are much higher under collective bargaining. Only 18% of minorities in merit shop apprenticeship programs graduate from those programs. Thus, minority apprentices are heavily under-represented in those states that do not have prevailing wage regulations. And if those minorities are in programs organized by merit shop contractors, the odds of those few ever turning out as journeymen and women are grim.

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- **Costs**—Some critics of prevailing wage regulations erroneously claim that you could build four schools for the cost of three if prevailing wage regulations were lifted. But labor costs in construction are only about 30% of total costs. To build four schools for the cost of three, everyone on the job site would have to work for free. Real—inflation adjusted—costs of school construction in Kentucky have risen in the 1990s. But this rise occurred prior to the application of prevailing wage regulations for schools. Since 1997, real median square foot cost of public school construction has been stable. Chapter 3 presents a study of over 6,000 school construction projects in the U.S. in the 1990s. This study does not find a statistically significant relationship between prevailing wage regulations and school construction costs. However, the study does find that school authorities can save as much as 4% on total construction costs if they begin their projects after the coldest weather has subsided. Late winter and spring start-ups run 4% less compared to similar projects begun in late summer or fall. School authorities can also save if they do not build into a tight construction market. A two percent drop in the state's unemployment rate leads to a 4% rise in total construction

costs. Counter-cyclical construction spending on the part of public schools can save taxpayer dollars and also soften the blow of slow times on the local community.

- **Skill Shortages and Training**—The long expansion of the 1990s has led to severe skill shortages in construction. This is almost exclusively a problem for contractors that do not use collective bargaining. The Business Roundtable reported the results of a survey of its members in late 1996: “Over 60 percent of the survey respondents indicated that they had encountered a shortage of skilled craft workers, and 75 percent reported the trend had increased over the past five years...The union sector has always excelled in craft training through the joint labor/management apprenticeship programs...the open shop, as a whole, has not supported formal craft training to the extent necessary.” Prevailing wage regulations promote training directly by requiring all contractors on public works to pay prevailing wage rates that include apprenticeship costs when collectively bargained rates apply. Prevailing wage regulations support training indirectly by not undercutting collective bargaining. In construction, 66% to 99% of all graduating apprentices, depending on trade, come out of joint labor-management programs established through collective bargaining.
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- **Injuries**—When prevailing wage regulations are eliminated, worker wages and benefits go down. Indeed, that is the stated aim of deregulation—the cutting of wages and benefits in the hopes of cutting costs. Proponents of deregulation often claim wages will be cut in half. But when this does occur, experienced and trained workers leave the industry. A younger, less experienced and less trained set of workers shoulder the job. This not only puts at risk the quality of work, it puts at risk the workers themselves. In Kentucky, in the nine years after schools were exempted from prevailing wage regulations in 1982, serious injuries among Kentucky construction workers rose 11% compared to the six years prior to exemption. Serious injuries as a percent of all injuries rose by 8%. And the days lost per serious injury rose 16% to an average of 21 lost days of work per injured worker.
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- **Health Insurance and Old Age Security**—When collective bargaining is absent in construction, most workers are not paid health insurance or pensions. In Kentucky, the average contractor that has collectively bargained

with his or her workers pays \$1,240 per year in employer contributions to each worker's pension, and \$2,567 in employer contributions to each worker's health insurance. The typical contractor that does not collectively bargain with his workers pays, on average, \$51 per worker into pensions and \$242 into health insurance per year. These are averages. Actually, Kentucky's open shop contractors pay their key workers more than \$51 in pensions and the rest of their workers get no employer-sponsored pensions. Ninety-six percent of Kentucky construction workers who do not have the protection of collective bargaining are not receiving pensions. Over half are not receiving health insurance. Construction workers form roughly 5% of the labor force. When the construction industry and ultimately its customers fail to pay for the family health costs and the old-age costs of 5% of the community, then eventually social services are forced to pick up some of that tab.



The History of Prevailing Wage Regulations with a Special Focus on Kentucky

The First Federal Prevailing Wage Law (1868).



Ulysses S. Grant was the first President to seek enforcement of a federal prevailing wage law.

The first federal eight hour day law was enacted on June 25, 1868. It also was the first federal prevailing wage law. The country had just passed through a Civil War that among other things had kick-started massive industrialization across the north and west of the country. The next thirty years would see the emergence of a new class of wealth and power in the country. Men such as J.P. Morgan, John D. Rockefeller, and Andrew Carnegie were using the rapid growth stimulated by the Civil War as a foundation for accumulating economic power never before seen in the country.

At the same time, the lives of working people were in flux. Hours of labor had always been long but they had moved to the pace and the rhythms of the farm. Shoe factories in New England, meat packing plants in Chicago and woolen mills in California changed all that. Work was being harnessed to the time clock and the production line supervisor. People were being ground down by the pace of machinery, the demands of the supervisor and the strain of 12 hour days and six day weeks.

In 1868 Congress addressed this issue with the National Eight Hour Day law. The idea was to set labor standards, to guide the labor market, to nudge it away from the stretching out of the workday towards competitive behavior that emphasized increased productivity within a limited set of hours. It was felt that the market could not get there by itself. Short run competitive pressures would continually push for the longer day. But by regulating the market, it could be forced to find its own best self-interest, competition over productivity rather than competition over sweating labor. The legal doctrine of individual contract prevented Congress from directly regulating the market, but Congress could regulate its own contracts. Thus, public works was targeted as a way of indirectly trying to regulate all labor markets. Republican Senator Conness of California captured most of these ideas in one line of argument:

[The Eight-Hour Law] is but a very small boon that the working men of America ask from the Congress of the United States, namely: that the example be set by the Government of reducing the number of hours of labor. I know that the passage of this bill cannot control in the labor of the country; but the example to be set by the Government, by the passage of this bill, is due to the laboring men of the country, in my opinion. I know that labor in the main, like every other commodity, must depend upon the demand and supply. But, sir, I for one will be glad, a thousand times glad, when the industry of the country shall become accommodated to a reduced number of hours in the performance of labor. After forty or fifty years of such advance in the production of the world's fabrics by the great improvements that have been made by inventions, and the application of steam as a power, by which the capital of the world has been aggregated and increase many fold, I think that it is time that the bones and muscles of the country were promised a small percentage of cessation and rest from labor, as a consequence of that great increase in the productive industries of the country. ¹

Prevailing wage regulations were an integral part of the first national eight-hour law. For Congress said that when hours on public works were cut from 12 to 8, the daily wage should not be cut from (say) \$1.20 to 80 cents. In those days, construction workers were paid by the day. Congress said that when hours were cut, the contractor on public works still had to pay the daily wage that was current in the locale in which the work was being done. Enforcement of the current wage provision proved difficult. Twice Republican President Grant had to issue proclamations directing contractors and government agents to respect the current wage provision of the eight-hour day law. ²

Thus, the principle of a prevailing wage law at the federal level predates the Davis-Bacon Act by fifty years. The purpose of the federal law was to set labor standards regarding hours and wage rates in the public sector presumably with the hope that these standards might spread to the private sector. That the purpose was thwarted in enforcement is indicated by Grant's need to make the same proclamation twice. It was also thwarted by legal decisions emphasizing the rights of individuals to contract without government interference.

Frustrated by problems of implementation and court rulings, the American Federation of Labor, in its first convention in 1881 stated what it thought the purpose of the law was and complained that it was not being enforced:

¹ Congressional Globe, op cit.

² On May 19, 1869, President Grant issued the following proclamation:

that, from and after this date no reduction shall be made in the wages paid by the Government by the day to such laborers, workmen and mechanics on account of any such reduction of hours of labor.

On May 11, 1872 Grant reiterated with greater detail and emphasis in a second proclamation that per diem wages should not be cut with the required shorter hours:

...I, Ulysses S. Grant, President of the United States, do hereby again call attention to the act of Congress aforesaid, and direct all officers of the executive department of the government having charge of the employment and payment of laborers, workmen and mechanics employed by or on behalf of the government of the United States to make no reduction in the labor wages paid by the day to such laborers, workmen and mechanics on account of the reduction of the hours of labor.

The Statutes at Large and Proclamations of the United States of America from March 1871 to March 1873, Vol. XVII, Boston, 1873, pp. 955-56.

The Statutes at Large and Proclamations of the United States of America, from December 1869 to March 1871, Vol. XVI, Boston, 1871, p. 1127.

Resolved...that the National Eight Hour law is one intended to benefit labor and to relieve it partly of its heavy burdens, that the evasion of its true spirit and intent is contrary to the best interest of the Nation; we therefore demand the enforcement of said law in the spirit of its designers.³

The next year the AFL convention went on to argue “that the system of letting out Government work by contract tends to intensify the competition between workmen, and we demand the speedy abolishment of the same.” Further by focusing on enforcing the federal law, “the enforcement of the National Eight-hour law will secure adoption of similar provisions in nearly all the States of the Union.”⁴ Thus, the AFL wanted to get the government out of the business of pushing wages down and into the business of pushing hours of work down.

Public works were targeted for regulation not so much because construction unions were a particularly powerful interest group but because under legal theories of the time, general governmental regulation of the labor market was viewed as a violation of the individual right to freely make contracts. However, the government was a party to contracts for public construction. Therefore, the government, like any party to a contract, could set conditions under which it was willing to contract for construction services. Proponents of hours and wage regulations on government works hoped these conditions would serve as a model and standard for private work in and out of construction.

British (1890) and Canadian (1900) Laws.

The country has no interest in keeping down the price of labour ; on the contrary, the country is interested in the advancement of the labour market...It is better for the workingman, for high wages enable him to supply himself with more of the necessaries, more of the comforts, more of the luxuries of life. This is better for the country also, as it stimulates the consumption of manufactured goods of all kinds. Higher wages benefit not only him who receives but him who gives, and they benefit not only the parties directly concerned, but the whole community.

Canadian Postmaster General
1900 Workmen's Wages on Government Contracts Debate

In England in 1890, the House of Lords issued the Report of the Sweating Commission. Sweatshop labor conditions had become a scandal. Construction was seen as one of the sweatshop industries. The system of contracting and subcontracting and lowest bidder acceptance led to a form of competition that was deleterious. To obtain a contract in the short run, contractors would ignore long term costs of the industry, such as training. Having shaved on a bid to win a government contract, contractors were trying to offset their costs through shoddy workmanship. Contractors who won a job would shop it around to laborers, seeing who would take the biggest pay cut to get a job. In response to these practices, Parliament enacted a prevailing wage law as part of a larger set of reforms designed to reign in the prevalence of sweatshop competitive practices.

Canada followed the English example in 1900. The Canadian Parliament was persuaded that there was a high-wage, high-skilled growth path and a low-wage, low-skilled growth path

³ Federation of the Organized Trades and Labor Unions of the United States and Canada, 1881, "Declaration of Principles" in *Proceedings of the American Federation of Labor, 1881 to 1888*, Reprinted 1905, Pantograph Printing, Bloomington, Illinois (hereinafter *Proceedings*), 1881 p. 3. This organization changed its name to the American Federation of Labor in 1886.

⁴ *Proceedings*, 1882, pp. 4 and 18.

opening up before Canada. The high-wage path was seen as preferable because it promoted solid skills and good workmanship on public works, it created middle class citizens and it stimulated demand for local manufactured goods.

The First State Prevailing Wage Law--Kansas (1891).

In February 1891, Samuel Gompers, president of the American Federation of Labor, visited Topeka, Kansas, to speak on what the local newspaper called "the great topic of labor." Ten years earlier, the AFL — at its own creation — had laid out legislative aims that included the eight-hour work day, the elimination of child labor, free public schooling, compulsory schooling laws, the elimination of convict labor, and prevailing wages on public works. These proposals were based on a belief that the American labor market should consist of highly skilled workers earning decent wages, with time for family, and with children free to earn an education. In pursuit of these aims, Gompers' political strategy in Kansas allied him with the Republican Party.

On the morning of Gompers' arrival, the Alliance Party, known to history as the Populist Party, withdrew an earlier invitation for him to speak in the hall of the state House of Representatives, which the party controlled. Gompers, who represented 900,000 workers, had fallen out of favor with the Populists, reportedly because of his belief that the trade unions should not form a political party with the Alliance.⁵ Gompers and the AFL took the position that unions should be nonpartisan. Rather than form a labor party, Gompers advocated that unions support those of any party who would support the needs of working men and women. In Kansas in 1891, this made Samuel Gompers an ally of the Republican Party. The Republicans, who controlled the Kansas Senate, invited Gompers to speak there, and he did.

Gompers was in Kansas to focus on the eight-hour day. Like other Americans, Kansans in 1891 typically worked six days per week, ten to twelve hours per day. In the older trades and crafts, such as carriage making and saddle making, where the work pace was slow and under the workers' direction, the long work-day was tolerable. In the newer factories producing shoes, textiles, and the like; in the mines; and in the urban putting-out systems in needlework, six-day weeks and twelve-hour days were grueling. The AFL had made its prime objective a shortened work-day and work week with as little cut in pay as possible. In his Topeka speech, Gompers declared:

Our banner floats high to the breeze and on that banner float is inscribed, "Eight hours work, eight hours rest and eight hours for mental and moral improvement."⁶

At that time, when there were no income supplement programs for the poor, low-income parents worked *and* had to send their children to work to make ends meet. This practice was later referred to by a North Carolina newspaper editor as "eating the seed corn." Each generation of poor condemned its offspring to poverty because the children grew up as illiterate as their parents. The prevalence of cheap child labor, which accounted for 5 percent of the manufacturing labor force in 1890 and a larger proportion of service sector workers, kept wages down and forced adult workers to put in the long hours to make ends meet. Gompers wanted regulation to force employers and the poor to adopt a strategy, however painful in the short run, of a high-

⁵. *Topeka State Journal*, February 24, 1891, col.4, p. 4.

⁶. *Topeka Daily Capital*, February 25, 1891, p.1.

wage, high-skilled growth path where children were in school and workers had the skills to justify wages that would allow for a family life. Gompers said,

The Federation endorses the total abolition of child labor under 14 years of age; an eight hour law for all laborers and mechanics employed by the government directly through contractors engaged on public work, and its rigid enforcement; protection of life and limb of workmen employed in factories, shops and mines; ...the extension of suffrage as well as equal work for equal pay to women....The Federation favors measures, not parties.⁷

Gompers also pleaded for workers to be paid the "current" daily wage so they could afford the reduced work time. Government was being asked to set a good example for the private sector, to show that a refreshed labor force could produce in eight hours what a fatigued and bedraggled labor force turned out in ten or twelve hours. The prevailing wage law in its infancy was an attempt to obtain shorter working hours for *all* labor. The AFL paid attention to public works, however, because government at all levels was a major purchaser of construction. The AFL said government should not try to save money by eroding the wages of its citizens.

With similar logic, the AFL called for an end to convict labor. Many states employed convicts to pay for their keep. Convicts built roads on chain gangs, operated farms, made textiles, and sewed garments. Convict-made goods were sold, forcing down prices and the wages of working free citizens.

In February 1891, the Second Annual Convention of the Kansas State Federation of Labor, in Topeka, approved a bill concerning state-paid wages. That month, the bill, which included the prevailing wage section, called "for an Eight Hour Law" and was brought forth by Mr. Avery of the Typographical Union No.121, Topeka. The bill stated,

That in no case shall any officer, board, or commission, doing or performing any service or furnishing any supplies to the State of Kansas under the provisions of the act be allowed to reduce the daily wages paid to employees engaged with him (or them) in performing such service or furnishing such supplies, on account of the reduction of hours provided for in the act. That in all cases such daily wages shall remain at the minimum rate which was in such cases paid and received prior to the passage of the act.⁸

The eight-hour bill was one of four labor-related bills pending in the legislature: the weekly pay bill, the child-labor bill, and the bill to make the first Monday in September a holiday, which would become known as Labor Day. In addition, that year the Kansas State Federation of Labor approved a resolution calling "for the abolition of convict labor when in competition with free labor."⁹

⁷. *Topeka State Journal*, February 25, 1891, col. 3-4, p.1.

⁸. *Sixth Annual*, 215.

⁹. *Sixth Annual*, 124.

The eight-hour bill, Senate Bill 151, failed in the Kansas senate March 6, 1891, with the prevailing wage section removed. But by March 10, when the prevailing wage section was put back in, the bill became law. This first prevailing wage law stated:

That not less than the current rate of per diem wages in the locality where the work is performed shall be paid to laborers, workmen, mechanics and other persons so employed by or on behalf of the state of Kansas....¹⁰

We do not know the immediate impact of the Kansas prevailing wage law. But a report from the Oklahoma labor commissioner in 1910 may well have applied to Kansas. The Oklahoma law was patterned after the Kansas act. It was passed in 1908. It was reported to have had the intended effect of setting wage and hour standards not only on public works but in related labor markets. The Oklahoma Commissioner of Labor stated in 1910:

The eight hour law has been of inestimable value to the laboring men of this state....The common laborer, who was heretofore employed ten and twelve hours per day, is now, under the provisions of this bill, allowed to work but eight hours....The law has not only affected the laborers and those who are dependent upon this class of work for a living, but it has gone further, and in many localities has gradually forced railroad companies, private contractors [i.e. private construction] and people of that class to pay a high rate of wages for unskilled labor.¹¹

The Federal Davis-Bacon Act (1931)

For four years before the 1931 passage of the Davis-Bacon Act, 14 bills were introduced in Congress to establish prevailing wages in construction. Republican Representative Robert L. Bacon (NY) in 1927 introduced the first bill proposing a prevailing wage for construction, H.R. 17069. This member of Congress justified his measure as follows:

The Government is engaged in building in my district a Veteran's Bureau hospital. Bids were asked for. Several New York contractors bid, and in their bids, of course, they had to take into consideration the high labor standards prevailing in the State of New York...The bid, however, was let to a firm from Alabama who had brought some thousand non-union laborers from Alabama into Long Island,

¹⁰ L. 1891 Ch. 114 p.192-193.

¹¹ Chas. L Daugherty, Labor Commissioner, Oklahoma Department of Labor, Third Annual Report, Oklahoma City, OK, 1910, p. 327. The primary concern in both Kansas and Oklahoma was to use public works hours and wage policies to set and improve local labor standards. A typical enforcement case in Oklahoma as reported by the Labor Commissioner follows:

[Anadarko. May 10. 1908] We were advised that the O'Neill Construction Company had cut the wages on public works at Anadarko from twenty-five cents to seventeen and one-half cents per hour....[C]ontract was taken with the understanding that twenty-five cents per hour should be paid. The work was not progressing as rapidly as necessary to the cost within the estimate, hence the contractors tried to take advantage of the situation by reducing pay. After thoroughly discussing the matter before the [city] council and contractor, the wages were restored to twenty-five cents. (p. 320)

Second Annual Report Oklahoma Labor Commissioner
Chas. L Daugherty, Oklahoma City, OK, August 7, 1909.

N.Y.; into my district. They were herded onto this job, they were housed in shacks, they were paid a very low wage, and the work proceeded...It seemed to me that the federal Government should not engage in construction work in any state and undermine the labor conditions and the labor wages paid in that State...The least the federal Government can do is comply with the local standards of wages and labor prevailing in the locality where the building construction is to take place.¹²

Hearings for a federal prevailing wage law began in 1927 and continued in 1928 and 1930, but no bill was passed. On March 3, 1931, Bacon's original proposal, which he had reintroduced as H.R. 16619, was signed into law by Republican President Herbert Hoover.¹³

The Davis-Bacon Act required payment of prevailing wages on federally financed construction projects. However, the original language of the law was vague, and prevailing wages generally were not determined before the acceptance of bids. In 1935, Democratic President Roosevelt signed clarifying amendments to the act, which became the basis of the current Davis-Bacon Act.

In 1935, Roosevelt's Secretary of Labor, Francis Perkins, established the original rules for determining the Davis-Bacon prevailing rates. The prevailing wage was said to be the wage paid to the majority, if a majority existed; if not, the 30-percent rule was used. The 30-percent rule means if 30 percent of the workers in an area are paid the same rate, that rate becomes the prevailing rate there. The 30-percent rule often resulted in the union wage being the prevailing wage. If the 30-percent rule did not apply, because at least 30 percent of the workers in a given occupation in the local labor market did not receive the same wage rate, the average wage rate was paid to workers doing the same job. The prevailing wage was determined this way for 50 years.

In 1985, Republican President Reagan changed administration of Davis-Bacon, creating the 50-percent rule. This rule holds that if 50% plus one wage rates for an occupation in a local labor market are the same to the penny, then that wage rate is said to prevail. If no one wage rate accounts for more than 50% of all wage rates for an occupation in a local labor market, then the average wage rate for that occupation prevails. Under the old rules, if union wage rates accounted for more than 30% of all wage rates for an occupation, then the union wage rate prevailed. Under the new rules, union wage rates must represent more than 50% of all wage rates in an occupation before union wage scales prevail under Davis-Bacon.



Republican President Herbert Hoover supported the passage of the Davis Bacon Act. The Act was named after Republican Representative Robert Bacon and Republican Senator James Davis. Hoover signed the Act in 1931.

¹² U.S. House of Representatives, *Hearings before the Committee on Labor on HR 17069*, 69th Congress, 2nd Session, p. 2, February 18, 1927.

¹³ *Hearings Before the Committee on Labor, House of Representatives-Seventy-First Congress*. January 31, 1931. Bacons proposal was re-introduced in 1930 as H.R. 9232 by Congressman Elliot W. Sproul from Illinois, while Bacon proposed a complementary bill.

Kentucky (1940).

Seven states passed prevailing wage laws between 1891 (Kansas) and 1923 (Nebraska). Seventeen states, including Kentucky (1940) passed prevailing wage laws between 1931 and 1940. Eventually all but nine states would pass prevailing wage laws. (See Table 2.)

The first record I have found regarding the history and implementation of the Kentucky law comes from a visit by U.S. Labor Department officials to the Kentucky Labor Commissioner in 1951. A memorandum of that visit summarized the state of the law 11 years after its passage.

The Kentucky law (See Baldwin's Kentucky Revised Statutes, Sections 337.150-337.550 inclusive; and Section 337.990) provides for the following:

1. The contracting agency before advertising for bids, is required to ascertain prevailing rates for labors [sic.] workmen, mechanics, etc., in the locality where the work is to be performed. The schedule must be made part of the specification and part of any contract resulting therefrom.
2. The wages paid must not be less than those indicated by the schedule and if more than 90 days relapse between the establishment of the schedule and the confirmation of the contract the appropriate public authority must make a redetermination.
3. Contractors and subcontractors are charged with strict compliance and must pay the wages in legal tender without deductions....Contractors are required to keep accurate payroll records and to post copies of the prevailing wage rate.
4. Work schedules are limited to 8 hours a day and 40 hours a week except in cases of emergency. [A footnote stated: "During the war an amendment was passed relaxing hours of work in connection with the construction of highways. Designation by the commissioner of highways is necessary, for the duration of the National emergency." This amendment was passed in 1942 and repealed in 1950. (Repealed 1950 Ky. Acts ch. 176, sec. 1. -- Created 1942 Ky. Acts ch. 136, secs. 1 and 3.)]
5. The department (presumably the contracting department) is empowered to assist workers in collecting the full amount of wages due. The worker is authorized to bring a civil action on claims for unpaid wages.
6. Various penalties are provided for violations of wage and hour requirements.

The U.S. Labor Department officials went on to note:

It would seem that possibly the best solutions to [Kentucky Labor Commissioner] Mr. Willis's [sic.] problem would be the enactment of a good wage payment and wage collection law. Kentucky has laws relating to the

payment of wages...but there is no authority given to the commissioner of labor to take assignments from workers and to bring suit to collect.¹⁴

In the 1940s and 1950s, contracting agencies determined the prevailing wage. The role of the Labor Commissioner in enforcing the prevailing wage law was unclear. The state Attorney General opined in 1945 that it was the duty of the Labor Commissioner to assist public works laborers in the collection of prevailing wages and the Commissioner should also institute criminal proceedings under the law.¹⁵ But apparently, this was not happening.

We also get some idea of what a prevailing wage was interpreted to be in the 1940s from the Attorney General's opinions. In August of 1946, the Kentucky Attorney General states that the wage rate for the majority of workers in a locality is the proper rate to apply as the prevailing wage where there are insufficient employees in the area working under a collective bargaining agreement.¹⁶ This was an effort on the part of the Attorney General to tackle the vagueness in the law regarding what was a prevailing wage. In the 1940s and 1950s, the law stated:

The prevailing wages shall be the wages paid in the locality under collective agreements between unions and employers at the time of the contract, if such agreements apply to a sufficient number of workers in the locality.¹⁷

Because contracting agencies determined the prevailing wage, each agency was free to decide what was "sufficient". The Attorney General was attempting to define and regularize the alternative procedure if a contracting agency found union contracts to be insufficient. The Attorney General's alternative required the use of what statisticians call the mode, or the most commonly found wage rate. Most likely, this would be the union wage rate. So in effect, the Attorney General was telling contracting agencies to go back to the collectively bargained rate whether or not the agency thought it covered a "sufficient" number of workers.

This ambiguity got the law into trouble. In 1960, a Prevailing Wage Board was established to centralize the determination of prevailing wage rates. The amendment to the law required the Board to make a determination on prevailing wages based upon union scale in an area where most workers in the category under consideration were covered by union contracts. However, a case arose in a county in which the overwhelming majority of laborers available to work on a project were not covered by a union contract. The Kentucky Court of Appeals stated:

The law is completely silent with respect to the scope of the Board's authority or duty in the establishment of prevailing wages when union rates are not applicable. This deficiency falls within the scope of the rule that where the intention of the legislature is so obscure as to defy a rational meaning, the law cannot be given effect.¹⁸

This led Kentucky to adopt the federal Davis-Bacon prevailing wage law formula to this problem. Through an amendment in 1962, the law defined prevailing wages as the wages that

¹⁴ Memo from John B Kneipple dated January 18, 1951 in the U.S. Labor Department, Prevailing Wage Division files.

¹⁵ Attorney General opinion, August 27, 1945.

¹⁶ Attorney General opinion, August 15, 1946.

¹⁷ Kentucky Revised Statutes, 1955.

¹⁸ Labor law Reports Summary, No. 54, June 19, 1961.

are or have been paid to the majority of laborers...employed in each classification of construction upon reasonably comparable construction in the locality where the work is to be performed...If a majority does not receive the same rate, then the rate paid to the greater number—provided that it is at least 30 percent of those employed—determines the prevailing wage; or if less than 30 percent are receiving the same rate, then the average rate is prevailing. The 1962 amendment also gave guidance on what information was to be considered in determining the prevailing wage. These included

1. wage rates paid on recent previous public works in the same locality,
2. wage rates paid on reasonably comparable recent private construction projects in the locality, and
3. recent collective bargaining agreements between bona fide labor organizations and their contractors whenever applicable to a locality.¹⁹

The definition of a prevailing “wage” in the original act and in its 1962 amended form did not address the issue of fringe benefits. Starting in the early 1950s, collective bargaining agreements began to establish health benefits for construction workers. By the early 1960s, pension benefits were also being provided to construction workers through collective bargaining. At first these benefits were modest, maybe a nickel for pensions. But by the mid-1960s, these were increasingly important aspects of the construction labor market. They allowed construction workers to provide for their family’s health and old age security for themselves and their spouses. Consequently, in 1968, the Kentucky legislature addressed this issue by breaking down the prevailing wage as the sum of “the basic hourly rate and an additional amount per hour equal to the hourly rate of contribution irrevocably made to a trustee or third person pursuant to an enforceable commitment to carry out a financially responsible plan for medical, pension, death or injury benefits.”²⁰ This language was similar to the Davis Bacon Act.

So a law that began in 1940 as a prevailing “wage” law based on “sufficient” numbers of union workers in a locality as determined by the contracting agency, had by 1968 become a prevailing “total compensation” law. The determination of this prevailing wage was based on a switching rule that used collectively bargained rates where 30% of an occupation in a locality was covered by a collectively bargained contract. Otherwise, the average total compensation for the locality was used. By 1968, the Commissioner of Labor was responsible for making these determinations and along with individual rights of redress, the Commissioner was responsible for enforcing the law.

In 1982, political winds were blowing against prevailing wage laws. Florida had repealed its law in 1979. U.S. Senator Orin Hatch held hearings on the federal Davis Bacon prevailing wage law aimed at its repeal. Alabama repealed its law in 1980 and Utah repealed its law in 1981. Kentucky did not repeal its law, but it exempted all public institutions of learning from the laws coverage. Kentucky also exempted city, county and urban-county governments from the laws coverage if the construction was financed with less than 50% state funds. It also established a threshold for coverage of any project of \$250,000. This threshold was to rise with the consumer price index. Also, following regulations instituted by the Reagan Administration regarding the Davis-Bacon Act, the switching rule between most commonly found wage rates and the average wage rate was changed from 30% to 50%. With these changes in mind, a

¹⁹ U.S. Labor Department, Prevailing Wage Division, Annual State Report, Kentucky, 1963-64.

²⁰ Kentucky, Regular Session, 1968 New Laws Page 509, Senate Bill No. 123.

comparison of the federal Davis Bacon Act and the Kentucky law in 1983 was made by the U.S. Labor Department. That comparison is presented in Table 1.

In 1996, Kentucky reversed course and re-applied the state prevailing wage regulation to public schools and to municipal and county construction not using a majority of state funds. It also clarified the threshold provision, preventing projects from being broken into sub-projects below the threshold. Also, the threshold is no longer tied to the consumer price index. Furthermore, the eight-hour provision that had been in the law from the beginning was modified to permit a four-tens work week. With these changes in hand, the Kentucky prevailing wage law can be said to be similar to the current federal Davis-Bacon Act.



Table 1: A Comparison of the Federal and Kentucky Prevailing Wage Laws Circa 1983

Federal	Kentucky
Administered by:	
U.S. Department of Labor	Kentucky Department of Labor
Coverage:	
Contracts to which the United States or the District of Columbia is a party, for construction, alteration, and/or repair including painting and decorating, of public buildings or public works of the United States or the District of Columbia within their geographical limits, and which requires or involves the employment of mechanics and/or laborers.	All buildings, roads, streets, alleys, sewers, ditches, sewage disposal plants, waterworks and all other structures or work except for buildings constructed as institutions of learning constructed under contract with any public authority and involving laborers, workmen, and mechanics. However, the law does not apply to construction conducted by a city, county, urban-county government or school district unless such construction is financed with 50 percent or more of State funds.
Threshold amount:	
\$2,000.00	\$250,000, with an adjustment each July 1 based on change in the CPI.
Definition of wage:	
Basic hourly rate of pay plus fringe benefits.	Basic hourly rate of pay plus fringe benefits.
Rate determination criteria:	
<p>Rate of wages paid in the area in which the work is to be performed, to the majority of those employed in that classification in similar construction in the area.</p> <p>If there is not a majority paid at the same rate, then the rate paid to the greater number: Provided, such number constitutes 30 percent of those employed. (The elimination of the 30 percent rule is one of a number of proposed changes in the Federal regulations. These proposed regulations were the subject of a U.S. District Court decision which has been appealed. Since the 30 percent rule was not enjoined by this decision, steps to implement the change are currently under consideration.)</p> <p>If less than 30 percent of those so employed receive the same rate, then the average rate.</p>	<p>Rate of wages paid in the locality where the work is to be performed, to the majority of those employed in each classification of construction.</p> <p>If there is not a majority paid at the same rate, then the basic hourly rate of pay shall be the average basic hourly rate. (The commissioner shall conduct a public hearing in the locality, after notice has been given, for the purpose of making initial determinations or revisions of a prevailing wage schedule for the construction of public works. The locality may be one or more counties, but may not be less than an entire county.)</p> <p>If both Federal and State rates are applicable, those wages in each classification which are higher shall prevail.</p>
Information considered:	
<p>Statements showing wage rates paid on projects.</p> <p>Signed collective bargaining agreements.</p> <p>Wage rates determined for public construction by State and local officials pursuant to prevailing wage legislation.</p> <p>Information furnished by Federal and State agencies.</p> <p>Any other information pertinent to the determination of prevailing wage rates.</p> <p>Wage surveys conducted by the U.S. Department of Labor, Federal agencies, or other interested parties.</p>	<p>Wage rates paid on previous public works constructed in the localities.</p> <p>Wage rates previously paid on reasonably comparable private construction projects constructed in the localities.</p> <p>Collective bargaining agreements</p>

Federal	Kentucky
Payroll records:	
Payroll records are to be submitted weekly.	Payroll records need not be submitted. They must be open to inspection by the Commissioner of Labor, and may not be destroyed or removed from the State for one year following completion of the improvement in connection with which they are made.
Wage claims:	
<p>If the contracting officer finds that any laborer or mechanic employed by the contractor or any subcontractor directly on the site of the work covered by the contract has been or is being paid a rate of wages less than that required by the contract, the Government may, by written notice to the contractor, terminate his right to proceed with the work, or the part of the work for which there has been a wage violation, and to complete the work by contract or otherwise, and the contractor and his sureties shall be liable to the Government for any excess costs incurred.</p> <p>The Comptroller General of the U.S. is authorized to pay directly to laborers and mechanics any wages found to be due from any accrued payments withheld under the terms of the contract.</p>	<p>Any laborer, workman, or mechanic employed on public works may file a complaint of any violation with the department. The department shall assist in the collection of claims of wages due. The commissioner shall investigate and enforce the prevailing wage provisions to the fullest and shall bring all actions to collect wages due and shall take action against any contractor or subcontractor to restrain violations of the law. Such contractor or subcontractor may be held ineligible to bid on public works until determined to be in substantial compliance.</p> <p>A laborer, workman, or mechanic may by civil action recover any sum due as the result of the failure of the employer to comply with the prevailing wage law.</p> <p>The commissioner may also bring any legal action necessary to collect claims on behalf of any or all laborers, workmen, or mechanics</p>
Penalties:	
The Comptroller General of the U.S. is authorized and directed to distribute a list to all departments of the Government giving the names of persons or firms found to have violated the law. No contract is to be awarded to the persons or firms appearing on the list until three years have elapsed from the date of publication of the list.	Any contractor or subcontractor who violates any wage or work hours provision in any contract under the prevailing wage law shall be fined not more than \$100 for each offense and be required to make full restitution to all employees to whom legally indebted as a result of the violation. The prime contractor shall be jointly and severally liable with a subcontractor for wages due an employee of the subcontractor. For a flagrant or repeated violation the offending contractor or subcontractor shall be barred from bidding on or working on, any and all public works contracts for a period of two years from the date of the last offense. Each day of violation constitutes a separate offense, and the violation as it effects each individual worker shall constitute a separate offense.

Source:

U.S. DEPARTMENT OF LABOR
Office of State Liaison and Legislative Analysis

Employment Standards Administration
Division of State Employment Standards Programs

Conclusions.

Prevailing wage laws emerged from a concern that cutthroat competition over wages in construction would lead the industry down a low-wage, low-skill development path. This was said to put the quality of construction at risk and lead to an itinerant, footloose low-wage construction labor force. Poor construction workers would make poor neighbors and potential burdens on the community. Reasonably paid construction workers, on the other hand, held out the possibility of being solid neighbors, good citizens and productive members of the community. Government, by the operation of prevailing wage laws, was supposed to get out of the business of cutting government costs by cutting the wages of its citizens. Whatever labor standards had been established, whatever wages prevailed in a local community, that is what the law said government should pay on public works.

The bidding process on government works differs significantly from the private sector. In the private sector, the owner of the construction project can overlook the lowest bidder for a higher bid that promises better quality or performance. In the public sector, the lowest bonded bid must be accepted. Contractors have an incentive to shave costs on the initial bid and hope to make up those costs in change orders or in a favorable interpretation of the jobs specifications. Owner dissatisfaction cannot lead to debarment from subsequent public jobs as long as the letter of the law and specifications are adhered to. This bidding structure puts an added downward pressure on wages and an upward pressure on hidden costs.

But if these laws are successful in focusing competition on the factors that raise the productivity of construction in the long run and help justify a better-paid construction labor force, then three things must be true. First, where prevailing wage laws exist, training in construction must be more common and of a higher quality. Second, where prevailing wage laws exist, the income and benefits of construction workers must be higher. And third, despite higher wages, income and benefits, where prevailing wage laws exist, construction costs must be roughly equivalent to construction costs where prevailing wage laws are absent. We will soon turn to the task of investigating these three questions. But first, we examine a unique criticism of prevailing wage laws. Some critics allege that prevailing wage laws in general and the Davis-Bacon Act in particular are racist laws. This criticism alleges that these laws were originally passed to exclude blacks and other minorities from construction. And furthermore, this criticism argues that the current effect of prevailing wage laws is to exclude blacks and other minority workers.

Table 2: Prevailing Wage Laws by State, Year Passed and Repealed

States having prevailing wage laws	Year passed	States without prevailing wage laws		
Alaska	1931	Georgia		
Arkansas	1955	Iowa		
California	1931	Mississippi		
Connecticut	1935	North Carolina		
Kentucky	1933	North Dakota		
District of Columbia	1931	South Carolina		
Hawaii	1955	South Dakota		
Illinois	1931	Vermont		
Indiana	1935	Virginia		
Kentucky	1940			
Maine	1933			
Maryland	1945			
Massachusetts	1914			
Michigan	1965			
Minnesota	1973			
Missouri	1957			
Montana	1931			
Nebraska	1923			
Nevada	1937			
New Jersey	1913			
New Mexico	1937			
New York	1894			
Ohio	1931			
Oklahoma*	1909			
Oregon	1959			
Pennsylvania	1961			
Rhode Island	1935			
Tennessee	1953			
Texas	1933			
Washington	1945			
West Virginia	1933			
Wisconsin	1931			
Wyoming	1967			
		States that repealed prevailing wage laws	Year passed	Year of repeal
		Alabama	1941	1980
		Arizona	1912	1984
		Colorado	1933	1985
		Florida	1933	1979
		Idaho	1911	1985
		Kansas	1891	1987
		Louisiana	1968	1988
		New Hampshire	1941	1985
		Utah	1933	1981

*The enforcement of Oklahoma's law was judicially suspended in 1995.

Appendix: the Current Kentucky Prevailing Wage Law

337.010 Definitions for chapter and specific ranges in chapter.

(1) As used in this chapter, unless the context requires otherwise:

(a) "Commissioner" means commissioner of the Department of Workplace Standards under the direction and supervision of the secretary of the Labor Cabinet;

(b) "Department" means Department of Workplace Standards in the Labor Cabinet;

(c) "Wages" includes any compensation due to an employee by reason of his employment, including salaries, commissions, vested vacation pay, overtime pay, severance or dismissal pay, earned bonuses, and any other similar advantages agreed upon by the employer and the employee or provided to employees as an established policy. The wages shall be payable in legal tender of the United States or checks on banks convertible into cash on demand at full face value, subject to the allowances made in this chapter;

(d) "Employer" is any person, either individual, corporation, partnership, agency, or firm who employs an employee and includes any person, either individual, corporation, partnership, agency, or firm acting directly or indirectly in the interest of an employer in relation to an employee; and

(e) "Employee" is any person employed by or suffered or permitted to work for an employer.

(2) As used in KRS 337.275 to 337.325, 337.345, and KRS 337.385 to 337.405, unless the context requires otherwise:

(a) "Employee" is any person employed by or suffered or permitted to work for an employer, but shall not include:

1. Any individual employed in agriculture;

2. Any individual employed in a bona fide executive, administrative, supervisory, or professional capacity, or in the capacity of outside salesman, or as an outside collector as the terms are defined by administrative regulations of the commissioner;

3. Any individual employed by the United States;

4. Any individual employed in domestic service in or about a private home. The provisions of this section shall include individuals employed in domestic service in or about the home of an employer where there is more than one (1) domestic servant regularly employed;

5. Any individual classified and given a certificate by the commissioner showing a status of learner, apprentice, worker with a disability, sheltered workshop employee, and student under administrative procedures and administrative regulations prescribed and promulgated by the commissioner. This certificate shall authorize employment at the wages, less than the established fixed minimum fair wage rates, and for the period of time fixed by the commissioner and stated in the certificate issued to the person;

6. Employees of retail stores, service industries, hotels, motels, and restaurant operations whose average annual gross volume of sales made for business done is less than ninety-five thousand dollars (\$95,000) for the five (5) preceding years exclusive of excise taxes at the retail level or if the employee is the parent, spouse, child, or other member of his employer's immediate family;

7. Any individual employed as a baby-sitter in an employer's home, or an individual employed as a companion by a sick, convalescing, or elderly person or by the person's immediate family, to care for that sick, convalescing, or elderly person and whose principal duties do not include housekeeping;

8. Any individual engaged in the delivery of newspapers to the consumer;

9. Any individual subject to the provisions of KRS Chapters 7, 16, 27A, 30A, and 18A provided that the secretary of the Personnel Cabinet shall have the authority to prescribe by administrative regulation those emergency employees, or others, who shall receive overtime pay rates necessary for the efficient operation of government and the protection of affected employees;

10. Any employee employed by an establishment which is an organized nonprofit camp, religious, or nonprofit educational conference center, if it does not operate for more than seven (7) months in any calendar year; or

11. Any employee whose function is to provide twenty-four (24) hour residential care on the employer's premises in a parental role to children who are primarily dependent, neglected, and abused and who are in the care of private, nonprofit childcaring facilities licensed by the Cabinet for Families and Children under KRS 199.640 to 199.670.

(b) "Agriculture" means farming in all its branches, including cultivation and tillage of the soil; dairying; production, cultivation, growing, and harvesting of any agricultural or horticultural commodity; raising of livestock, bees, furbearing animals, or poultry; and any practice, including any forestry or lumbering operations, performed on a farm in conjunction with farming operations, including preparation and delivery of produce to storage, to market, or to carriers for transportation to market;

(c) "Gratuity" means voluntary monetary contribution received by an employee from a guest, patron, or customer for services rendered; (d) "Tipped employee" means any employee engaged in an occupation in which he customarily and regularly receives more than thirty dollars (\$30) per month in tips; and

(e) "U.S.C." means the United States Code.

(3) As used in KRS 337.505 to 337.550, unless the context requires otherwise:

(a) "Construction" includes construction, reconstruction, improvement, enlargement, alteration, or repair of any public works project by contract fairly estimated to cost more than two hundred fifty thousand dollars (\$250,000). No public works project, if procured under a single contract and subject to the requirements of this section, may be divided into multiple contracts of lesser value to avoid compliance with the provisions of this section;

(b) "Contractor" and "subcontractor" include any superintendent, foreman, or other authorized agent of any contractor or subcontractor who is in charge of the construction of the public works or who is in charge of the employment or payment of the employees of the contractor or subcontractor who are employed in performing the work to be done or being done by the contractor or subcontractor under the particular contract with any public authority;

(c) 1. "Locality" shall be determined by the commissioner. The commissioner may designate more than one (1) county as a single locality, but if more than one (1) county is designated, the multicounty locality shall not extend beyond the boundaries of a state Senatorial district. The commissioner shall not designate less than an entire county as a locality. If there is not available in the locality a sufficient number of competent, skilled laborers, workmen, and mechanics to efficiently and properly construct the public works, "locality" shall include any other locality nearest the one in which the work of construction is to be performed and from which such available skilled laborers, workmen, and mechanics may be obtained in sufficient number to perform the work; and

2. "Locality" with respect to contracts advertised or awarded by the Transportation Cabinet of this state shall be determined by the secretary of the Transportation Cabinet. The secretary may designate any number of counties as constituting a single locality. The secretary may also designate all counties of the Commonwealth as a single locality, but he shall not designate less than an entire county as a locality;

(d) "Public authority" means any officer, board, or commission of this state, or any political subdivision or department thereof in the state, or any institution supported in whole or in part by public funds, including publicly owned or controlled corporations, authorized by law to enter into any contract for the construction of public works and any nonprofit corporation funded to act as an agency and instrumentality of the government agency in connection with the construction of public works, and any "private provider", as defined in KRS 197.500, which enters into any contract for the construction of an "adult correctional facility", as defined in KRS 197.500; and

(e) "Public works" includes all buildings, roads, streets, alleys, sewers, ditches, sewage disposal plants, waterworks, and all other structures or work, including "adult correctional facilities", as defined in KRS 197.500, constructed under contract with any public authority.

(4) If the federal government or any of its agencies furnishes by loans or grants any part of the funds used in constructing public works, and if the federal government or its agencies prescribe predetermined prevailing minimum wages to be paid to mechanics, workmen, and laborers employed in the construction of the public works, and if KRS 337.505 to 337.550 is also applicable, those wages in each classification which are higher shall prevail.

Effective: July 15, 1998

History: Amended 1998 Ky. Acts ch. 154, sec. 92, effective July 15, 1998; ch. 426, sec. 558, effective July 15, 1998; and ch. 606, sec. 113, effective July 15, 1998. -- Amended 1996 Ky. Acts ch. 48, sec. 1, effective July 15, 1996; ch. 100, sec. 1, effective July 15, 1996; and ch. 115, sec. 1, effective July 15, 1996. -- Amended 1994 Ky. Acts ch. 405, sec. 85, effective July 15, 1994; and ch. 492, sec. 1, effective July 15, 1994. -- Amended 1986 Ky. Acts ch. 208, sec. 2, effective July 15, 1986. -- Amended 1984 Ky. Acts ch. 414, sec. 12, effective July 13, 1984. -- Amended 1982 Ky. Acts ch. 54, sec. 1, effective July 15, 1982. -- Amended 1978 Ky. Acts ch. 141, sec. 1, effective June 17, 1978; and ch. 340, sec. 1, effective June 17, 1978. -- Amended 1976 Ky. Acts ch. 223, sec. 1. -- Amended 1974 Ky. Acts ch. 341, sec. 1; and ch. 391, sec. 1. -- Amended 1970 Ky. Acts ch.

33, sec. 1. -- Amended 1968 Ky. Acts ch. 100, sec. 6. -- Amended 1966 Ky. Acts ch. 158, sec. 1. -- Recodified 1942 Ky. Acts ch. 208, sec. 1, effective October 1, 1942, from Ky. Stat. secs. 1599c-4, 1599c-39, 2290c-1, 2290c-2, 4767a-1, 4767a-17.

Legislative Research Commission Note (7/15/98). This section was amended by 1998 Ky. Acts chs. 154, 426, and 606 which do not appear to be in conflict and have been codified together.

337.505 Definition of "prevailing wage," fringe benefits included.

For the purpose of KRS 337.505 to 337.550, the term "prevailing wage" for each classification of laborers, workmen, and mechanics engaged in the construction of public works within the Commonwealth of Kentucky, means the sum of:

(1) The basic hourly rate paid or being paid subsequent to the labor commissioner's most recent wage determination to the majority of laborers, workmen, and mechanics employed in each classification of construction upon reasonably comparable construction in the locality where the work is to be performed; such rate shall be determined by the commissioner in accordance with paragraphs (a), (b), and (c) of subsection (3) of KRS 337.520; in the event that there is not a majority paid at the same rate, then the basic hourly rate of pay shall be the average basic hourly rate which shall be determined by adding the basic hourly rates paid to all workers in the classification and dividing by the total number of such workers, and

(2) An additional amount per hour equal to the hourly rate of contribution irrevocably made or to be made by an employer on behalf of employees within each classification of construction to a trustee or to a third person pursuant to an enforceable commitment to carry out a financially responsible plan or program, which was communicated in writing to the employees affected, for the following fringe benefits: medical or hospital care, pensions on retirement, death compensation for injuries or illness resulting from occupational activity or insurance to provide any of the foregoing, unemployment benefits, life insurance, disability and sickness insurance, accident insurance, vacation and holiday pay, defraying costs of apprenticeship or other similar programs, or other bona fide fringe benefits, but only where the employer is not required by other federal, state or local law to provide any of such benefits: provided, said additional amount may, at the discretion of the employer, be paid either in cash to the employee or by contributions for fringe benefits, or partly in cash and partly by such contributions, it being the intention of this subsection to recognize fringe benefits as a part of the prevailing wage rate where made in accordance with this subsection.

Effective: July 15, 1982

History: Amended 1982 Ky. Acts ch. 54, sec. 2, effective July 15, 1982. -- Amended 1974 Ky. Acts ch. 341, sec. 2. -- Amended 1968 Ky. Acts ch. 33, sec. 1. -- Created 1962 Ky. Acts ch. 173, sec. 1.

337.510 Public authority's duties as to inclusion of prevailing wage in proposals and contracts.

(1) Before advertising for bids or entering into any contract for construction of public works, every public authority shall notify the department in writing of the specific public work to be constructed, and shall ascertain from the department the prevailing rates of wages for each classification of laborers, workmen, and mechanics for the class of work called for in the construction of such public works in the locality where the work is to be performed. This schedule of the prevailing rate of wages shall include a statement that it has been determined in accordance with the provisions of KRS 337.505 to 337.550 and shall be attached to and made part of the specifications for the work and shall be printed on the bidding blanks and made a part of every contract for the construction of public works.

(2) The public authority advertising and awarding the contract shall cause to be inserted in the proposal and contract a stipulation to the effect that not less than the prevailing hourly rate of wages as determined by the commissioner shall be paid to all laborers, workmen, and mechanics performing work under the contract. It shall also require in all the contractor's bonds that the contractor include such provisions as will guarantee the faithful performance of the prevailing hourly wage clause as provided by contract. It shall be the duty of the public authority awarding the contract, and its agents and officers, to take cognizance of all complaints of all violations of the provisions of KRS 337.505 to 337.550 committed in the course of the execution of the contract, and when making payments to the contractor becoming due under the contract, to withhold, and retain therefrom all sums and amounts due and owing as a result of any violation thereof. It shall be lawful for any contractor to withhold from any subcontractor under him sufficient sums to cover any penalties withheld from him by the awarding authority, on account of the

subcontractor's failure to comply with the terms thereof and if payment has already been made to him, the contractor may recover from him the amount of the penalty in a suit at law.

History: Amended 1974 Ky. Acts ch. 341, sec. 3. -- Amended 1970 Ky. Acts ch. 33, sec. 3. -- Amended 1960 Ky. Acts ch. 56, sec. 1, effective June 16, 1960. -- Recodified 1942 Ky. Acts ch. 208, sec. 1, effective October 1, 1942, from Ky. Stat. sec. 2290c-2.

337.512 Duties of individual officers with respect to prevailing wage law.

(1) No public official, authorized to contract for or construct public works shall fail, before advertising for bids or undertaking such construction, to ascertain from the commissioner the prevailing rates of wages as provided in KRS 337.505 to 337.550. (2) No member of a public authority authorized to contract for or construct public works shall vote for the award of any contract for the construction of such public works, or vote for the disbursement of any funds on account of the construction of such public works, unless such public authority has first ascertained from the commissioner the prevailing rates of wages of laborers, workmen, and mechanics for the classes of work called for by such public works in the locality where the work is to be performed and the determination of prevailing wages has been made a part of the proposal specifications and contract for such public works.

History: Amended 1974 Ky. Acts ch. 341, sec. 4. -- Created 1970 Ky. Acts ch. 33, sec. 4.

337.520 Determination of prevailing wages -- Administrative regulations -- Filing wage contract.

(1) The commissioner shall make initial determinations and current revisions of schedules of rates of prevailing wages, of the amount of fringe benefits included as defined in KRS 337.505, and the number of hours applicable. The commissioner may promulgate administrative regulations to carry out the provisions and purposes of KRS 337.505 to 337.550 and to prevent their circumvention or evasion. The administrative regulations shall not include a provision that each contractor and subcontractor furnish a sworn affidavit with respect to the wages paid each employee. No administrative regulation shall be issued by the commissioner except upon reasonable notice to, and opportunity to be heard by, any interested person.

(2) The commissioner shall require the filing of all wage contracts of all laborers, workmen, and mechanics in this state which have been agreed to between bona fide organizations of labor and an employer or associations of employers. The contracts shall be filed within ten (10) days after they are signed.

(3) The commissioner shall have the authority to determine schedules and current revisions of the rates of prevailing wages as defined in KRS 337.505, but in no case shall the commissioner determine wages to be paid for a legal day's work to laborers, workmen, and mechanics engaged in the construction of public works at less than the prevailing wages paid in the localities. The commissioner, in determining what rates of wages prevail, shall consider the following criteria:

(a) Wage rates paid on previous public works constructed in the localities. In considering the rates, the commissioner shall ascertain, insofar as practicable, the names and addresses of the contractors, including subcontractors, the

locations, approximate costs, dates of construction and types of projects, the number of workers employed on each project, and the respective wage rates paid each worker who was engaged in the construction of these projects.

(b) Wage rates previously paid on reasonably comparable private construction projects constructed in the localities. In considering the rates the commissioner shall ascertain, insofar as practicable, the names and addresses of the contractors, including subcontractors, the locations, approximate costs, dates of construction and types of projects, the number of workers employed on each project, and the respective wage rates paid each worker who was engaged in the construction of these projects.

(c) Collective bargaining agreements or understandings between bona fide organizations of labor and their employers located in the Commonwealth of Kentucky which agreements apply or pertain to the localities in which the public works are to be constructed.

(4) The wage rates to be used by the public authority in a contract for the construction of public works shall be the prevailing wage as of the date the public works project is advertised and offered for bid. If contracts are not awarded within ninety (90) days after the date of offering for bid, the public authority shall ascertain the prevailing rate of wages from the department before the contract is awarded. The schedule or scale of prevailing wages shall be incorporated in and made a part of each contract. (5) The

commissioner may promulgate administrative regulations authorizing the employment of apprentices and trainees in skilled trades at wages lower than the applicable prevailing wage.

Effective: July 15, 1996

History: Amended 1996 Ky. Acts ch. 48, sec. 2, effective July 15, 1996. -- Amended 1982 Ky. Acts ch. 54, sec. 3, effective July 15, 1982. -- Amended 1974 Ky. Acts ch. 341, sec. 5. -- Amended 1970 Ky. Acts ch. 33, sec. 6. -- Amended 1968 Ky. Acts ch. 33, sec. 2. -- Amended 1962 Ky. Acts ch. 173, sec. 2(1) to (4). -- Recodified 1942 Ky. Acts ch. 208, sec. 1, effective October 1, 1942, from Ky. Stat. sec. 2290c-3.

337.530 Contractor to pay prevailing wages and post rates -- Payroll records --

On-site inspections.

(1) Where a prevailing rate of wages has been determined and prescribed, the contract executed between a public authority and the successful bidder or contractor shall contain a provision requiring the successful bidder and all of his subcontractors to pay not less than the rate of wages so established. The successful bidder or contractor and all subcontractors shall strictly comply with these provisions of the contract.

(2) All contractors and subcontractors required by KRS 337.505 to 337.550 and by contracts with any public authority to pay not less than the prevailing rate of wages, shall pay such wages in legal tender without any deductions. These provisions shall not apply where the employer and employee enter into an agreement in writing at the beginning of or during any term of employment covering deductions for food, sleeping accommodations or any similar item if this agreement is submitted by the employer to the department and is approved by the department as fair and reasonable. All contractors and subcontractors affected by the terms of KRS 337.505 to 337.550 shall keep full and accurate payroll records covering all disbursements of wages to their employees to whom they are required to pay not less than the prevailing rate of wages. Such records shall indicate the hours worked each day by each employee in each classification of work and the amount paid each employee for his work in each classification. They shall be open to the inspection and transcript of the commissioner or his authorized representative at any reasonable time, and shall be in compliance with all regulations issued by the commissioner. These payroll records shall not be destroyed or removed from this state for one (1) year following the completion of the improvement in connection with which they are made.

(3) Each contractor and subcontractor subject to the provisions of KRS 337.505 to 337.550 shall post and keep posted in a conspicuous place or places at the site of the construction work a copy or copies of prevailing rates of wages and working hours as prescribed in the contract with the public authority, showing the rates of wages prescribed and the working hours for each class of laborers, workmen, and mechanics employed by him in the work of constructing the public works provided for in the contract with the public authority.

(4) Every employer shall permit the commissioner or his authorized agents to question any of his employees at the site of the public work and during work hours in respect to the wages paid, hours worked and duties of such employee or other employees.

Effective: July 15, 1982

History: Amended 1982 Ky. Acts ch. 54, sec. 4, effective July 15, 1982. -- Amended 1974 Ky. Acts ch. 341, sec. 7. -- Amended 1970 Ky. Acts ch. 33, sec. 8. -- Amended 1962 Ky. Acts ch. 173, sec. 4. -- Amended 1960 Ky. Acts ch. 56, sec. 3. -- Recodified 1942 Ky. Acts ch. 208, sec. 1, effective October 1, 1942, from Ky. Stat. sec. 2290c-4.

337.540 Limitation of working hours -- Exceptions -- Overtime.

(1) Every public authority, before advertising for bids, shall include with the schedule of wages a provision that no laborer, workman, or mechanic shall be permitted to work more than eight (8) hours in one (1) calendar day, which shall constitute a legal day's work; nor more than forty (40) hours in one (1) week, which shall constitute a legal workweek, except in cases of emergency caused by fire, flood, or damage to life or property. This limitation of work hours shall be made a part of the specifications for the work and printed on bid blanks where the work is done by contract and shall be incorporated as a part of each contract. This shall not prohibit any laborer, workman, or mechanic from working more than eight (8) hours in one (1) calendar day, but not more than ten (10) hours in one (1) calendar day where the employee and employer enter into an agreement in writing prior to the working of any one (1) day in excess of eight (8) hours, or where provided for in a collective bargaining agreement.

(2) No laborer, workman, or mechanic shall be permitted to work more than eight (8) hours in any one (1) calendar day, nor more than forty (40) hours in any one (1) week, except in cases of emergency caused by fire, flood, or damage to life or property, on the construction of public works which is being constructed under contract with any public authority. This shall not prohibit any laborer, workman, or mechanic from working more than eight (8) hours in one (1) calendar day, but not more than ten (10) hours in one (1) calendar day where the employee and employer enter into an agreement in writing prior to the working of any one (1) day in excess of eight (8) hours, or where provided for in a collective bargaining agreement.

(3) Any laborer, workman, or mechanic worked in excess of eight (8) hours per day or forty (40) hours per week, except in cases of emergency shall be paid not less than one and one-half (1-1/2) times the basic hourly rate of pay as defined and fixed under this chapter for all overtime worked, and each contract with any public authority for the construction of public works shall so provide. In any case where a laborer, workman, or mechanic works in excess of eight (8) hours per day, but not more than ten (10) hours per day in accordance with subsection (2) of this section, it will not be a violation of this subsection provided the laborer, workman, or mechanic who works in excess of ten (10) hours in any one (1) calendar day shall be paid not less than one and one-half (1-1/2) times the basic hourly rate of pay.

(4) The determination of exception provided in this section of when an emergency exists shall be made by the public authority letting the contract.

Effective: July 15, 1994

History: Amended 1994 Ky. Acts ch. 258, sec. 1, effective July 15, 1994. -- Amended 1974 Ky. Acts ch. 341, sec. 8. -- Amended 1968 Ky. Acts ch. 33, sec. 3. -- Recodified 1942 Ky. Acts ch. 208, sec. 1, effective October 1, 1942, from Ky. Stat. sec. 2290c-5.

337.548 Injunction of violation of prevailing wage law.

If it is found that a public authority has not complied with KRS 337.505 to 337.550, the commissioner shall give notice thereof in writing to such public authority. Sufficient time may be allowed for compliance therewith as the commissioner deems necessary. After the expiration of the time prescribed in the notice, the department shall at the earliest possible time bring suit in the Circuit Court of the county in which such public body is located to enjoin the award of such contract for a public works or any further work or payments thereunder if the contract has been awarded until the requirements of such notice are complied with. The court may issue a temporary restraining order without notice to the defendant in such action. Upon final hearing thereof, if the court is satisfied that the requirements of the notice by the department to the defendant were not unreasonable or arbitrary, it shall issue an order enjoining the defendant from awarding such contract for a public works or any further work or payments thereunder if the contract has been awarded until the notice is complied with. Such injunction shall continue operative until the court is satisfied that the requirements of the notice have been complied with and the court shall have and exercise with respect to the enforcement of such injunctions all the power invested in it in other similar cases. Both the plaintiff and the defendant in such action have the same rights of appeal as are provided by law in other injunction actions.

History: Created 1970 Ky. Acts ch. 33, sec. 9.

337.550 Department to aid in enforcement -- Remedies of laborer.

(1) Any laborer, workman, or mechanic employed on public works may file a complaint of any violation of any provision of KRS 337.505 to 337.550 with the department. The department shall assist him in the collection of claims of wages due him and shall also assist to the fullest extent in the administration and enforcement of KRS 337.505 to 337.550. The commissioner shall investigate and enforce the provisions of KRS 337.505 to 337.550 to the fullest and shall bring all actions to collect wages due any laborer, workman, or mechanic and shall take action against any contractor or subcontractor to restrain violations of KRS 337.505 to 337.550. If any contractor or subcontractor is found to be in violation of any provisions of KRS 337.505 to 337.550, then the commissioner shall inform the secretary for finance and administration of the Commonwealth of Kentucky, and the secretary for finance and administration shall hold such contractor or subcontractor ineligible to bid on public works until such time as that contractor or subcontractor is in substantial compliance as determined by the commissioner.

(2) A laborer, workman, or mechanic may by civil action recover any sum due him as the result of the failure of his employer to comply with the terms of KRS 337.505 to 337.550. The commissioner may also bring any legal action necessary to collect claims on behalf of any or all laborers, workmen, or mechanics. No employer shall take any punitive measure or action against an employee because such employee has

made a charge, testified, assisted or participated in any manner in an investigation, proceeding or hearing under KRS 337.505 to 337.550. The commissioner shall not be required to pay the filing fee, or other costs, in connection with such action.

Effective: June 17, 1978

History: Amended 1978 Ky. Acts ch. 340, sec. 5, effective June 17, 1978. -- Amended 1974 Ky. Acts ch. 341, sec. 9. -- Amended 1970 Ky. Acts ch. 33, sec. 10. -- Recodified 1942 Ky. Acts ch. 208, sec. 1, effective October 1, 1942, from Ky. Stat. sec. 2290c-6.

337.990 Penalties.

The following civil penalties shall be imposed, in accordance with the provisions in KRS 336.985, for violations of the provisions of this chapter:

(1) Any firm, individual, partnership, or corporation that violates KRS 337.020 shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000) for each offense. Each failure to pay an employee the wages when due him under KRS 337.020 shall constitute a separate offense.

(2) Any employer who violates KRS 337.050 shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000).

(3) Any employer who violates KRS 337.055 shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000) for each offense and shall make full payment to the employee by reason of the violation. Each failure to pay an employee the wages as required by KRS 337.055 shall constitute a separate offense.

(4) Any employer who violates KRS 337.060 shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000) and shall also be liable to the affected employee for the amount withheld, plus interest at the rate of ten percent (10%) per annum.

(5) Any employer who violates the provisions of KRS 337.065 shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000) for each offense and shall make full payment to the employee by reason of the violation.

(6) Any person who fails to comply with KRS 337.070 shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000) for each offense and each day that the failure continues shall be deemed a separate offense.

(7) Any employer who violates any provision of KRS 337.275 to 337.325, KRS 337.345, and KRS 337.385 to 337.405, or willfully hinders or delays the commissioner or his authorized representative in the performance of his duties under KRS 337.295, or fails to keep and preserve any records as required under KRS 337.320 and 337.325, or falsifies any record, or refuses to make any record or transcription thereof accessible to the commissioner or his authorized representative shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000).

(8) Any employer who pays or agrees to pay wages at a rate less than the rate applicable under KRS 337.275 and 337.285, or any wage order issued pursuant thereto shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000).

(9) Any employer who discharges or in any other manner discriminates against any employee because the employee has made any complaint to his employer, to the commissioner, or to his authorized representative that he has not been paid wages in accordance with KRS 337.275 and 337.285 or regulations issued thereunder, or because the employee has caused to be instituted or is about to cause to be instituted any proceeding under or related to KRS 337.385, or because the employee has testified or is about to testify in any such proceeding, shall be deemed in violation of KRS 337.275 to 337.325, KRS 337.345, and KRS 337.385 to 337.405 and shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000).

(10) Any employer who violates KRS 337.365 shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000).

(11) Any person who violates KRS 337.530 shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000).

(12) Any contractor or subcontractor who violates any wage or work hours provision in any contract under KRS 337.505 to 337.550 shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000) for each offense, and the contractor or subcontractor shall make full restitution to all employees to whom he is legally indebted by reason of said violation. The prime contractor shall be jointly and severally liable with a subcontractor for wages due an employee of

the subcontractor. For a flagrant or repeated violation the offending contractor or subcontractor shall be barred from bidding on, or working on, any and all public works contracts, either in his name or in the name of any other company, firm, or other entity in which he might be interested for a period of two (2) years from the date of the last offense. Each day of violation shall constitute a separate offense, and the violation as affects each individual worker shall constitute a separate offense.

(13) Any public authority, public official, or member of a public authority who willfully fails to comply or to require compliance with KRS 337.505 to 337.550 shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000) for each offense. Each day of violation shall constitute a separate offense. If a public authority, public official or member of a public authority willfully or negligently fails to comply with KRS 337.505 to 337.550 and the failure results in damages, injury or loss to any person, the public authority, public official, or member of a public authority may be held liable in a civil action. (14) A person shall be assessed a civil penalty of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000) when that person discharges or in any other manner discriminates against an employee because the employee has:

(a) Made any complaint to his employer, the commissioner, or any other person;

or

(b) Instituted, or caused to be instituted, any proceeding under or related to KRS 337.420 to 337.433; or

(c) Testified, or is about to testify, in any such proceedings.

Effective: July 13, 1990

History: Amended 1990 Ky. Acts ch. 42, sec. 3, effective July 13, 1990. -- Amended 1980 Ky. Acts ch. 188, sec. 262, effective July 15, 1980. -- Amended 1976 Ky. Acts ch. 222, sec. 2. -- Amended 1974 Ky. Acts ch. 391, sec. 13. -- Amended 1970 Ky. Acts ch. 33, sec. 11. -- Amended 1960 Ky. Acts ch. 56, sec. 4, effective June 16, 1960. -- Amended 1944 Ky. Acts ch. 63, sec. 2. -- Recodified 1942 Ky. Acts ch. 208, sec. 1, effective October 1, 1942, from Ky. Stat. secs. 576a-2, 1350, 1599a-19, 1599a-20, 2290c-4, 2290c-7, 4767a-16, 4866b-7.

Legislative Research Commission Note (10/23/90). Through an apparent clerical or typographical error, the reference to KRS 337.505 to 337.550 in the first sentence of what is now subsection (13) of this statute was transformed into "KRS 337.505 or 337.550." Compare 1970 Ky. Acts ch. 33, sec. 11, with 1974 Ky. Acts ch. 391, sec. 13. Pursuant to KRS 7.136(1), 446.270, and 446.280, the prior wording has been restored.

Are Prevailing Wage Laws Jim Crow Laws?

Do These Laws Purposely (or Inadvertently) Exclude Minorities from Public Construction Work?*

*(This chapter was written with Dale Belman, Professor of Economics, University of Wisconsin at Milwaukee.)

The Davis-Bacon Act, which requires that federal construction contractors pay their workers “prevailing wages” was passed by Congress in 1931 with the intent of favoring white workers who belonged to white-only unions over non-unionized black workers. The act continues to have discriminatory effects today.

David Bernstein, “The Davis-Bacon Act: Let’s Bring Jim Crow to an End”²¹

Introduction.

Until the mid-1970's debate over prevailing wage laws in construction was limited to its effect on project costs, taxpayer expenses, the benefits of collective bargaining and apprenticeship training. In 1975 Armond Thieblot introduced a new argument, that the Davis Bacon Act was, at least in part, motivated by racial bigotry. Thieblot noted that the issue of race was mentioned explicitly only once during the House debate on Davis Bacon by a Southern Congressman, but Thieblot asserted that thinly veiled allusions to race could be found in other speeches including those of Congressman Bacon.²²

In recent years, Thieblot’s initial assertion has been refined and advanced by some Washington think tanks, notably the CATO foundation and the Institute for Justice.²³ Their basic argument is that prevailing wage statutes discriminated against African-American workers because the higher wages on public projects inclined contractors to pass over lesser skilled workers, such as African-Americans. These think tanks also allege that such discrimination was not an unintended by product of the law, but reflected the purpose of the supporters of the Davis-Bacon Act. This interpretation of prevailing wage laws in general and the Davis Bacon Act in

21. David Bernstein, “The Davis-Bacon Act: Let’s Bring Jim Crow to an End,” Cato Briefing Paper, No. 17, Cato Institute, 1000 Massachusetts Avenue, N.W., Washington, D.C., January 18, 1993, Executive Summary.

22. Armond Thieblot The Davis Bacon Act, Industrial Research Unit, Report No. 10, Wharton School, University of Pennsylvania, Philadelphia, 1975, p. 9.

23. Institute for Justice lawyers presented arguments on behalf of plaintiffs in seeking the constitutional overturning of the Davis Bacon Act as a racially discriminatory law. Brazier Construction Co., Inc., et al., Plaintiffs, v. Robert Reich, Secretary of Labor, et al., Defendants, Civil Action No. 93-2318 WBB.

particular has received favorable attention from the media and in congress.²⁴ But these claims are not based on a careful review of the legislative histories of prevailing wage laws or analysis of the effects of prevailing wage laws on minority employment. Focusing on the issue of race, this chapter provides both an evaluation of the legislative history of prevailing wage laws in construction, and new empirical work estimating the effect of state prevailing wages on minority employment.

Were the Laws Leading Up to the Davis Bacon Act Racist?

Competition in post Civil-War construction labor markets segmented along racial lines. Blacks outside the South tended to compete with immigrant labor for unskilled work and tended to be excluded from the skilled trades.²⁵ White unions in construction reinforced this pattern of racially segmented competition.²⁶ These same construction unions were important supporters of the National Eight Hour Day Law of 1868. Given that unions supporting this law also engaged in racially exclusionary membership practices, can it be said that this law was intended primarily or substantially as a barrier against black employment on public works?

The Congressional debate surrounding the National Eight Hour Day Law in 1868 was fought over class lines and not racial lines. For instance, the Abolitionist Republican Senator from Massachusetts argued in favor of the Eight Hour Law by explicitly favoring the rights of labor over capital:

In this matter of manual labor I look only to the rights and interests of labor. In this country and in this age...capital needs no champion;...whatever tends to dignify manual labor or to lighten its burdens, to increase its rewards or enlarge its knowledge should receive our support.²⁷

Opponents of the Eight Hour Law felt the market should be allowed to regulate the terms of employment and that the law violated the freedom of individuals to make contracts as they pleased. For instance, Abolitionist Maine Republican Senator Fessenden in opposing the law argued:

Let men make contracts as they please; let this matter be regulated by the great regulator, demand and supply; and so long as it continues to be, those who are smart, capable, and

24. Scott Alan Hodge, "Davis Bacon: Racist Then, Racist Now," guest editorial by Heritage Foundation analyst in The Wall Street Journal, June 25, 1990, p. A14; George Will, "It Is Time to Repeal the Davis -bacon Act," syndicated column in many papers, February 5, 1995; Tony Brown, Black Lies, White Lies: the Truth According to Tony Brown, William Morrow and Company, Inc., New York, 1995, pp. 304-310.

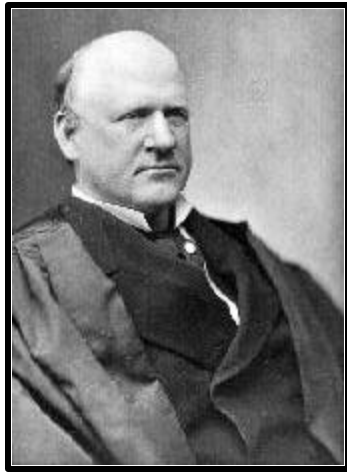
25. Only 14 African American masons and bricklayers were reported working in New York City in 1870. Blacks in construction tended to be construction laborers. "The longshoremen and common laborers [in New York City] are outnumbered by foreign competition; but as a general thing, their services as good honest laborers are preferred, and to a certain extent when business is brisk, get their share of employment." The Elevator, March 18, 1870, Vol. V, No. 50, p. 4, col. 1.

26. For instance, in 1869, the National Labor Convention of Colored Men complained: "the exclusion of colored men and apprentices from the right to labor in any department of industry or workshops in any of the States and Territories of the Unties States by what is known as "Trades Unions" is an insult to God and an injury to us." The [Washington] Evening Star, Wednesday, December 8, 1869 Vol. 34 No. 5224, p. 4 Col. 4.

27. Senate Debates, The Congressional Globe, June 24, 1868, 40th Congress, 2nd session, pp. 3424-3429.

intelligent, who make themselves skilled workmen, will receive the rewards of their labor, and those who have less capacity and less industry will not be on a level with them, but will receive an adequate reward for their labor [op.cite.]

In his evaluation of this debate historian David Montgomery concluded that the National Eight Hour Law was passed primarily with the support of Radical Republicans, the same political group that pushed the passage of the 13th, 14th and 15th Amendments to the Constitution.²⁸ There is no evidence in the Congressional debates that the first prevailing wage law in the United States was primarily or substantially aimed at limiting the labor market options of racial or ethnic minorities.²⁹



U.S. Supreme Court Justice John Marshall Harlan, an outspoken legal opponent of Jim Crow laws in the 1890s, upheld the constitutionality of prevailing wage laws. He said the purpose of the Kansas law was to shorten the working day without decreasing the prevailing daily wage. Had prevailing wage laws been Jim Crow laws in intent or effect, Justice Harlan would have objected to their constitutionality.

Nor can the first three state prevailing wage laws, Kansas in 1891, New York in 1894 and Oklahoma in 1908, be construed as racially motivated laws. The Kansas and Oklahoma laws were similar to the National Eight Hour Law. It mandated eight hours to be the legal working day on public construction and it required that contractors pay the common daily wage. The law intended that when the working day was shortened from 12 or 10 hours to 8, the daily wage would not be correspondingly reduced. In summarizing the purpose of the Kansas Act, in *Ashby v. Kansas*, the court case which found the act constitutional, Justice John Harlan, of the U.S. Supreme Court wrote:

When the eight hour law was passed the legislature had under consideration the general subject of the length of a day's labor, without specific reference to the purpose or occasion of their employment. The leading idea clearly was to limit the hours of toil of laborers, workmen, mechanics and other persons in like employment to eight hours, without reduction in compensation for the day's service.³⁰

28. David Montgomery, *Beyond Equality, Labor and the Radical Republicans*, 1862-1872, Alfred A. Knopf, New York, 1967, Chapter 8.

29. In California in the mid-1860s, labor unions had two main legislative goals --the exclusion of Chinese immigrants and the eight-hour day. California Republican U.S. Senator John Conness distanced himself from Chinese exclusion but led the fight for the National Eight Hour law. Montgomery, *Ibid.* p. 315.

30. Quoted in: Oklahoma, Department of Labor, *Second Annual Report*, Oklahoma City, OK, 1909, p. 327.

If the Kansas law had racial animus as a central motivation, that motivation escaped the notice of the most eminent dissenter in *Plessey vs. Ferguson*, the 1890 case that established the legality of segregation based on the principle of separate but equal public accommodations and services.

The primary concern of New York's prevailing wage law was the deleterious effects of cheap, itinerant, foreign and non-local labor on local labor standards.³¹ Those who were U.S. citizens were said to have a prior right to jobs. Foreign labor was described as itinerant, spending little and remitting most earnings back home. To the extent race was a consideration, union supporters of New York's prevailing wage law and its citizenship corollary had only one race in mind--whites. Unions complained of cheap, itinerant "birds of passage" from England, Canada, Sweden and Denmark.³²

Of course, cheap foreign labor was not always truly foreign or non-U.S. citizens. Cheap domestic labor also threatened local labor standards.³³ But that cheap domestic labor (at least in

31. The link between cheap foreign labor and cheap domestic labor from other regions of the country was made by a writer from the New York City Bricklayers and Masons' International Union Local No. 47:

"The only difficulty the bricklayers have is the influx of members of their craft from other States and countries to this city which is almost impossible to overcome."

-New York, Bureau of Statistics of Labor, Thirteenth Annual Report, p. 387.

George D. Gaillard of New York District Council of the United Brotherhood of Carpenters similarly stated:

"I think there should be something done about foreigners coming here in the spring and working during the summer and then again returning to Europe in the fall. They come over here and work for less money than the native American, thus depriving him of work."

-Thirteenth Annual Report, p. 388.

32. For example, Edward F. O'Brien, the Secretary of the Bricklayers and Masons' International Union No. 32 said:

...when business in our trade is brisk, the crowd of masons that come here to work from England is awful. They work during the summer here, live poorly, bank all they get, fill our positions and take all they earn back to England, to come again next summer. (p. 387)

A Brooklyn writer for the Brotherhood of Carpenters and Joiners No. 258 said:

We recommend restriction of immigration, for our trade suffers greatly from foreigners coming here and undermining the American citizens by working for whatever they can get. At the present time you will find that most of the carpenters out of work are citizens of the United States; while those employed are foreigners, especially Swedes...(pp. 387-88).

The Secretary of the Buffalo Brotherhood of Carpenters and Joiners No. 355 said:

We expect that you will do something for us here at Buffalo to prevent the importation of foreign labor, such as Canadians and labor from other States, to take all the employment away from us here at Buffalo. (p. 388)

A Brooklyn writer for the Brotherhood of Painters and Decorators No. 110 commented:

Our wages have been brought down to \$2.75 per day and less, by the amount of foreign labor in the market, mostly Swedes and Danes. (p. 388)

-Thirteenth, Annual Report

33. Mervyn Pratt of the United Tin and Sheet Iron Workers' Association of New York City emphasized that

the 1890s in New York state) was white, not persons of color. For instance a writer for the New York City Bricklayers and Masons International Union No. 34 noted in 1899:

For some years what we term 'birds of passage' came over from Europe in the spring, worked here until fall, and then returned to the old country, but on account of the hard times they haven't been coming over lately. We are now affected by the flood of westerners, and there is an overplus of bricklayers in the city...³⁴

Was the Davis Bacon Act of 1931 Primarily Motivated by Racial Animus?

David Bernstein argues that racist comments found in the Congressional debate over the Davis-Bacon Act (1931) and preceding related acts (1930 and 1927) prove the Davis-Bacon Act was motivated by racial animus. His interpretation of the Congressional record divides into two parts-- a limited number of statements that directly referred to race and a larger number of statements that he believes are coded references to race. Bernstein states:

The comments of various congressmen reveal the racial animus that motivated the sponsors and supported of the bill. In 1930, Representative John J. Cochran of Missouri stated that he had “received numerous complaints in recent months about southern contractors employing low-paid colored mechanics getting work and bringing the employees from the South.” [Alabama] Representative Clayton Allgood, supporting Davis-Bacon on the floor of the House, complained of “cheap colored labor” that “is in competition with white labor throughout the country.” Other congressmen were more circumspect in their references to black labor. They railed against ‘cheap labor,’ ‘cheap imported labor,’ men ‘lured from distant places to work on this new hospital’ ‘transient labor,’ and ‘unattached migratory workmen.’ While the congressmen were not referring exclusively to black labor, it is quite clear that despite their ‘thinly veiled’ references, they had black labor primarily in mind.³⁵

In fact, direct reference to race in the debate over Davis-Bacon was rare. Of the 31 Senators and Representatives who spoke in favor of the Davis-Bacon Act in 1931, Alabama Representative Allgood is the only one to have explicitly mentioned the issue of race. Furthermore, only one of the thirteen witnesses who spoke at Senate and House hearings in that year mentioned the issue of race. Thus, the view that Congressional debate demonstrates that the Davis-Bacon Act was motivated by racial animus relies primarily on the view that proponents of the Act hid their animus with racial code words. In this view, when proponents of the Davis-Bacon Act complained of cheap, itinerant, foreign, non-local labor undercutting local labor standards, these proponents were using these adjectives as code words for African Americans.

There should be some law which would prevent foreign contractors--I mean contractors from other States--from coming here and taking contracts, as it brings on many troubles. The wages in other places than New York city are certain to be lower than here and they only want the wages and work the hours of the places from which they came.

-Thirteenth Annual Report, p. 535.

34. 16th Annual Report of the New York Bureau of Labor Statistics for 1898, Albany 1899, p. 1042.

35. Bernstein, ibid., p. 3.

One weakness with the code word hypothesis is that racial and ethnic discrimination was widely accepted at the time and people, including political representatives, were unlikely to use code words when speaking openly of the ‘problem’ was so acceptable. Another weakness is that these same adjectives were explicitly applied to white Europeans in the debate over New York state prevailing wage law. A racial animus interpretation of prevailing wage laws would require that these initiatives and their code words be used primarily or only emerge when the cheap labor is a racial minority.

A third issue with the code word hypothesis as applied to Davis-Bacon is that most, cheap, itinerant labor coming into high wage states in the North was not from the South and, even among itinerant southern construction labor coming north, most were white. Table 3 shows the proportion of all construction activity in each of the high wage states accounted for by contractors either from seven north-west-central states or eight southern states. As a group, contractors the north-west-central states accounted for 8% of the construction activity in these ten high wage states in 1929 while contractors from the southern states accounted for 1% of the construction activity in these 10 northern states. The pattern of activity is partly determined by regional proximity. Illinois which is close to the northwestern states has the highest involvement of contractors from Western states; Pennsylvania which is closest to the South has the highest southern contractor involvement.

Table 3:

Importing State	Average Construction Income	Percent of All Construction Activity in Importing State Accounted for by Contractors from:		
		North Central	West 8 Southern	All Out of Region
NY	\$2,254	7%	0%	28%
IL	\$2,113	29%	1%	66%
NJ	\$2,036	1%	1%	8%
MI	\$1,921	12%	1%	55%
MA	\$1,874	1%	0%	16%
CN	\$1,842	0%	0%	2%
OH	\$1,786	15%	3%	61%
RI	\$1,774	0%	0%	7%
PA	\$1,755	1%	5%	50%
IN	\$1,581	10%	2%	35%
10 States		8%	1%	32%

Source: 1930 U.S. Census of Population, Construction

Massachusetts, Connecticut and Rhode Island had little involvement from contractors of either the South or the West. Ohio and New York, states equally distant from the South and the plains states had significantly greater involvement from plains state contractors compared to southern contractors.³⁶

36. The two regional grouping, eight southern states and seven plains states, had similarly sized construction industries at the time. The labor force in the southern states earned on average around \$1,200 per year and were

Furthermore, even when a southern general contractor came north with a work crew, that crew was likely to be composed of both white and African American workers. Construction occupations were racially segregated in the South. A crew, which would require the craftsmen from a variety of construction occupations, would necessarily include workers of both races. Thus, the general contractor would likely bring black laborers and hod carriers and perhaps brick masons. But the same contractor would probably bring white carpenters.³⁷ If a southern contractor came north with an integrated crew at the proportions typical of the racial composition of the southern construction labor force, then the majority of southern workers coming north would be white. (See Table 4).

Table 4: Black Construction Workers as a Percent of All Construction Workers in Southern States, 1930

State	African American as Percent of All Construction Workers
Alabama	25%
Florida	17%
Georgia	31%
Louisiana	28%
Mississippi	30%
North Carolina	24%
South Carolina	39%
Virginia	15%

Source: 1930 Census of Population, Occupations

Proponents of the Jim Crow interpretation of the Davis-Bacon Act point to an example of an Alabama contractor who came into Representative Robert Bacon's Long Island district around 1926 and built a veterans hospital. This example was mentioned several times in the Davis-Bacon debate and in discussions of earlier related laws. As early as 1927, Representative Bacon complained that this Alabama contractor undercut local labor standards by using cheaper outside labor.

The Jim Crow view assumes that this contractor brought a primarily black labor force with him. Bernstein argues this was a coded complaint against the employment of black workers in Bacon's district.³⁸ Bernstein relies on a memorandum written by U.S. Commissioner of Labor Ethelbert Stewart in 1928 that characterized the Alabama contractors crew as primarily or essentially black.³⁹ However, in hearings for a predecessor bill, Bacon indicated that the

roughly 20% African American. The plains states workers earned roughly \$1,450 per year and few were African American. Workers in the northern states selected earned around \$1,800 per year and employed few African Americans.

37. For instance, data for Virginia in the 1920s indicate that virtually all construction contractors in that state operated with racially integrated construction crews even though in most cases occupations were racially segregated.

38. Bernstein, op. cit., p. 3.

39. Stewart wrote:

Alabama contractor had brought an integrated crew and that the issue was not race, in any case, but rather the undercutting of local labor standards.⁴⁰ In the 1931 debate over the Davis-Bacon bill itself, Representative Fiorello LaGuardia from New York City described his memory of the Alabama contractor that came to Long Island some five years earlier:

A contractor from Alabama was awarded the contract for the Northport Hospital, a Veterans' Bureau hospital. I saw with my own eyes the labor that he imported there from the South and the conditions under which they were working. These unfortunate men were huddled in shacks living under most wretched conditions and being paid wages far below the standard. These unfortunate men were being exploited by the contractor. Local skilled and unskilled labor were not employed. The workmanship of the cheap imported labor was of course very inferior....all that this bill does, gentlemen, is to protect the Government, as well as the workers, in carrying out the policy of paying decent American wages to workers on Government contracts. [Applause.]⁴¹



New York Republican Representative Fiorello LaGuardia strongly defended the Davis Bacon Act. He decried the exploitation of Southern workers--both black and white--and claimed that the Davis Bacon Act's purpose was to ensure that decent wages were paid on Government projects.

[the Alabama contractor] brought with him an entire outfit of negro laborers from the South, housed them in barracks and box cars, permitting no one to see them, that he employed no local labor whatsoever. (Quoted in Bernstein, p. 4)

40. Bacon stated:

...the contractor has also brought in skilled nonunion labor from the South to do this work, some of them negroes and some of them white, but all of them are being paid very much less than the wage scale prevailing in New York State...

If this contractor hired no local labor, then the skilled labor would very likely have been white southerners. In any case, Bacon explicitly stated that the issue was not whether the outside labor was black but rather whether the outside labor undercut local union wages and working conditions. When Georgia congressperson Upshaw suggested that the problem was created by the presence of black labor, Bacon responded:

the same thing would be true if you should bring in a lot of Mexican laborers or if you brought in any nonunion laborers from any state.

This response is consistent with the debate around the New York state prevailing wage law thirty years before that sought to reduce the employment prospects of European whites and cheaper labor from western states. Sixty-Ninth Congress, Second Session, House of Representatives, Hearings Before the Committee on Labor, H.R. 17069, Washington, GPO, 1927, pp. 2-4.

41. U.S., Seventy-First Congress, Third Session, *Congressional Record*-House, February 28, 1931, p. 6510.

Although a small number of racial references can be found in the Davis-Bacon debate and previous, related debates, the principle issue of the debate is the protection of labor standards.⁴² There is no question but that between 1868 and 1931 most construction unions were racially exclusionary institutions, and these unions were supporters of prevailing wage laws. But race was not the primary or an essential concern of prevailing wage laws. The line of support for prevailing wage laws drawn from Radical Republican and Abolitionist Senator Henry Wilson in 1868 to anti-Jim Crow Justice John Harlan at the turn of the Century to Progressive Republican Fiorello LaGuardia in 1931 is inconsistent with the Jim Crow interpretation of prevailing wage laws.

Racial Employment Effects of the Davis-Bacon Act.

Whatever the intent of supporters of prevailing wage laws, could it be that these laws nevertheless act to exclude African-American employees from the construction industry? Critics of the law suggest that African-American workers are disadvantaged both by the higher wage required by prevailing wage laws and by the lack of low wage entry occupations other than apprentice. These critics argue that higher wage rates make less skilled and less productive employees unattractive to contractors because the wage level cannot be adjusted to conform to the productivity of such employees. Contractors will prefer higher skilled workers, workers who are overwhelmingly white due to hiring and training practices, and will avoid hiring the lower skilled African-American workers. In addition the only type of employee who can be paid at less than the journeyman rates under current administrative practice is an apprentice. The lack of alternative lower wage positions, such as 'helper' or 'trainee', precludes less skilled workers from being hired onto jobs where they could develop the skills needed to qualify as a journeyman. This restriction on the ports of entry for lower skilled workers acts to exclude African-Americans in particular. Both arguments premise that African-Americans in the building trades and related fields have lesser skills than other workers in construction occupations. This might be due to discrimination in entry to apprenticeship programs, in hiring into jobs for which there is union representation, or a lack of family background in the building trades.⁴³

Representing this criticism, Richard Vedder and David Gallaway argue:

Representative Bacon was partly successful in his efforts to maintain a predominantly white labor force in construction. Despite a reduction in racially prejudicial conduct by employers over time, blacks continue to be under-represented in construction employment, more so than in other comparable occupations not subject to the strictures imposed by Davis-Bacon. While minimum wage laws such as Davis-Bacon increase unemployment for all groups and raise costs of production, the negative impact of this

42. Further evidence on the racial intent of supporters and opponents of the Davis-Bacon Act might be found voting in the voting pattern of proclaimed segregationists in the House and Senate but the vote was taken by voice and there is no record of who voted for or against the bill. Only one House member spoke against the bill and his dissent was because of the pro-union provisions of the Act.

43. As noted previously in this paper, there is historic evidence of discrimination in acceptance into apprenticeship programs. More recent work by Bilginsoy suggests that such practices have largely been ended (1998). Further, apprenticeship programs provide only half of the trained journeymen in the industry. Other important sources include training in the military, community colleges and on the job training.

legislation has fallen disproportionately on individuals subject to discrimination.⁴⁴

Vedder and Galloway support their conclusions with two measures of the change in the labor market situation of African-American employees in construction between 1930 and 1980: 1) the shift in their unemployment rate relative to white employees, and 2) the change in African-American representation in construction relative to the change in their representation in comparable non-construction occupations.

First, that African-American unemployment rates in construction would increase after passage of prevailing wage legislation is a straightforward extension of the thesis that prevailing wage laws reduce employment opportunity for minority construction employees. Recognizing that unemployment rates among African-American employment rose more than white rates from 1930 to 1980, Vedder and Galloway further suggest that the general trend is due to the federal minimum wage law, and is "aggravated within construction by the existence of Davis-Bacon."⁴⁵ The difference in the unemployment rate of African-American and white workers in construction should then have widened over the intervening 50 years and should have widened more than the difference in unemployment rates between African-Americans and white workers in the balance of the labor force.

Minority unemployment rates in construction did rise relative to white rates from 1930 to 1980. The gap between white and African-American unemployment rates in construction increased from 1.2 percentage points to 3.9 percentage points between 1930 and 1980 (African-American unemployment construction rose from 13.5% to 16.4%, for white workers it rose from 12.2% to 12.5%). Although the authors argue that the "... differential more than tripled", the increase in the gap in construction was smaller than the increase in the gap for the full labor force (see Table 5). Data from another article by Vedder and Galloway (1994) indicates that the African-American/white unemployment gap for the entire national work force increased eleven times, from -.52 percentage points to +5.52 percentage points between 1930 and 1980. Expressed less dramatically, the ratio of African-American to white unemployment in construction rose from 1.10 to 1.31 between 1930 and 1980, while it rose from .92 to 2.07 for the labor force as a whole. Once appropriately benchmarked, national unemployment data does not support the view that Davis-Bacon increased unemployment among African-American construction workers.⁴⁶

44. Richard Vedder and David Galloway, Cracked Foundation: Repealing the Davis-Bacon Act, Center for the Study of American Business, Policy Study Number 127, November, 1995, p. 23.

45. Vedder and Galloway, Cracked Foundation, Fn. 39, p. 28.

46. Given the vast changes in a African-American employment structures over the period in question, shifts from a predominantly agricultural labor force with concealed unemployment and underemployment, to an urban work force more readily counted and measured, the most appropriate conclusion might be that the data is inadequate to the purpose.

Table 5: Unemployment Rates for Construction and the General Economy, 1930 - 1980

	Male Unemployment Rates			
	Construction		Non-Construction	
	Whites	Blacks	Whites	Blacks
1930	12.22%	13.48%	6.59%	6.07%
1980	12.49%	16.36%	5.18%	10.70%

The second argument considers the change in the labor force involvement of African-Americans in six construction occupations (carpenters, electricians, plumbers, painters bricklayers/stonemasons and plasterers) and compares this to the change seven other blue collar occupations (typesetters, compositors and printing-press operators; tool and die makers; cabinet makers; butchers; cotton mill operatives; and machinists) for the period 1900- 1990. African-American participation in an occupation is indexed by the ratio

$$\frac{\% \text{ of the African-American male labor force in Occupation}}{\% \text{ of male labor force in Occupation}}$$

When this index is greater than 1, African-American male construction workers in the occupation are over-represented in the selected occupation. Conversely, they are under-represented when the index is below 1. Rather than make this comparison occupation by occupation, the two sets of occupations are aggregated into a construction and non-construction indices using employment weights. Data for the indices is taken from the decennial census.

Prior to Davis-Bacon, African-Americans were more severely under-represented in the non-construction group, the construction index was 31.5% against 13% for the comparison. By 1990, this had reversed with the index for the comparison group reaching 125% against a construction index of 70.4%.⁴⁷ Vedder and Galloway argue that black participation in construction should have risen as fast as it did in the comparison occupations. Its failure to do so was because construction was regulated by Davis-Bacon while the comparison occupations were not so regulated.

Although bench marking the construction index to other occupations provides partial control for factors other than Davis-Bacon which have affected the racial composition of occupations, the comparison is ultimately unconvincing. Sensible changes in the occupations used to construct the indices alter the results. Addition of construction laborers to the construction index, unskilled workers comparable to textile mill operatives, lifts that index from 70.4% to almost 100%. The effects of economic and social changes over the period under consideration -- changes such as the shift of the cotton and furniture industries to the South, the shift of consumer preferences from beef (a Northern and Western industry) to chicken (a Southern industry), and the growth of construction in the Sunbelt would have to be sorted out before these indices could be used to measure the effect of Davis-Bacon on the racial composition of the construction trades.

47. Vedder and Galloway, Cracked Foundations, Figure 2, p. 15.

Contemporary Effects of 'Little' Davis-Bacon Laws on Minority Employment:

The issue addressed in this empirical research, an issue at the core of the controversy about prevailing wage statutes, is whether such statutes reduce African-American representation in the construction labor force. Our strategy for investigating this issue is to first use descriptive statistics to illustrate the inter-relationship between statutes and the racial composition of the labor force. We then supplement this with estimates of five progressively more complete multi-variate models of the racial composition of the construction labor force. These models include factors such as union membership, individual characteristics and occupation which may influence employment in construction. The descriptive statistics illuminate the central features of the relationship of interest; the multi-variate models assure that the effects of statutes have been isolated from those of correlated factors as well as provide statistical tests of the relationship between statutes and racial composition.

Our research finds no relationship between prevailing wage statutes and the racial composition of the construction labor force. There is a simple negative correlation between prevailing wage laws and the probability of observing an African-American in the blue collar construction labor force. Although this is consistent with the views of the critics of prevailing wage laws, it neglects the role of the racial composition of labor supply on the characteristics of the construction labor force. Many of the states which lack prevailing wage laws are in the South and have a large proportion of African-Americans in their labor force. Once we allow for differences in the labor supply between states, there is no evidence of a relationship between state prevailing wage laws and the proportion of African-Americans in construction. This pattern is apparent in the descriptive statistics and across all specifications of the multi-variate models.

This analysis focuses on the effect of state prevailing wage laws on the racial composition of the construction labor force. Analysis of the Federal Davis Bacon Act is difficult as there is little cross sectional or inter-temporal variation in provisions and application of the Act. In contrast, there is considerable variation between states with respect to both the presence and provisions of state prevailing wage statutes. In 1994, thirty-three states (including the District of Columbia) had prevailing wage statutes which applied to construction, eighteen did not. Among the 33 states with laws there are differences in construction projects subject to the laws and the formula used to determine the prevailing wage. Thieblot, a proponent of the notion that prevailing wage regulations discourage black employment, uses a classification scheme of states according to whether their prevailing wage law is 'strong', 'average' or 'weak'. The following analysis uses Thieblot's classification and yet directly refutes his conclusions.⁴⁸

Data for this analysis is taken from the 1994 Outgoing Rotation File (ORG) provided by the BLS. These files include individuals who are in the last month of their CPS rotation and who are asked questions about their wages, hours of work, and union membership. We include all individuals who report being employed as a 'precision production' (craft), operative, transportation operative or laborer in the construction industry from the 1994 ORG files of the BLS. There are 5,886 observations in the data set, 5.96% of the employees self report as African-American.

48. Thieblot, "Impact of Prevailing Rates on Black Employment in the Construction Industry," expert report submitted on behalf of plaintiffs in *Brazier Construction Company, et al. v. Robert Reich*, *op. cit.* Thieblot repeats this analysis in a brief note in the *Journal of Labor Research*, Spring, 1999. Thieblot uses a two to 17 point system in an earlier work *State Prevailing Wage Laws, An Assessment at the Start of 1995*, Associated Builders and Contractors, Inc., Rosslyn, VA, 1995.

No one argues that prevailing wage laws and the racial make up of the labor force are the only factors affecting African-American representation in construction. Other factors may influence employment in construction and may, if not controlled for, mask the true effect of prevailing wage statutes. We address this estimating a four multi-variate models, working from a simple model which only allows for the influence of prevailing wage statutes, to models which better reflect the complexity of the employment decision. The initial model includes only the three prevailing wage indicators: strong law, average law, and weak law, as explanatory variables (Model I). Individuals are assigned values for the prevailing wage variables according to their reported state of residence. The next model adds a control for the percent of African-Americans in the non-construction labor force of the state. (Model II)

The third model includes two variables related to unionization, union membership and union density by state, for the construction industry (Model III). Some construction unions have historically acted to exclude African-Americans from membership and from their trade. Although such practices have been determined to be illegal by the courts, unions may still engage in practices which de facto serve to exclude African-Americans from employment in construction. These two measures of unionization control for and measure the effect of construction unionization on African-Americans employment independent of the effects of state prevailing wage laws. Individual characteristics, such as age, education, place of residence and gender may influence the suitability of individuals for employment in construction. The fourth model follows the work of Heywood and Peoples (op.cite.) in adding controls for demographic characteristics and educational attainment (Model IV).

The final model, model V, provides controls for three digit occupation. The argument for racial hiring consequences of prevailing wage laws suggests that such laws systematically favor more skilled, and hence more productive, workers. African-American workers are on the lower end of the skill distribution, so prevailing wage laws act to exclude them from the industry. But skills in construction are, for the most part, specific to occupations. Those excluded by prevailing laws are excluded because they are on the lower end of the skill distribution for their occupation. To this point coefficients have been estimated without regard to occupation and, as such, combine 'within' occupation and 'between' occupation effects. This could veil the racial effects of prevailing wage laws if such effects occur entirely within occupations. The addition of controls for occupation resolves this as 'between' occupation effects are accounted for by the occupational controls and the non-occupational coefficients capture only 'within' occupation effects. Although most econometric research control for occupation at the level of major occupation (23 categories) or, less frequently, detailed occupational (45 classifications) controls, this research uses three digit occupational controls to better delineate the craft structure of the industry.

The models are estimated using probit, but as the error term has both individual and state error components, consistent estimation is more complex than the typical probit is. The two component error structure, an implication of inclusion of state level variables in the model, results in an n.i.i.d. error which is correlated across individuals within states. If this were a linear model, OLS estimates would be consistent but inefficient.⁴⁹ The implications for estimation of a maximum likelihood model are more serious, coefficient estimates are not consistent. This can be corrected with a model which allows for a random state error component. There are several

49. The standard errors obtained from the OLS routine in a typical software package would, however, be wrong, as they are calculated under the assumption of independence of error terms. The correct OLS errors can be obtained by methods typically referred to as robust or White-Huber corrections.

methods of estimating such a model, we utilize Butler & Moffit's (1982) approach.⁵⁰ We illustrate the issue of random components by estimating Model I with a conventional probit and the random effects corrected estimator used throughout the balance of the paper. Estimates of the derivatives of the likelihood functions, the non-linear counterpart of regression coefficients, are provided in Table 6.⁵¹

Estimates of model I derived from a conventional probit are found in the first column in Table 6, estimates for a model which allows the state error term are in the second column. The derivatives of the coefficients from the conventional probit are similar across the three classifications of prevailing wage laws. The presence of a law reduces the likelihood of observing an African-American employee by approximately 3.5% without regard to the strength of the law. The coefficients are statistically significant at conventional levels, but the level of significance varies widely, from significant in a 1% one tailed test for strong laws, to 5% in a one tailed test for weak laws, to 10% for average laws. Despite such differences -- but parallel with the descriptive statistics -- the conventional probit estimates of Model I may be taken as supporting the racial exclusion theory.

These results are, however, misleading both with regard to coefficient estimates and statistical significance. Correction for random state effects (column two) has little impact on the estimated effect of the coefficients on weak and average laws, African-American employment is reduced between 3% and 3.8% in the presence of such laws. The standard errors for these two variables are substantially smaller than those in the conventional probit, both coefficients are significant at better than a 1% level. The more striking change is the decline in the estimated effect of strong laws, to one third the level indicated by the conventional probit, and its consequent loss of statistical significance in any conventional test.⁵² The result for the strong law coefficient is at variance with the racial exclusion theory as strong laws should have a more marked exclusionary effects than average or weak laws. The random effects estimates might be interpreted as providing partial support for the racial exclusion theory, but it more clearly illustrates the need to use an appropriate estimator.

Model II adds a variable for the proportion of African-American's in the state's non-construction labor force and the estimates suggest this is a critical determinant of the proportion of such workers in construction. The derivative of the coefficient on the proportion of African-American in the non-construction labor force is .5002 with a t-statistic of 13.9; a state with ten percentage points more African-American workers in its labor force will have a five percentage points higher level of African-American employment in its construction labor force. As with the descriptive statistics, inclusion of this variable in the model eliminates the relationship between prevailing wage laws and African-American employment in construction. The coefficients on the prevailing wage variables become smaller in magnitude, the point estimates of the derivatives range between -.003 and +.0094; this decline in magnitude causes the coefficients to become non-significant. This result also carries through models III - V, prevailing wage coefficients are never

50. Estimation with this procedure can be sensitive to the procedures used for estimation, such as the number of quadratures used, but estimates with this data were stable across variations on the routine.

51. The complete estimates are available from the authors.

52. The divergence in the effect of strong laws from that of other laws can be tested by comparing this model to one in which the strong, average and weak coefficients are constrained to be the equal. The hypothesis of equality between the coefficients on the three prevailing wage variables can be rejected in a 1% Wald test.

significant in models which include the proportion of African-Americans.

Addition of controls for union membership and union density, model III, do not alter any the estimates. The coefficient on the proportion of African-Americans in the state labor force remains large and statistically significant, those on the prevailing wage law variables continue to have small, non-significant coefficients and the coefficients on union membership and union density by state are also small and non-significant. This outcome, which is maintained in all further estimates, is unexpected given the historic and legal record of some building trades unions with regard to employment of African-American workers. It may reflect the success of legal and institutional efforts to end discriminatory practices. Whatever the source, this research suggests that construction employees who are union members are no less likely to be African-American than those who are not African-American. Further, that the increased bargaining power provided by greater union organization of construction labor markets is not being used to exclude African-Americans from employment in construction.

Model IV, which controls for factors such as age, education and residence, which might influence the suitability of individuals for employment in construction, does not alter the relationship between prevailing wage laws and minority employment. The effect of the proportion of African-Americans in the state labor force remains large, the effects of prevailing wage laws and of union membership and density remain small in magnitude and non-significant. Other important determinants of African-American employment are age and its square, metropolitan residence, marital status and holding a college degree. Older employees are more likely to be African-American, although the relationship is convex. Considering the effect of age alone, a twenty year old has an 8% probability of being African-American, a thirty year old has a 10.6% probability, a forty the probability is 12.3%, at fifty it is 13.1%. The probability begins to decline between fifty and sixty and at sixty it is 12.9%. One possible source of this pattern are the recent shifts in minority employment in construction, with Hispanics increasingly competing with African-American workers over the last twenty years. Older African-American construction workers, who have ties to the industry, would have remained employed at relatively high rates. But fewer young African-Americans would find employment in construction as Hispanics have moved into the industry (Belman and Bilginsoi, 1997). In addition to age, residence in a metropolitan area increases the probability of an employee being African-American by 1.7%. Being married and holding a college degree both decrease the likelihood of observing an African-American, by 2.3% and 4.2% respectively. Educational attainment other than a college degree has little effect on the racial composition of the construction labor force, a result in keeping with the importance of occupation specific rather than general skill training in the industry (Belman and Bilginsoi, op.cite.).

Model V, the final model in this series, differs from prior estimates in controlling for a fixed effect by three digit occupation. Again, by removing the effects of inter-occupational factors including skill related factors, this model should eliminate any masking of the effects of prevailing wage laws by occupational factors. The thrust of the prior results remains. The cardinal explanatory variable is the proportion of African-Americans in the state labor force, the effects of prevailing wage laws and unionization are small in magnitude and non-significant. Model V suggests varied patterns of racial employment by trade. There are thirty-four distinct trades in this data set including three grades of mechanic, carpet layers, iron workers, electricians, apprentices, and bricklayers. There is evidence that African-Americans are significantly less likely to be observed in occupations such as construction supervisor, heating-ventilation-air-conditioning, carpenter, electrician, painter, plumber, ironworker, sheetmetal, welder, operating engineer or material moving operative. Although no simple pattern is apparent in this set of occupations, it

appears that African-Americans are less likely to be employed in licensed occupations (such as plumbing and electrical) and occupations which require formal training (such as operating engineer, electrician and plumber). But, carpenters and welders, occupations which are often self taught or learned on the job, are also less likely to be African-Americans. The estimates also indicate that apprentices are no less likely to be African-American than other construction workers. This cuts against the argument that such positions do not provide ports of entry to construction for African-Americans and is consistent with Bilginsoy's research on apprenticeships. The small size of the sample argues against putting too much credence in this result.⁵³

Conclusion:

A prominent criticism of prevailing wage laws has been that they reduced the employment of African-Americans in the construction industry. This premise has been supported by evidence from legislative records and theoretic arguments about administered wages role as a bar to the employment of the lesser skilled African-American worker. The argument was further buttressed with evidence on discrimination against African-American employees by building trades unions.

This chapter has addressed both of these issues, providing an overview of an extensive review of the historic record of prevailing wage laws and a statistical analysis of the current relationship between 'little Davis-Bacon' acts and minority employment. We find that, although those involved in passage of prevailing wage laws did have exclusionary intent, the intent was towards low wage, transient workers including, at various times, white Northern Europeans and migrants from the Northern Great Plains. The argument for anti African-American bias in the legislative history of Davis-Bacon itself is based on overplaying one Senator's comments, misreading of the record and misinterpretation of the historic circumstances at the time of the passage.

Our empirical research moves away from discussion of intent to one of measurable consequences. Utilizing a conventional data source and a procedure incorporating a state and individual error component, we find a moderate negative simple correlation between state prevailing wage laws and minority employment in blue collar construction. This correlation is, however, the product of the lack of such laws in the South, the region with the largest proportion of African Americans in its labor force. Once adjusted, the association between prevailing wage laws and minority employment disappears.

The debate surrounding the Davis Bacon Act will continue on other grounds. How the Act effects the cost of public construction, the quality of work done, the amount of training that takes place in construction, the extent to which the law promotes labor standards and encourages collective bargaining, all these issues remain and will be addressed in subsequent chapters. However, the proposition that the Davis Bacon Act was primarily or substantially intended to restrict African American access to federal construction work is not supported by the historical record, and the idea that the Davis Bacon Act currently restricts minority access to construction work is not consistent with current racial patterns of employment.

53. The helper classification is of interest as opponents of prevailing wage legislation suggest that the helper category is utilized by African-Americans as a point of entry to the construction labor force. The relationship between employment as a helper and racial status could not be tested as there were few helpers in the data set and since none were African-American it could not be included in the model.

Table 6

Prevailing Wage and Minority Employment
(Likelihood of Observing a Black Employee in a Probit Model)
[Coefficients Reported as Derivatives of the Likelihood Function at Sample Means]

	Model I	Random Effects Models				
		Model I	Model II	Model III	Model IV	Model V
Weak Law	-.033** (-1.75)	-.0377*** (-4.44)	-.0032 (-0.308)	-.0029 (-0.277)	-.0065 (-0.659)	-.0058 (-0.643)
Average Law	-.034* (-1.38)	-.0296*** (-2.90)	-.0030 (-0.315)	-.0021 (-0.197)	-.0023 (-0.225)	-.0019 (-0.209)
Strong Law	-.038*** (-2.32)	-.0090 (-1.27)	.0094 (1.112)	.0111 (0.799)	.0050 (0.381)	.0066 (0.562)
Pct African American			.5002*** (13.94)	.5003*** (13.92)	.4471*** (13.110)	.3946*** (12.913)
Union				.0045 (0.468)	-.0011 (-0.175)	.0007 (0.128)
%Union				-.0096 (0.264)	-.0089 (-0.262)	-.0147 (-0.479)
Demographic Controls					X	X
Education Controls					X	X
occupation controls						X

Percent black is the proportion of African Americans in the non-construction labor force by state. Demographic controls include age and its square, gender, marital status and urban residence. Education variables are qualitative measures of educational attainment indicating some high school high school degree, associate of arts, B.A., M.A., professional degree or PhD. Occupation is controlled for with dummies for three digit blue collar occupations
(.) t-statistics for coefficients.

* - significant in a 10% one tailed test; ** significant in a 5% one tailed test; *** significant in a 1% one tailed test (all tests against of null of zero or positive coefficient).

An Analysis of the Impact of Prevailing Wage Laws on Construction Costs

with a Special Focus on School Construction Costs

Introduction.

Few people would object to a law that had as its purpose the promotion of decent wages and benefits for the citizens of a state. Fewer still would object to a law that promoted training and the creation of skills that would justify the payment of decent wages. Not many would object to a law that promoted the availability of health insurance for working class families. Few would be the opponents to widespread private pension programs that helped provide old age security for construction workers and their spouses. The other chapters of this report show that the intent and effect of prevailing wage laws are, in fact, ones that few people would object to. The purpose of these laws was and is to promote productive skills, decent wages, solid health insurance, and widespread pensions among construction workers both on public and private construction.

Construction workers make up around 5% of the total labor market. Historically, construction has been a place where working class families could make middle class incomes. The carpenter next door to you could afford his or her house. Economic security led to social security. Construction workers made good neighbors. With the aid of collective bargaining and prevailing wage regulations, the construction labor market has been a major American success story and a minor economic miracle.

Left unorganized and unregulated, the construction labor market has all the makings of a secondary labor market of low skilled, itinerant, foot-loose workers. With perhaps the exception of the harvest labor market in agriculture, construction is the most unstable area of work; it is seasonal; and it suffers from wide swings of booms and busts. Workers move from contractor to contractor. Outside the framework of collective bargaining and prevailing wage regulations, contractors have few incentives to train most of their workers. Worker retention to the industry is also problematic. These are the classic signs of what economists call a casual, low-wage, secondary labor market. The American success and the minor miracle is the fact that through collective bargaining and prevailing wage regulations, many construction workers have been able to build highly skilled, craft-based careers out of the flux and uncertainty that characterizes almost all

aspects of construction. This benefits these workers directly and it benefits the communities within which they live. If construction develops along a high-skill, high-wage growth path, then the 5% of the workforce in construction and their families become community assets. If construction develops along a low-skill, low wage path, then the construction workers become a community liability. Given the choice between a high skill growth path that also insures quality workmanship and safe construction—and a low skill growth path that puts workmanship in to question and safety at risk, why would anyone oppose prevailing wage laws?

Some will oppose prevailing wage laws simply because they have a vested interest in the low-wage development path. These contractors seek a comparative advantage in using low-wage, low-skilled labor. They hope the race will become a race to the bottom and in such a competition, they think they have an advantage. Prevailing wage laws present serious problems for contractors whose major comparative advantage is that they do not pay health insurance, they do not provide pensions, and they do not train apprentices. But few argue to change prevailing wage regulations simply to expand the opportunities of low-wage contractors.

The major rationale presented to justify a repeal of prevailing wage regulations is the allegation that prevailing wage laws raise government construction costs. This argument is appealing for two reasons. First, if government could save significant sums of money on its construction costs without sacrificing the quality of construction, then several worthwhile constituencies might well gain from these savings. For example, perhaps we could build more schools for the same amount of money; or cut taxes; or both, if the savings were truly substantial. Second, it seems intuitively plausible that if wages are cut, money will be saved. This is where these critics of prevailing wage laws often go wrong. Sure, if you cut wage rates, and nothing else changes either now or in the future, then you will save money on construction costs. But in what walk of life can you cut wage rates by 30% to 50% and eliminate benefits and have no effect on worker morale, labor productivity or business strategies?

You can build a dam with buckets and shovels. Your workers will need few skills and your wage rates will be low. Or you could build a dam with heavy earth moving equipment and you will need to hire high-skilled, high-wage equipment operators. But just because the bucket-and-shovel approach allows for low wage rates does not mean that your dam will be either cheaper or quicker to build. The belief that cutting wage rates cuts labor costs or construction costs needs to be carefully examined.

Building Four Schools for the Cost of Three.

Critics of prevailing wage regulations contend that public agencies can save substantially on the cost of construction if prevailing wage regulation were eliminated. A not uncommon proposition is that construction costs could be cut by 25% or more. For instance, Gary Johnson, Governor of New Mexico asserted in his state-of-the-state address in 1996 that

“...without the constraint of the Little Davis-Bacon Act, we could build four schools instead of three for the same amount of money.”

State of the State Address, January 16, 1996

- If labor costs are almost half of total costs, (50%)
- And labor costs fall by about half (50)%
- Then, by eliminating prevailing wage regulations--overall costs must fall by 25%.

This calculation requires one key assumption. It explicitly assumes that when wages and benefits fall by 50%, labor productivity remains the same. If, at a lower wage rate, contractors hire less experienced or less skilled workers, then those lower wages do not necessarily translate into cost savings for the state. Either the contractor will have to hire more workers to offset their lower productivity, or work less productive workers longer, or tolerate lower quality results. Any of these factors could partially or completely wipe out hypothetical savings from lower wage rates.

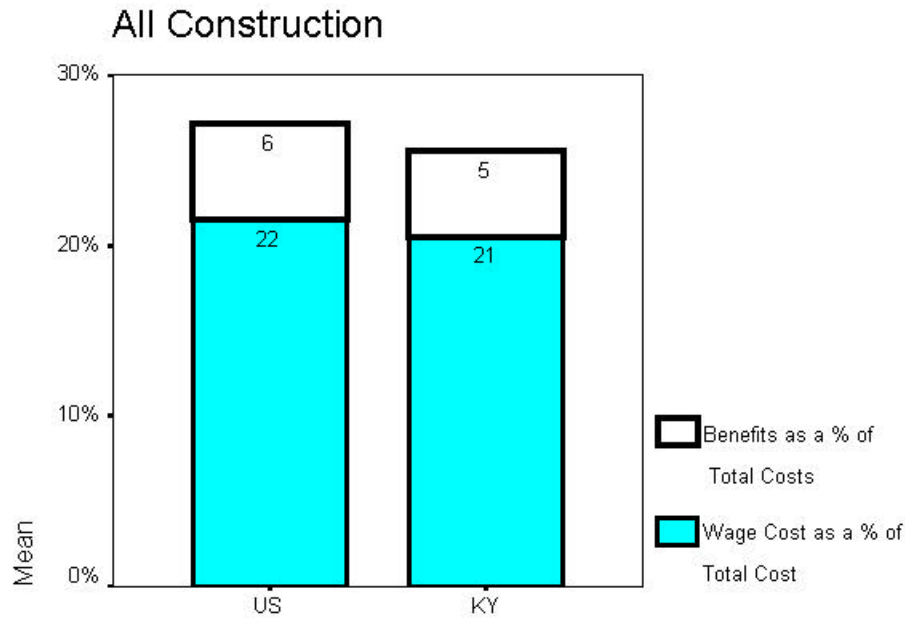
This type of analysis is hypothetical. It is not examining the cost of public construction under prevailing wage regulations with the cost of public construction absent those regulations. Rather, it is developing a hypothetical scenario of what might happen. Like all hypothetical scenarios, this analysis is only as reliable as the assumptions made. As it turns out, standard sources on costs in the construction industry do not support the notion that labor costs are more than 30% of total costs. Indeed, in Kentucky labor costs run around 26% of total construction costs. A drop in wages of 50% with no change in productivity or the type of equipment used or the amount of training done, would yield a 15% savings assuming wages dropped in half. If wages fell by 25%, the savings would fall to 7.5%. And if productivity fell off, if training fell off, if experienced workers went elsewhere, that hypothetical 7.5% could fall substantially. Indeed, if cost over-runs increased, if the cost of maintaining poorly constructed buildings and roads increased, the hypothetical savings could even fall into the red.

Labor Costs According to the United States Census of Construction.

There is a standard source on labor costs in the construction industry. The U.S. Census of Construction surveys construction contractors in every state every five years. The results of the most recent survey, taken in 1997, have yet to be released. However, we have data on labor costs as a percent of total costs in construction for the United States as a whole and for Kentucky in 1992. These data are for thousands of contractors and they are not gathered for the purpose of any specific study. The Census of Construction is systematically relied upon by researchers and analysts of the construction industry.

We will see that labor costs as a percent of total costs are much lower than is required to calculate substantial savings. For all construction in Kentucky, labor costs--including wages, benefits and payroll taxes—run around 26 % of total construction costs. Figure 1 shows labor costs as a percent of total costs broken down into wages and benefits for Kentucky and the U.S. in 1992. Benefit costs in this graph are somewhat overstated because they include not only benefits going to construction workers, but also

benefits paid to non-construction workers employed by construction contractors—office workers, estimators, engineers and architects.



Source: 1992 U.S. Census of Construction

Benefits overstated by including office & other non-construction workers

Figure 1: Labor Costs as a Percent of Total Costs for All Construction in US Kentucky, 1992

The Census of Construction for Kentucky also breaks labor costs and total costs down by contractor type. In this breakdown only wage costs are included. Figure 2 shows, for Kentucky, wage costs as a percent of total costs for specific types of general and heavy-highway contractors.⁵⁴ For light commercial contractors (office buildings, schools, churches, etc.), wage costs account for 20% of the total cost of construction. Estimated benefits—including payroll taxes--probably account for an additional 4% of total costs. Thus, labor costs account for about 24% of the net value of the work done by light commercial contractors including school builders. I say net value because the Census of Construction quite rightly excludes from commercial contractors the value of work done by subcontractors. To calculate overall labor costs on a commercial job or a school project, one must consider not only the costs of the general contractor but also the subcontractors. We will do this momentarily. However, first, let us look at heavy and highway contractors.

⁵⁴ School construction contractors are aggregated with office builders, church and other non-residential general building contractors. In the industry, this is usually referred to as light commercial general contractors. A school project will also include some specialty subcontractors.

General & Highway Contractors

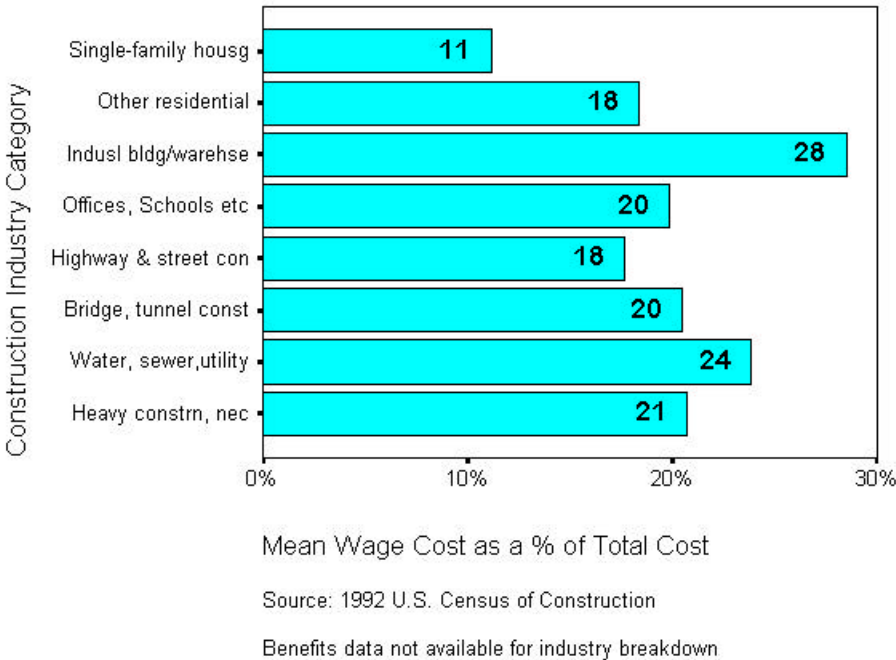
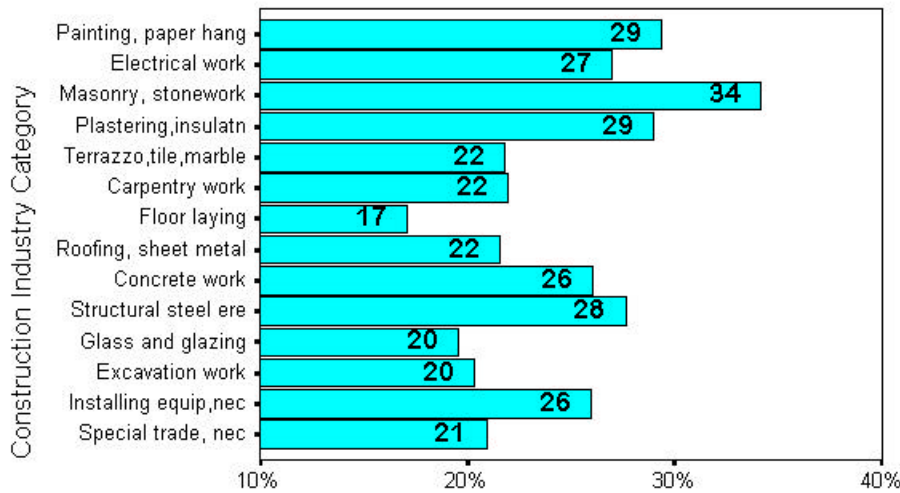


Figure 2: Labor Costs as a Percent of Total Costs for Kentucky General Contractors, and Heavy and Highway Contractors

For highway and street contractors, the use of non-heavy and highway subcontractors is limited. Thus, the 18% wage-cost-as-a-percent-of-total-cost reported by highway and street contractors is an accurate reflection of wage costs in this type of construction. Labor costs are typically lower in heavy and highway construction because the use of heavy equipment increases labor productivity substantially. The use of labor augmenting equipment that raises labor productivity permits the payment of higher wage rates, while at the same time cutting labor costs as a percent of total costs. You could build Hoover dam with buckets and shovels; wage rates would be low but labor costs as a percent of total costs would be high. And, the dam would probably cost more to build.

Labor costs as a percent of total costs are typically higher for specialty subcontractors compared to general contractors and heavy/highway contractors. This is because typically the general contractors bear a larger share of material costs and heavy/highway contractors have heavier equipment to augment the productivity of their workers. Figure 3 shows labor costs as a percent of total costs for specialty contractors in Kentucky.

General & Highway Contractors



Mean Wage Cost as a % of Total Cost

Source: 1992 U.S. Census of Construction

Benefits data not available for industry breakdown

Figure 3: Labor Costs as a Percent of Total Costs for Kentucky Specialty Contractors

One of the first things to notice in these figures is that labor costs as a percent of total costs do not fluctuate directly with wage rates. For instance, in Figure 3, labor costs for high paid electricians account for 27% of total costs. In contrast, lower paid painters' wages 29% of the total value of work done by painting contractors. The highest wage costs as a percent of total cost in Kentucky in 1992 were masonry and stone contractors. Typically brick masons earn less than electricians. These differences are partly due to the differing cost of materials paid for by a masonry contractor, a painting contractor and an electrical contractor. But also the higher labor productivity of a well trained electrician can offset his or her higher wage rates. High wage rates, if they induce higher labor productivity, can actually reduce labor costs as a percent of total costs. Low wage rates, if they mean a loss of skills, can in some cases result in higher labor costs as a percent of total costs.

Second, while the Census of Construction does not break out school construction contractors as a separate category, a U.S. Department of Labor study has done this. In 1979, the U.S. Bureau of Labor Statistics published a study of school construction costs by region in the United States. The BLS study aggregated school types and presented data on four regions, Northeast, Midwest, South and West. The relevant data for our purposes is presented below.

Table 7: Hourly Wage Rates and Total Costs as a % of Total Construction Costs

Elementary and Secondary School Construction		
1972	Hourly Wage Rate	Wages as a Percent of Total Cost
Northeast	\$7.75	27.9%
North Central	\$7.43	29.3%
South	\$5.22	27.3%
West	\$7.22	29.0%

Source: U.S. Bureau of Labor Statistics, John G. Olsen, "Labor and Material Requirements for New School Construction," *Monthly Labor Review*, April 1979, Vol. 102, Number 4, p. 41.

These are old statistics but their age make them more instructive. In 1972, prevailing wage laws were widely enforced in the North (including Kentucky). If prevailing wage laws bloat relative labor costs now, they should have bloated those costs then. But, in fact wage costs as a percent of total costs were 27.9% in the Northeast. (This does not include benefits.) Adding another 6 % for benefit and payroll taxes would bring labor costs up to about 34% of total costs in 1972. If prevailing wage laws did not bloat labor costs then, there is little reason to believe they are doing so now.

Wage Rates and Labor Costs.

An interesting point to be derived from Table 7 is that hourly wage rates varied considerably between the Northeast region and the South (\$7.75 versus \$5.22 in 1972). In contrast, wage costs as a percent of total costs were almost the same in the two regions (27.9% versus 27.3%). The analyst, John Olsen, commented on these facts as follows:

Average hourly earnings also varied by region. Hourly earnings for all construction workers averaged \$6.78, ranging from \$5.22 in the South to \$7.75 in the Northeast. Wages as a percent of contract costs varied from just above 27 percent in the South to slightly above 29 percent in the North Central. Although average hourly wage rates in the Northeast were higher than those in the North Central region, wage costs as a percent of total contract costs were lower. Among other factors, this irregular trend could result from regional differences in productivity rates and in relative material costs. (pp. 40-41)

Could it be that as wage rates are cut experienced workers leave for better paying jobs elsewhere? Could it be that as wage rates rise, contractors find it worth their while

to spend the money needed to better train their workers and provide them with new, better equipment?

A Direct Look at School Construction Costs

Table 8: Annual Median Real Square Foot Construction Costs for Kentucky Public Schools

Kentucky		
Year	Median	Projects
1991	\$80	7
1992	\$79	18
1993	\$78	14
1994	\$85	11
1995	\$89	17
1996	\$93	22
1997	\$91	17
1998	\$88	17
1999	\$91	10

Restrictions: School Size
 between 20,000 & 120,000
 Sq Foot Value \$20 to \$180
 Deflated Using ENR-B
 Source: FW Dodge Start Cost

Table 8 shows the median square foot construction costs for school building projects in Kentucky over the period July, 1991 to July, 1999. The accepted bid price of the schools were inflated to 1999 dollars using Engineering News Record's index of building construction costs. This allows for a direct comparison of square foot construction costs for school built in different years.⁵⁵ The data in Table 8 are graphically presented in Figure 4.

⁵⁵ The data are from the F.W. Dodge Corporation, the standard service provider of project information in the construction industry. Alternative price indices were tried to examine whether results were dependent on the price index chosen. Results were basically the same regardless of the price index used to translate information into constant 1999 dollars.

Annual Median Square Foot Cost of Kentucky Public School Construction Projects (in 1999 Dollars)

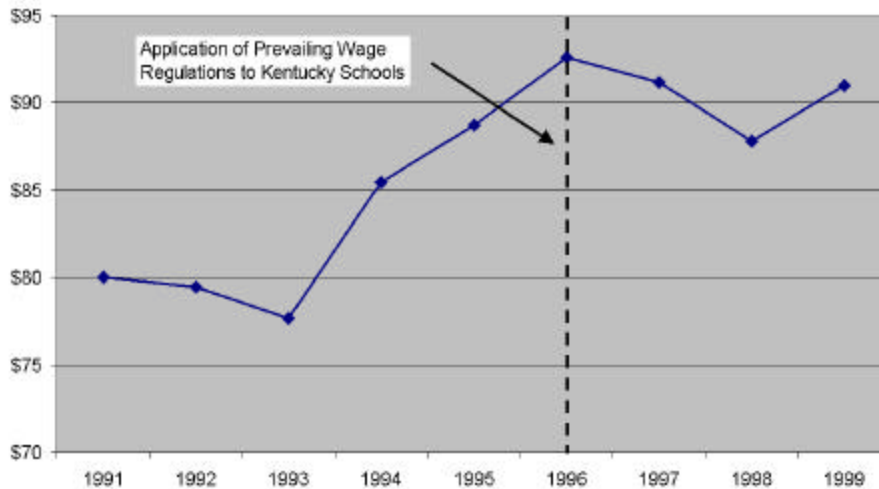


Figure 4: Annual Median Square Foot Public School Construction Cost in Kentucky, 1991 to 1999

As one can see, real public school construction costs in Kentucky rose substantially in the 1990s. But these costs began rising prior to the implementation of Kentucky's prevailing wage law to public school construction. Subsequent to the implementation of the law, public school construction costs have not been rising (once you adjust for inflation). The peak year in real terms is 1996 and the vast majority of projects built in 1996 came before prevailing wage regulations. By itself, this is strong evidence that the rise in school construction costs in Kentucky cannot be primarily or substantially attributed to prevailing wage regulations.

A primary contributor to the increase in school construction costs has been the extended economic expansion of the 1990s. This has led not only to the tightening of labor markets but also to a sellers market for construction contractors. This has occurred not only in states with prevailing wage regulations but also in states without prevailing wage laws.

One way to see this is through the use of an econometric model of the determinants of school construction costs. The beauty of econometric models is that they allow one to statistically isolate the independent effects of different factors or variables that influence the cost of building a school. Table 9 presents five related econometric models of school construction costs. These econometric models were tested against data on school construction costs for all states over the years 1991 to 1999 which come from FW Dodge information on the accepted bid or start costs of several thousand school construction projects. These school building projects can be identified by a) state, b) the year and month in which construction started, c) the square foot size of the project, d) the type of project (that is, new construction, addition, alteration or additions and alterations), e) the number of stories involved, f) the type of school (elementary, middle or high school), and

g) whether or not the owner was public or private. And, of course, in each case we know what the accepted bid or start cost was. To complete the data set, the Engineering News Record building construction cost index was added to obtain an inflation-adjusted measure of start costs. Also, for each year, the state unemployment rate for the entire labor market (not just construction) was added as a measure of the stage of the local business cycle.

To understand how these models work, let us focus on Model I. Eventually, we will focus on the possible effects of prevailing wage regulations of school construction costs. But we will do this in the context of controlling for the other factors that influence school construction costs. To understand these controls, we start with model I. Model I looks only at school construction in states and time periods where no prevailing wage laws are on the books or in force.

The “dependent variable” or the phenomenon Model I seeks to explain is total start cost of a school building project (denominated in 1999 dollars using the *ERN* building cost index). To meet the technical requirement of a normally distributed dependent variable, the natural log of the start cost of each project is the actual dependent variable.⁵⁶ This transformation will also help us in interpreting some of the “independent variables” or explanatory factors in the model.⁵⁷ The first explanatory variable in the model is not a variable at all, really. It is called the “constant” and is sort of the starting point in estimating the effects of the true explanatory variables in the model. So for the moment, we can ignore the constant. A major factor explaining differences in the cost of different school building projects is the size of the project. All other things being equal, typically larger projects cost more than smaller projects. (This is not always true if a smaller project has a lot of equipment installation—the putting a new boiler into a school.) But it might also be that one project that is twice the size of another might cost more, but not twice as much as the smaller project. In other words, as the size of a project goes up, the total cost might go up at a slowing rate. Thus, two variables are put into the model to capture the possibility that there might be economies of scale in building schools.

The first variable is the square foot size of the project. The second variable is the square foot size of the project times itself (or square foot squared). The econometric models presented in Table 9 are called “ordinary least squared linear regression models.” This is the most commonly used type of econometric model. But it is a linear model. The phenomenon of economies of scale is a nonlinear phenomenon. Using a variable and its square to capture nonlinear relationships between a cause and effect is a conventional device in this type of model. If economies of scale in school construction exist we expect the following. The square foot size of the project will be positively related to the total cost of the project. The square of the square foot size of the project will be negatively

⁵⁶ This is a requirement of ordinary least squares linear regression models, the type of model used in these tests. Total school construction costs are not normally distributed. Rather there is a longer tail in the distribution towards the high end of costs. Taking the log of total cost normalizes this distribution by balancing the two tails of the distribution.

⁵⁷ Also construction projects were limited to those that were between 20,000 square feet and 120,000 square feet with a square foot cost that fell between \$20 and \$180 in 1999 dollars. Also the total value of the projects all exceeded \$750,000.

related to the total cost of the project. When projects are small, the size of a project and the square of the size of the project will be numbers that are relatively close together. As the project gets larger, the size and its square will get progressively farther apart. If the size is positively related to total costs and the square of the size is negatively related to total costs, and if the magnitude of the relationships line up, then total costs will be pushed up by size and pulled down by size squared. The larger the project gets, the stronger will be the downward force of size squared. Thus, the model has the potential of capturing economies of scale in school construction if those economies in fact exist.

And indeed, there does appear to be economies of scale in the construction of schools in states without prevailing wage laws. To see this, look at the independent variables in rows 2 and 3 under column a in Table 9. There you will find square feet and square feet squared. In column b for rows 2 and 3 you will find the estimated coefficients for these two variables. Estimated coefficients are the model's estimate of the effect of these variables on school construction costs. The square feet of a project is estimated to positively effect total costs and the square feet squared negatively effects total costs. Furthermore, the magnitude of the effect of square feet is larger. The coefficient is larger.



Table 9: Five Econometric Models of School Construction Costs

Dependent Variable: Natural Log of the Start Cost of a School Construction Project		Year Markers			State Unemployment Rate
		No Law States	Law States	All States	All States
a Independent Variables:		Model I	Model II	Model III	Model IV
		b	c	d	e
1	(Constant)	13.73	13.60	13.58	13.73
2	Square Feet	0.000035780865	0.000035978971	0.000035750302	0.000035724084
3	Square Feet Squared	-0.000000000150	-0.000000000148	-0.000000000149	-0.000000000149
4	Two Story School	4.7%	5.1%	5.1%	5.3%
5	Three or More Story School	13.8%	9.7%	11.0%	11.0%
6	Middle School	2.6%	<i>0.7%</i>	1.8%	<i>1.5%</i>
7	High Schools	5.0%	2.9%	4.1%	4.1%
8	Addition	<i>-2.2%</i>	-6.9%	-5.3%	-5.6%
9	Addition & Alterations	11.8%	4.1%	7.0%	5.4%
10	Alterations	5.1%	-10.2%	-4.5%	<i>-1.6%</i>
11	D1993	<i>-1.0%</i>	<i>-2.2%</i>	<i>-1.8%</i>	
12	D1994	<i>1.6%</i>	-4.6%	<i>-2.3%</i>	
13	D1995	7.3%	<i>2.7%</i>	4.1%	
14	D1996	7.8%	<i>2.4%</i>	4.2%	
15	D1997	8.0%	<i>0.1%</i>	2.9%	
16	D1998	9.3%	9.5%	9.0%	
17	D1999	16.8%	15.1%	15.2%	
18	Unemployment Rate				<i>-2.1%</i>
19	WINTER	<i>-2.1%</i>	-4.6%	-3.6%	-2.3%
20	SPRING	<i>-1.1%</i>	-4.3%	-3.0%	-2.0%
21	SUMMER	<i>0.5%</i>	<i>-2.0%</i>	<i>-1.0%</i>	<i>-1.0%</i>
22	Public School	8.4%	10.7%	8.6%	9.2%
23	Covered by Prevailing Wage Law			<i>-0.4%</i>	<i>-0.5%</i>
24	Public School Covered by PW Law			2.8%	3.1%
25	Adjusted R-Square	78%	79%	78%	78%
26	Observations	2686	3882	6568	6568
27	Sum of Covered by Prevailing Wage Law & Public School Covered by PW			2.4%	2.6%
28	Joint t statistic for Sum			0.98	1.09
29	Are the Joint Terms Statistically Significant?			No	No

Statistically significant coefficients are in bold.

**Projected Total Project Costs and Cost per Square Foot
by Size of School Project--Florida High School**

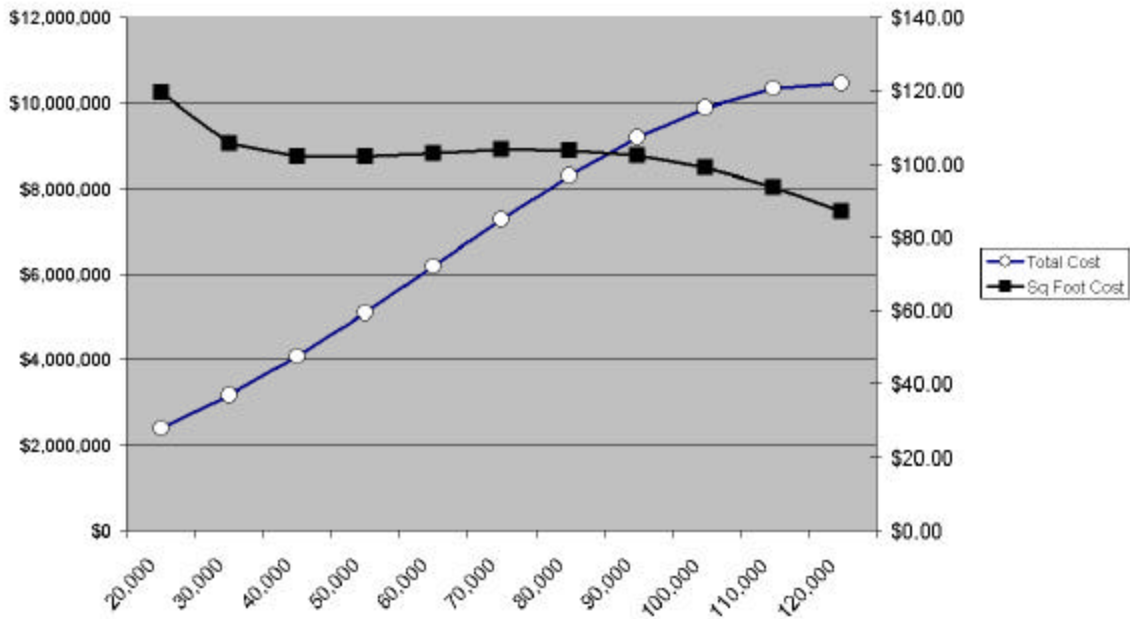


Figure 5: Model I Projection of Economies of Scale for a Public High School Built in Florida in 1999

Figure 5 gives a graphical presentation of the results of Model I in Table 9 regarding economies of scale. The Figure presents the model’s projection for total cost and cost per square foot of a new public high school built in Florida in 1999. The costs vary by the size of the project. At 20,000 the total cost would be small, just over \$2 million, but the cost per square foot is high—over \$120 per square foot. Read the total cost off the left-hand vertical axis and the square foot cost off the right-hand vertical axis. The line with circles represents the model’s projection of total costs and the line-with-squares represents the model’s projection of square foot cost.

Econometric models present estimates of the effect of all the variables included in the model. Sometimes those effects are small but nonetheless, statistically significant. The coefficient estimated for square foot squared is a small number but statistical tests indicated that this number is still statistically significantly greater than zero. A zero would indicate no effect or no relationship between the independent variable and the dependent variable—in this case school construction costs. Econometric models typically do not generate zero coefficients. Rather, they generate a coefficient but statistical tests indicate that the coefficient is not statistically significantly different from zero. In Model I the square foot and square foot squared variable coefficients are both statistically significant. This is indicated by the bolding of these two numbers in rows 2 and 3 under the column for Model I (column b).

In rows 4 and 5 under column a are two additional variables controlling for the size and shape of the project. These are marker variables, (often called “dummy” variables) that turn on if the school project is a two-story project (in row 4) or a three-or-more story project (in row 5). It turns out, that controlling for the square foot size of the project, going up as opposed to building out adds to the total cost of the school. Total cost in these models are construction costs, not land acquisition costs or architectural costs. In terms of building costs, a two-story school project adds 4.7% to the cost of construction and a multi-storied project adds 13.8% to total costs. Because many multi-story schools are built in heavily urban areas, some of this effect may be due to the costs of urban construction rather than multi-story construction per se. Also, because multi-story construction is sometimes used in colder climates, some of this multi-story effect may be due to the costs of cold-weather construction design requirements.

In states that do not have prevailing wage laws (that is, in Model I) a middle school that is the same size and style as an elementary school will nonetheless cost 2.6% more. A high school of the same size will cost 5% more than an elementary school. These results can be seen in rows 6 and 7 under column b in Table 9. Both results are statistically significant.

Relative to new school construction of the same size, involving the same number of stories and at the same type of school, additions are estimated to cost 2.2% less. However, this result is not statistically significant. That is, while the computer’s best guess is that additions are cheaper than new construction of the same size, the computer is uncertain about this. Statistical tests suggest that there is no statistically significant difference between this -2.2% estimate and zero. So there may be no difference between constructing an addition than there is in new construction of the same size.

Once the project includes additions and alterations, the model estimates that costs go up by 11.8% over new construction of the same size. This estimate is statistically significant. Alterations by themselves raise costs over similar-sized, new construction by 5.1%. This, too, is statistically significant.

Now we come to the issue of time. The reference point is 1991-1992. The question is, controlling for other factors like the type and size of the school and the nature

of the project, and realizing that we have already translated all the cost data into 1999 dollars—have the real costs of school construction increased since 1991-92? We test this question with a series of marker or dummy variables. The variable D1993 turns on if the school project was started in 1993 and turns off otherwise. The variables D1994 through D1999 similarly turn on and off when their year is indicated by the start date of a project. The coefficients for these marker variables in column b indicate whether or not in that year, controlling for the nature and size of the project, the total cost of the project has gone up over the reference period 1991-92. In 1993, the model estimates that real costs went down by 1% and in 1994, the model estimates that real costs went up 1.6% over 1991-92. But in both these cases the estimates are not statistically significant. That means that for all practical purposes, the real cost of school construction in states without prevailing wage laws did not change in either 1993 or 1994 over what they were in 1991-92. However, by 1995, statistically significant real increases in school construction costs can be observed. From 1995 on, real costs show an upward trend over 1991-92, from a 7.3% increase in 1995 to a 16.8% increase in 1999. These real increases in the total cost of building a similar project are obviously not due to prevailing wage regulations because Model I restricts observations to 2,686 school construction projects that took place without any prevailing wage regulations. This is consistent with Kentucky's experience of seeing real median square foot costs of public school construction rising in the period prior to the implementation of prevailing wage regulations on public school construction.

We not only know what year these various school construction projects were started, we know in what month each started. In cold-climate areas, starting a project in the teeth of cold weather can conceivably effect total construction costs. We test this with the variables winter, spring and summer in rows 19, 20 and 21. Again these are marker or dummy variables that turn on if a school is started in the winter (January through March), spring (April through June) or summer (July through September) compared to fall (October through December). The start date in the data is the date a bid has been accepted. Thus, actual groundbreaking will lag behind the start date somewhat. Keeping this in mind, a bid-acceptance date in "winter" probably means a groundbreaking date in winter-spring, and so on. So the reference period, "fall" refers to a groundbreaking period of probably November-December-January. Model I estimates that a bid-acceptance date in winter or spring lowers costs compared to a bid acceptance date in the summer or fall. Starting coming out of winter is 1% to 2% cheaper than starting going into winter. But these estimates are not statistically significantly different from zero. This should not be too surprising. Half the states that do not have prevailing wage laws are sunbelt states—eight southern states and Arizona. The snowbelt states without prevailing wage laws tend to be smaller—the Dakotas, New Hampshire, Vermont, Idaho and Utah. The largest snowbelt states without prevailing wage laws are Iowa and Colorado. In the time period under study, 1991 to 1999, Oklahoma, Michigan, Ohio and Kentucky flipped around between regulation and deregulation. So the effect of building into the colder months will be muted by the dominance of sunbelt states in this group. Thus, while a small savings is found for school groundbreaking that avoids the winter season, this effect is not statistically significant.

Row 22 presents an important variable—the cost of building a public school compared to a private school. In states without prevailing wage laws, for school construction projects of similar size and type, public schools cost 8.4% more. This has nothing to do with prevailing wage regulations. Again, we are only considering construction projects done in jurisdictions that do not have prevailing wage regulations. What this probably has to do with—is differing architectural design and materials. While there are certainly some upscale and expensive private schools, on balance, public schools are designed more expensively. This result is statistically significant and practically significant. We will find that public schools in states with prevailing wage laws cost more than private schools in those states. But this cannot be easily or primarily attributed to prevailing wage regulations because this phenomenon is found in the absence of those regulations.

In addition to all these variables reported in Table 9, Model I includes marker or dummy variables for each of the states except a reference state, in this case Florida. These marker variables capture the differences in construction costs among states such as Florida and Vermont or Florida and Idaho that are associated with differences in building codes, seismic and geographical patterns, cost-of-living and other factors that effect differences in state building costs. The coefficient estimates for these state dummy variables are not included in Table 9. (Variables in rows 23 and 24 are not used until Model III, so these cells are blank in Model I.)

Finally, Model I presents two statistics in rows 25 and 26. The adjusted R-square statistic in row 25 is a measure of the goodness-of-fit of the overall model to the data. This statistic shows a good fit.⁵⁸ And row 26 reports the number of projects studied in this model—2,686.

Having worked somewhat carefully through Model I, Model II can be discussed more rapidly. Model II looks only at schools (public and private) built in jurisdictions where prevailing wage laws hold sway. The results are similar to Model I—the no-law states. Total costs rise with total square feet but there are economies of scale (rows 2 and 3 column c). Two story and multi-story schools cost 5.1% and 9.7% more respectively. The result for two-story schools is very similar to that in Model I. The multi-story result is somewhat lower than in Model I. This may be due to a different mix of three, four and more story projects in the two samples. All these results are statistically significant.

In the case of states with prevailing wage laws, middle schools of the same size as elementary schools are not more expensive. The estimate is only 0.7% higher and it is not statistically significant. High schools are more expensive, but only 2.9% more compared to 5% more in states without prevailing wage laws. Additions were less expensive compared to new construction (6.9% less for similar sized projects), additions and alterations were 4.1% more expensive than new construction, and additions and alterations together were less expensive than new construction (-10.2%). All these results were statistically significant.

⁵⁸ The F-statistic is 234 yielding a second confirmation of goodness-of-fit. All the other models report similarly high F-statistics.

The business cycle differed in states with prevailing wage laws compared to states without these regulations in the 1990s. Compared to 1991-92, real, inflation-adjusted, costs of school construction went down in 1993 and 1994, and the result was statistically significant in 1994. Statistically significant increases over 1991-92 in the real cost of school construction in this group only come about late in the cycle. By 1998, real school construction costs had risen 9.5% over 1991-92 and in 1999 real costs were 15.1% above the 1991-92 bench mark. The difference between states with and without prevailing wage regulations in the pace and pattern of real cost increases can be tied to the fact that jurisdictions without prevailing wage laws are concentrated in the South and the Rocky Mountain-High Plains West. The U.S. business cycle has always varied geographically. The fact that real costs rose first and somewhat faster in states without prevailing wage regulations cannot be tied to the lack of those regulations. Deregulation did not cause school construction costs to rise. But we need to keep in mind the effects of the business cycle if we want to try to measure any possible effect of legal policies on school construction costs.

The timing of the start of school construction matters more in states with prevailing wage laws. A bid acceptance date in winter or spring will result in about a 4% decrease in school construction costs. This result is statistically significant. And it is due to the fact that many prevailing wage law states are in the snowbelt. If in real estate, location is everything, in the snowbelt timing is something to consider.

In prevailing wage law states, public schools are 10.7% more expensive than private schools. This is a statistically significant result. Given that public schools in states without prevailing wage laws were 8.4% more expensive than similar-sized private schools, we cannot say that the more expensive public schools in states with prevailing wage laws are 10.7% more expensive because they were built under these regulations. But can we say the difference between 8.4% in states without regulations and 10.7% in states with regulations can be tied to the regulations?⁵⁹ Model III examines this question.

In Model III, we consider all states—both those with and without prevailing wage regulations. This increases our observations to 6,568 school construction projects. In combining our data, we must add two variables. Not only must we include the marker or dummy variable for public school (compared to private school), we must also add a variable for whether or not the state has a prevailing wage law. This variable is in row 23 and turns on if a project was built in a state with a prevailing wage regulation. But the project could be a private school in a state with a prevailing wage regulation. So an additional marker variable is added in row 24 turning on when the project is a public project in a state with a prevailing wage law. In Model III these two variables in rows 23 and 24 are our focus variables. Controlling for all other factors, when we add them together, we get the model's estimate of the effect of prevailing wage regulations on public school construction costs.

⁵⁹ In order to push on to this more interesting question, I will only footnote the fact that Model II had 3,382 observations, and the goodness of fit statistics were acceptable.

By themselves, neither of the two new variables are statistically significant. Added together, the model estimates that prevailing wage regulations raise public school construction costs by 2.4%. But this result, shown in row 27 column d is not statistically significant either.⁶⁰ Proponents of the hypothesis that prevailing wage regulations raise school construction costs may take some comfort in the model's estimate that they do—by 2.4%. But the fact that this result is statistically insignificant means that this is an unreliable result. This putative savings is uncertain and unsure.

There is something else to consider. These data are accepted-bid data. They do not include change orders, cost over-runs or downstream maintenance costs. The bidding structure in public construction is unique. Reputation of the contractor cannot be considered in most instances. Thus, there is room in most jurisdictions for some contractors to shave his or her bid in order to win the public job with the hope that change orders will restore the contractor's profit margin. If this occurs, or if the contractor attempts to cut costs through shoddy workmanship, then the front end 2% savings from the low bidder may not result eventually in a 2% savings in final costs.

An uncertain and potentially costly 2.4% savings on public school construction costs may nonetheless be an attractive goal given that public budgets are always tight. Subsequent parts of this report argue that going after this uncertain 2.4% creates known costs. Eliminating prevailing wage regulations will result in lower apprenticeship training rates, higher injury rates and greater pressure on public health and old-age assistance programs. Are there alternatives that may be less costly ways of saving on school construction costs? Models II and IV say that there are. In Model II, where only states with prevailing wage laws are considered, a statistically significant 4% savings on total cost can be achieved simply by timing school construction to begin in the winter or spring. Recall that these start dates are the date of bid-acceptance. Bid-acceptances in the winter or spring yield 4% lower overall bids for similar projects compared to accepting bids in the fall.

Figure 6 shows that school authorities do concentrate bid-acceptances in the spring. But fully one-fifth of bid-acceptances are in the fall with construction beginning in the teeth of winter. An alternative to prevailing wage deregulation would be a more optimal seasonal timing of construction.

Model IV includes all states and is similar to Model III with one exception. The various marker variables for years have been replaced by a single variable, the unemployment rate in each state for each year. This is a measure of the overall business conditions in each state. The estimated coefficient for this variable found in row 18, column e shows that a one percentage point increase in a state unemployment rate yields a 2.1% decline in total school construction cost. Building into a builder's market costs money. Building into a slack market saves money. And such a strategy yields social dividends as well. By spending counter-cyclically, school authorities can soften the effects on their community of slowdowns in the economy.

⁶⁰ The t-test in this case is $(b1+b2)/\sqrt{(\text{var } b1 + \text{var } b2 + 2*\text{cov } b1b2)}$

Distribution of Start Dates by Season in States with Prevailing Wage Law

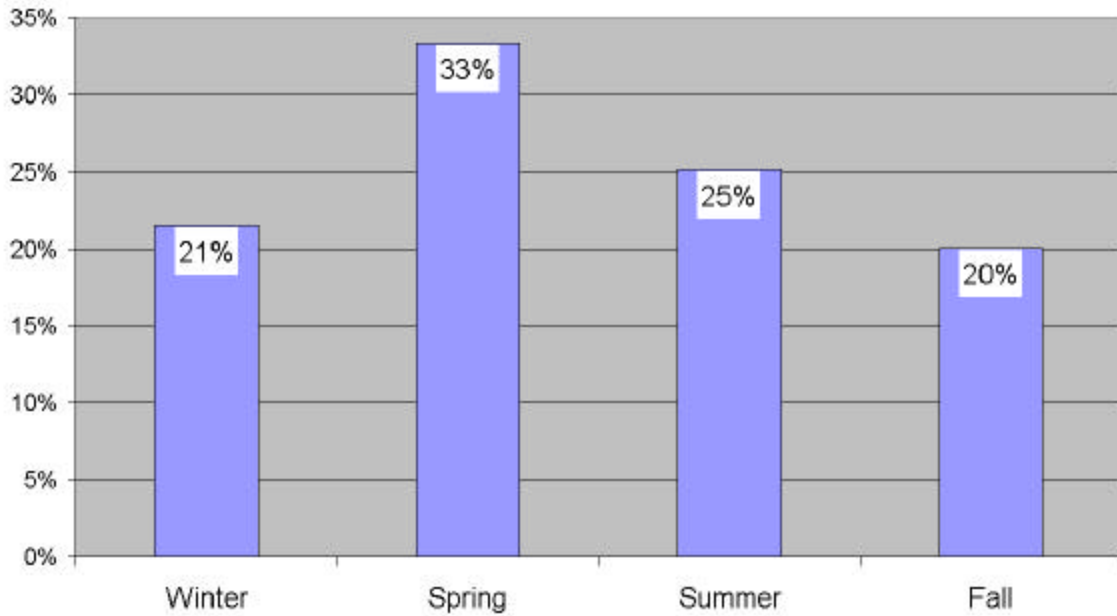


Figure 7: In states with Prevailing Wage Laws Moving Bid-Acceptances Back to the Winter and Spring Would Save 4% on Construction Costs

Distribution of Bid-Acceptance Dates for Schools in Kentucky by Season

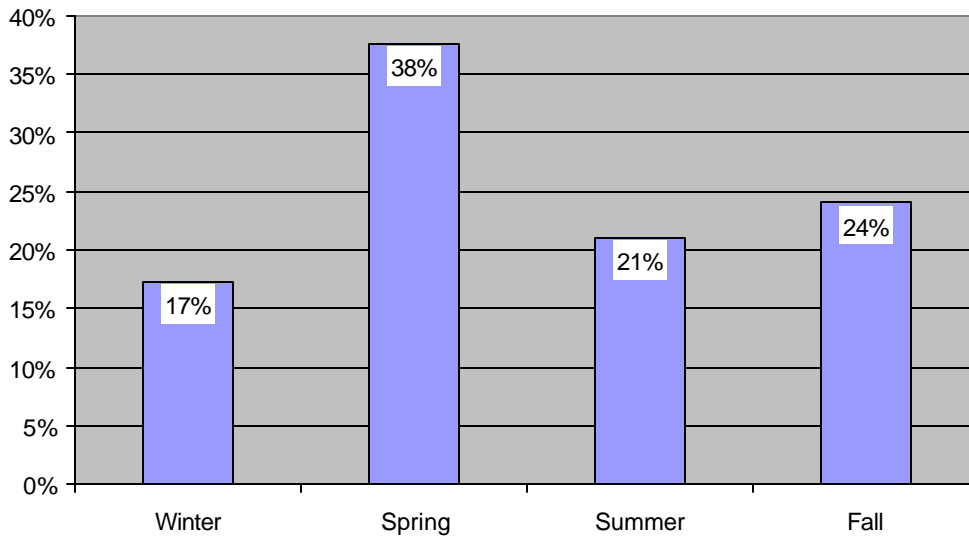


Figure 6: Kentucky Concentrates Bid-Acceptances in the Spring But Could Save Money by Moving More Late Summer and Fall Acceptances into the Winter-Spring Period

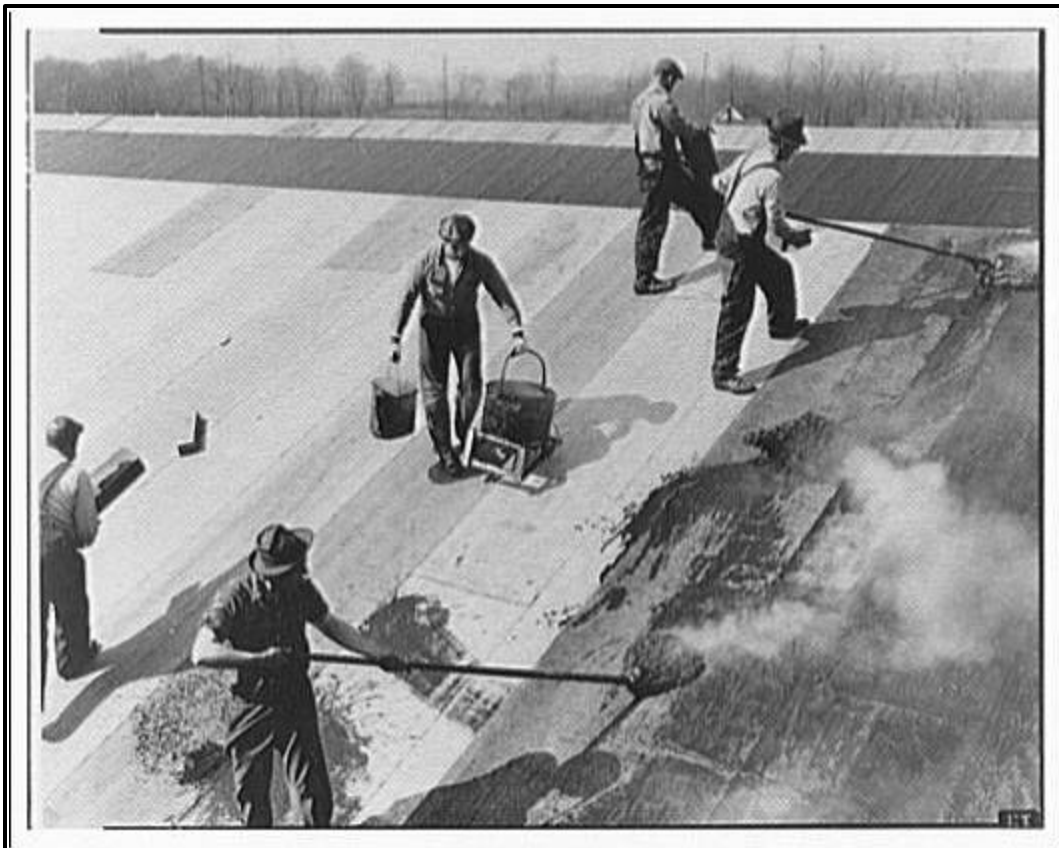
Conclusion

Simple, back-of-the-envelope calculations that claim you can build four schools for the cost of three if you eliminate prevailing wage regulations are wrong. They miscalculate what labor costs are as a percent of total costs and they inaccurately assume that draconian cuts in construction wage rates will not effect worker skills and morale, contractor purchases of equipment and crew management or industry training. Real public school construction costs in Kentucky rose in the 1990s. But that real increase in costs occurred before the state applied prevailing wage regulations to school construction. Econometric models of school construction costs based on over 6,000 projects built in the 1990s do find that one might save 2.4% on total school construction costs if prevailing wage regulations were lifted. But this result is statistically doubtful. Technically, this estimate is not statistically significantly different from no savings whatsoever. However, proponents of prevailing wage deregulation may wish to believe the result nonetheless. School authorities mindful of tight construction budgets may grasp at this straw for lack of alternatives. But such policy changes out of bias or desperation are unwise. The bidding structure in the public arena is ill-suited to fend off bid-shaving strategies that cut initial bid offers in the expectation of manipulating change orders down the road to restore profit margins. Lowest-bonded-bidder procedures in the public sector do not consider contractor reputation and crew workmanship as these factors are considered in the private sector. This weakness raises the specter of higher downstream maintenance costs offsetting any small, putative upfront savings associated with deregulation. And there are alternatives which offer a higher and statistically more certain prospect for saving on school construction costs. The models of school construction indicate that time means money. In this case, timing the start of construction to avoid cold weather conditions and tight construction markets have the potential of saving two to four times as much as any deregulatory scheme. And not only is the magnitude greater, but statistically, these sorts of savings are more certain.

4

How Does Kentucky's Prevailing Wage Law Effect Apprenticeship Training?

with a Special Focus on the Current Skills Crisis in Construction.



Roofers in the 1920s

The *Engineering News Record* (ENR) is a significant industry trade paper in construction. The Business Roundtable is a major organization of owners who purchase construction services. *Cockshaw's Construction Labor News+Opinion* (Cockshaw's Report) is the most widely read independent newsletter on construction labor issues. All have recently done surveys attesting to the presence of significant skill shortages in the U.S. construction industry. Our recent extended economic prosperity has expanded the demand for construction services. This expanded demand has precipitated the skill crisis in construction. But the underlying cause of this crisis has been the slow shift over the last twenty years towards open shop construction. On average, open shop contractors train less. They employ a less skilled labor force. These facts help account for the fact that union contractors can pay measurably higher wage rates to a more trained labor force and not have significantly higher labor costs.

As this chapter will show, the open shop trains only one out of every four construction apprentices. Because apprentices in open shop programs have lower graduation rates, less than one out of every five apprentices graduating to journeyman status in construction come from the open shop. In some trades, such as operating engineers and iron workers, only 2% of the graduating apprentices come from open shop programs. In collectively bargained apprenticeship programs, women and minority apprentices are less likely to graduate than white male apprentices. In open shop programs this is also true. However, a woman or a minority apprentice in a collectively bargained program is more likely to graduate than a white male apprentice is likely to graduate in an open shop program. Thus, a change in public policy discouraging collective bargaining in construction would have the dual effect of lowering the amount of apprenticeship training in the face of a skills shortage and lowering even further the opportunities for women and minorities to obtain skilled careers through apprenticeships. We begin a discussion of these issues by considering some of what the *Engineering News Record* and the Business Roundtable have said about the scope and causes of the current skills and training crisis in construction.

The industry has known for much of the past decade that it was headed for manpower trouble when the business cycle turned up...Nonunion contractors working in bustling areas appear to have the biggest manpower problems, according to the survey results. For example, 56% of the union crafts in the West reportedly have no labor shortages while only 10% of the open shop crafts have no problem. "I would guess that some of the labor shortage exists because the open shop has pirated all the available, qualified union workers, and now suffers the lack of training programs of their own to produce open-shop crafts people," says Donald A. McKay, chairman of union mechanical and sheet metal contractor Tougher Industries, Albany, N.Y. "It's frustrating to hear them whine to the owners for help with their educational programs, while spending a pittance on training." McKay notes that the Alliance of Mechanical, Electrical and Sheet Metal Contractors spends about \$100 million a year to train union workers in those trades....

"Craft Shortages Creeping In," *Engineering New Record* (ENR), December 25, 1995, Vol. 235, No. 26, pp. 34-5.

Although the economic and market picture for the open shop appears very bright, the [America's Open Shop Committee] survey revealed storm clouds on the horizon. One dampening note was the continuing, and worrisome, shortage of skilled tradesmen. This was revealed in a survey question which asked respondent to categorize the availability of 13 craft classifications as 'scarce,' "adequate," or 'plentiful.'" Eleven AGC chapters advised that 11 or more crafts were scarce in their markets. Moreover, there were a number of regions where all 13 trades were reported in scarce supply.

Cockshaw's Report, September 1999

Companies are currently experiencing significant problems in staffing construction projects, resulting in escalating costs and costly schedule delays....In late 1996, The Business Roundtable surveyed its member companies...Over 60 percent of the survey respondents indicated they had encountered a shortage of skilled craft workers, and 75 percent reported the trend had increased over the past five years....The union sector has always excelled in craft training through the joint labor/management apprenticeship programs...the open shop, as a whole, has not supported formal craft training to the extent necessary. They have succeeded by attracting skilled workers from the union sector as market share shifted and recruiting skilled workers from competitors as individual workload changed. As the well begins to dry up, the ability to use these methods decreases....Through the years, the subject of funding for training has come up repeatedly. All of the discussion has been on the open shop side. Training on the union side has always been required and paid for by the owner. A trained work force was expected and guaranteed by the contractors with costs passed on to the owner as part of the collective bargaining labor rate. It has been a different story on the open shop side.

"Confronting the Skilled Construction Work Force Shortage,"
The Business Roundtable, Construction cost Effectiveness
Task Force, October, 1997, pp. 2, 5, 6, 8 & 14.

Prevailing wage laws promote collective bargaining. Collective bargaining, in turn, promotes higher wage rates in construction. Yet, as the previous chapter has shown, there is no measurable correlation between prevailing wage laws and substantially higher construction costs. How can this be? How can contractors pay higher wage rates and yet not have measurably higher construction costs? The answer lies in training.

Apprenticeship Training Under Collective Bargaining and the Open Shop

Contractors that participate in collective bargaining do the lion's share of apprenticeship training in construction. The following Figure 8 shows the number of newly enrolled construction apprentices in the United States for each year since 1989.⁶¹ These data are

⁶¹ These data are from the U.S. Department of Labor, Bureau of Apprenticeship Training. They represent approximately 70 percent of all construction apprenticeship programs in the United States. Similar results are found using Kentucky state apprenticeship data in the study by William J. Londrigan, M.P.A. and Joseph B. Wise, III, M.B.A., *Apprentice Training in Kentucky, A Comparison of Union and Nonunion Programs in the Building Trades*, Building Trades Apprenticeship Coordinators/Directors Association of

broken down by the apprentices employed by union and nonunion contractors. While the number of new apprentices entering construction varies with the construction business cycle, the proportion trained under collective bargaining remains roughly the same. Approximately three out of every four new apprentices enroll in programs created by collective bargaining.

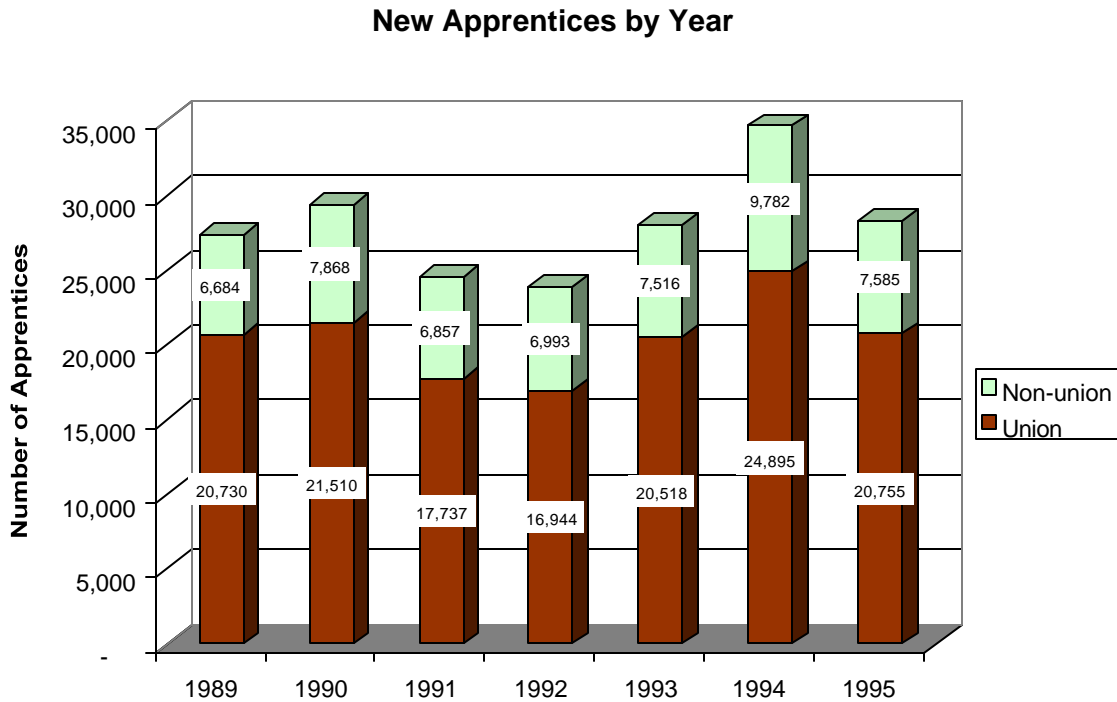


Figure 8: The Number of Newly Enrolled Construction Apprentices by Year and Union and Nonunion Programs, 1989 to 1995

Collective bargaining requires that contractors contribute a specified amount of money for every hour of work into an apprenticeship training fund. This fund is used to hire instructors, to buy tools, equipment and materials and to pay for instructional facilities. In effect, all apprentices who enter programs maintained by collective bargaining are on scholarships provided by their employers. This means contractors who have signed collectively bargained agreements have a vested interest in seeing that their apprentices get trained and successfully graduate.

In open shop apprenticeship programs, the apprentice typically must pay a larger share of his or her own training costs. This may come in the form of tuition payments, lower wages, or both. As a result, the contractors have less of a vested interest in assuring that enrolled apprentices successfully graduate. Consequently, not only are three out of every four new apprentices enrolled in collectively bargained programs, but also, once enrolled in a collectively bargained program, the apprentice is almost twice as

Kentucky, Inc, March, 1997.

likely to graduate. The following Figure 9 shows that for the entering classes of 1989 and 1990, by the end of 1995, 37% of the apprentices in collectively bargained programs had dropped out. In contrast, over half--54%--in the open shop programs had dropped out. In the collectively bargained programs, 41% of the classes entering in 1989 and 1990 had graduated to journeyman status while only 25% of the apprentices in the open shop had graduated to journeyman status. In both types of programs, 21% of the classes entering in 1989-90 were still enrolled apprentices by the end of 1995. Thus, not only does collective bargaining encourage training, it encourages the completion of training.

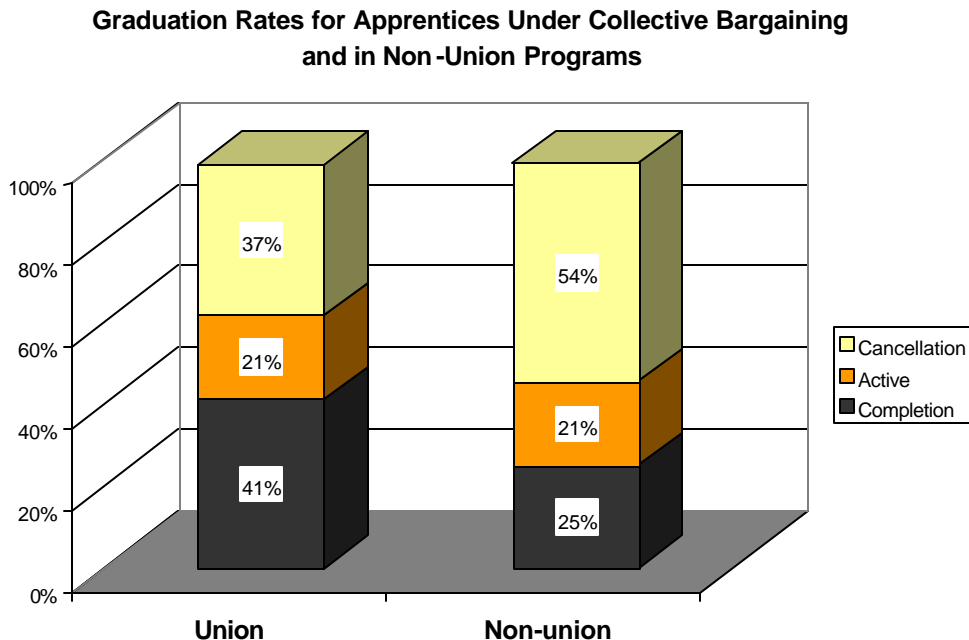


Figure 9: Graduation Rates by 1998 for Apprentices Enrolled in 1989-90 Under Collective Bargaining and the Open Shop

JOINT LABOR-MANAGEMENT TRAINING OF OPERATING ENGINEERS OF KENTUCKY

- The operating engineers in Kentucky have an investment of \$1,671,560 in land and buildings for training. The average spent on direct training is \$442,522 with the instructor costs representing \$179,283 of this amount.
- Operating Engineers train on the most modern of heavy equipment learning the most up-to-date techniques in safe, efficient handling of heavy machinery on building and road construction sites.
- On an average there are 7 apprentices who complete training annually.

The rubber meets the road in construction apprenticeship training when the apprentice turns out as a journeyman. As the following Figure 10 indicates, overall, collectively bargained programs turn out 82% of all construction journeymen and women trained through apprenticeship in the construction industry. In some crafts, open shop apprenticeship programs account for only one or two percent of all the apprentices graduating to journeyman status. For instance, only 1% to 2% of the apprentices graduating to journeymen status among operating engineers or structural steel workers (iron workers) come from open shop apprenticeship programs. Only 9% of the graduating bricklayers and 8% of the graduating carpenters come from open shop apprenticeship programs. Even among plumbers where the open shop has its largest share of graduating apprentices, two-thirds of all plumber-apprentices graduate from collectively bargained programs.⁶²

**Relative Contributions of Collectively Bargained and Open Shop Programs to Graduating Journeyworkers
(Classes of '89, '90 and '91)**

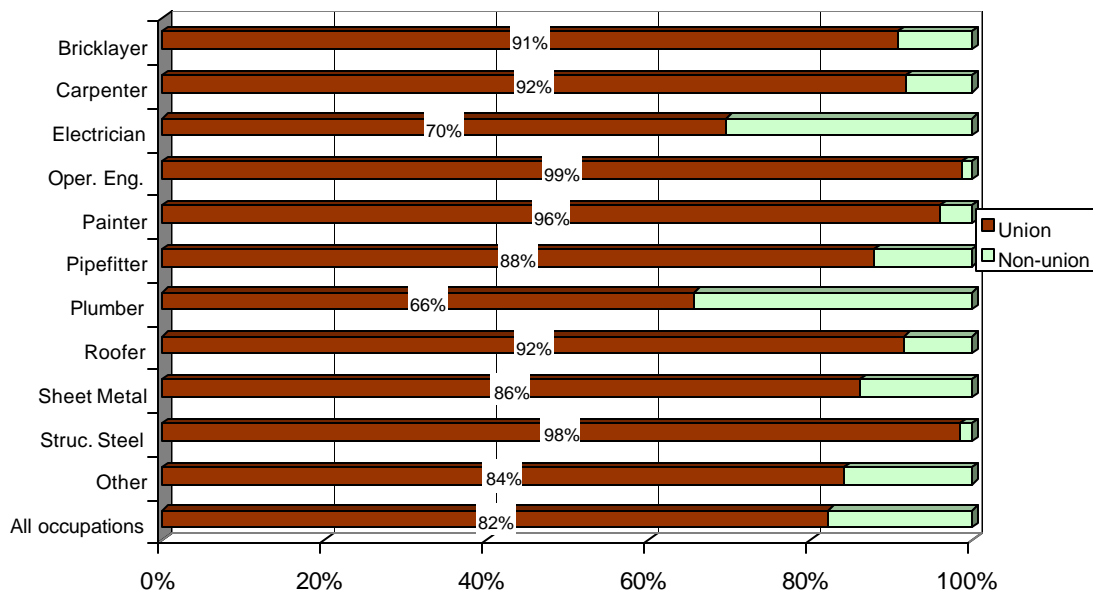


Figure 10: Share of Journeyworkers Graduating from Apprenticeship Programs Broken Down by Occupation and Collectively Bargained versus Open Shop Program

KENTUCKY ELECTRICIANS—INSIDE WIREMEN

- The National Electrical Contractors Association of Kentucky and the Kentucky locals of the I.B.E.W spend \$1,254,670 per year on apprenticeship training in Kentucky.
- On an average there are 151 apprentices who complete training annually. There are 58 instructors utilized annually either on a full or part-time basis. On an average there are 1,025 apprentices enrolled annually in a 5-year apprenticeship program

⁶² These are graduation rates at the end of 1995 for apprenticeship classes having entered in 1989, 1990 or 1991.

Prevailing Wage Regulations, Minorities and Apprenticeship Training

Historically, minorities have been excluded from good construction work. During the 1950s and 1960s, minority leaders fought hard to break down discriminatory barriers in construction. As a consequence, construction apprenticeship programs have been closely regulated in the last three decades to insure fair admissions procedures. These regulations apply to both joint labor-management programs organized under collective bargaining and programs operated by merit shop employers. However, anti-discriminatory regulations and oversight apply only to apprenticeship programs with five or more apprentices. This covers virtually all joint labor-management programs under collective bargaining because these are multi-employer programs. Programs with many contractors participating tend to be well over 5 apprentices. For instance, in Kentucky, on average, the heavy and highway contractors working with the International Union of Operating Engineers have on average 63 apprentices enrolled at any time. The Kentucky Chapter of the National Electrical Contractors Association in cooperation with Kentucky locals of the International Brotherhood of Electrical Workers have over 1,000 apprentices at any one time. The outside linemen have a separate apprenticeship program with around 34 apprentices enrolled annually. The plumbers and fitters in conjunction with the Kentucky Mechanical Contractors Association have around 220 apprentices enrolled per year. The carpenters have around 250 enrolled per year. All these programs must meet strict guidelines in their application and enrollment procedures. But open shop, single contractor programs with fewer than five apprentices at any one time need not concern themselves with issues of affirmative action. The consequence is that in states that do not have prevailing wage regulations there are fewer programs overall, fewer apprenticeship programs organized under collective bargaining and a higher proportion of small programs operated by single, merit shop contractors. Thus, it is not surprising that in states without prevailing wage laws, minorities are under-represented in apprenticeship programs while in states with prevailing wage regulations, the representation of minorities in apprenticeship programs reflects the overall proportion of minorities in the state population.

Figure 11 shows the minority representation ratio for states by prevailing wage regulation status. The data are from the U.S. Bureau of Apprenticeship and Training for the years 1987 to 1989. They show that in states with prevailing wage laws, the minority apprenticeship representation ratio is 96%. At 100%, the representation of minorities in apprenticeships would look just like the representation of minorities in these states' populations. So a ratio of 96% means that minorities are slightly under-represented in construction apprentices in states with prevailing wage laws. However, in states that never had prevailing wage laws, the minority representation ratio is 82% and in states that repealed their laws, the minority representation rate is 81%. In short, minorities have a much more difficult time getting into apprenticeship programs where prevailing wage regulations are absent. This is due to the fact that deregulation encourages single-employer apprenticeship programs and takes apprenticeship out from under affirmative action regulations.

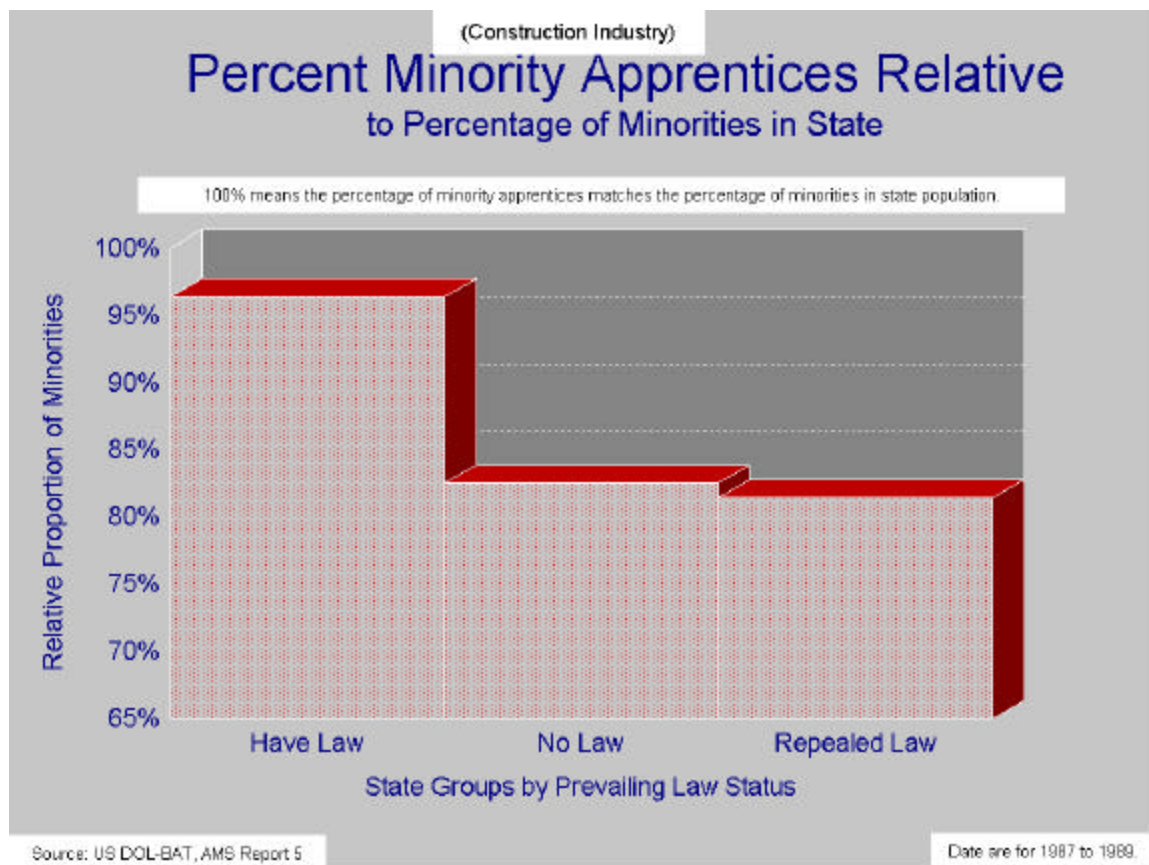


Figure 11: Minority Representation Ratio for Apprentices by Prevailing Wage Regulation Status

It is one thing to get into an apprenticeship program, it is another thing to get out. Graduation rates of merit shop apprenticeship programs are substantially lower than those for apprenticeship programs organized under collective bargaining. This should not be a surprise. Under collective bargaining, contractors are obliged by the collectively bargained contract to contribute so much per hour for every hour worked by all workers into a training fund. This fund is used to invest in new apprentices. Contractors, looking for a return to their investment, try to bring in the most promising new apprentices possible. Once enrolled, signatory contractors have every incentive to see to it that these apprentices get solid training that leads to graduation as skilled journeyman and women. Some merit shop contractors are equally committed to apprenticeship training. But when the upfront investment is not there or is less, the incentive to see to it that apprentices turn out as journeymen is less. Consequently, graduation rates of apprentices in the open shop is less.

Relative Performance of White and Minority Apprentices in the Union and Non-union Programs

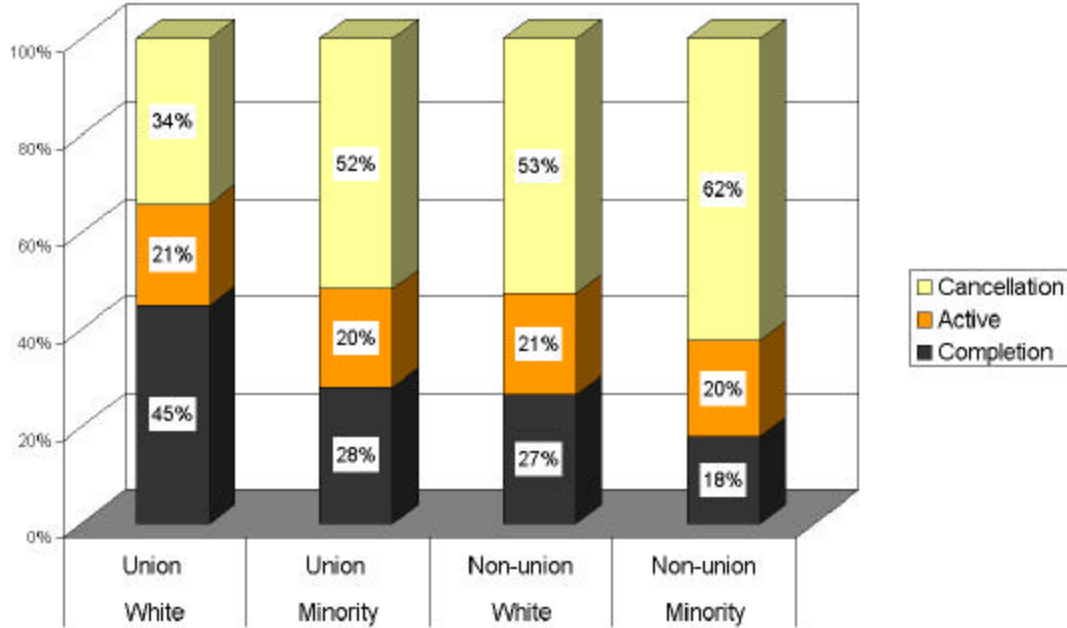


Figure 12: Status of the Apprenticeship Class of 1989-90 at the End of 1995

Figure 12 shows the status of the entering class of construction apprentices in 1989-90 at the end of 1995 broken down by union and non-union programs and then broken down by white and minority apprentices. (These data are from the U.S. Bureau of Apprenticeship and Training. Minorities are black, Asian, American Indian and Hispanic.) For white apprentices entering into joint labor-management apprenticeship programs in 1989-90, one third (34%) had dropped out of construction apprenticeship training by 1995. Forty-five percent had graduated into journeyworker status in their trade and 21% were still enrolled in the apprenticeship program. In contrast, slightly over half of the 1989-90 entering minority apprentices in joint labor-management programs had dropped out by the end of 1995. Twenty percent were still enrolled and 28% had graduated. Clearly, minority apprentices in joint labor-management programs do not fare as well as white apprentices. But, minority apprentices in union programs do as well or slightly better than white apprentices in merit shop programs. The real casualties are minority apprentices in merit shop apprenticeship programs. Not only are there fewer minority apprentices, but few of these few graduate. Only 18% of the minority entering class of 1989-90 in merit shop programs had graduated by 1995. Fully, 62% had dropped out. Thus, minority apprentices are heavily under-represented in apprenticeship programs in states without prevailing wage laws. And if those programs are merit shop

programs, the odds of those few minorities ever turning out as journeymen and women are grim.

The Use of Skilled and Unskilled Labor Under Collective Bargaining and the Open Shop

Union contractors and nonunion contractors approach the job site with very different work crews. The average nonunion contractors use a labor strategy that relies upon a limited number of skilled workers leading a larger number of unskilled workers through the construction process. For example, a skilled nonunion electrician may oversee a set on unskilled wire-pullers. The skilled nonunion electrician will color code studs and the wire-pullers will pull wire through those studs based on color coding. In a contrasting example, the skilled union electrician may pull the wires himself or have an apprentice do this. The nonunion contractor may have a cost advantage with his low-wage, unskilled approach to wiring a building as long as everything is simple and expected. But the union contractor may have the cost advantage if unexpected problems crop up that only a skilled and knowledgeable worker can handle. The nonunion contractor relies on his limited number of skilled workers to handle the unexpected. However, an unskilled worker can make a mistake without even knowing that a mistake was made. The union contractor with a more skilled labor force seeks a cost advantage by knowing that each activity is done by someone who knows the ins and outs of that activity. So problems are nipped in the bud rather than done over when caught. In short, the union contractor pays a higher wage rate but tries to offset that higher wage rate with fewer, more skilled and productive workers.

Figure 13 illustrates the difference between the labor force strategies of the average union and nonunion contractors. These are data from Pennsylvania in 1995-96 but they likely reflect trends nationally including Kentucky. They divide building construction contractors into those working under collectively bargained contracts and those working without a collectively bargained contract. The top 5 most commonly found occupations in building construction are reported in Figure 13. These occupations account for 68% of all union workers and 62% of all nonunion workers with the exception of apprentices which were excluded from the survey.⁶³ Union contractors employed a higher percentage of carpenters, electricians, sheetmetal workers and plumbers-pipefitters compared to nonunion contractors. In contrast, a higher percentage of the nonunion contractors' crew mix consisted of unskilled laborers. The foregoing apprenticeship data and these employment data show that on average, open shop contractors train less and use fewer skilled workers compared to union contractors.

KENTUCKY ELECTRICIANS—OUTSIDE LINEMEN

The National Electrical Contractors Association—Line Chapter and the IBEW Locals of Kentucky own a \$900,000 training facility

- Amount spent per year on Training. \$255,255
- # of Apprentices on average who complete program annually. 34
- # of Apprentices currently in training. 150
- # of Instructors utilized for training. 1 Full-Time; 10 Part-Time
- Amount spent per year on Instructor wages. \$62,167

⁶³ These data come from the Pennsylvania State Data Center Prevailing Wage Survey commissioned by the Pennsylvania State Labor Department, data file "working3.txt".

Crew Mix of Union and Open Shop Contractors in Pennsylvania 1995-96

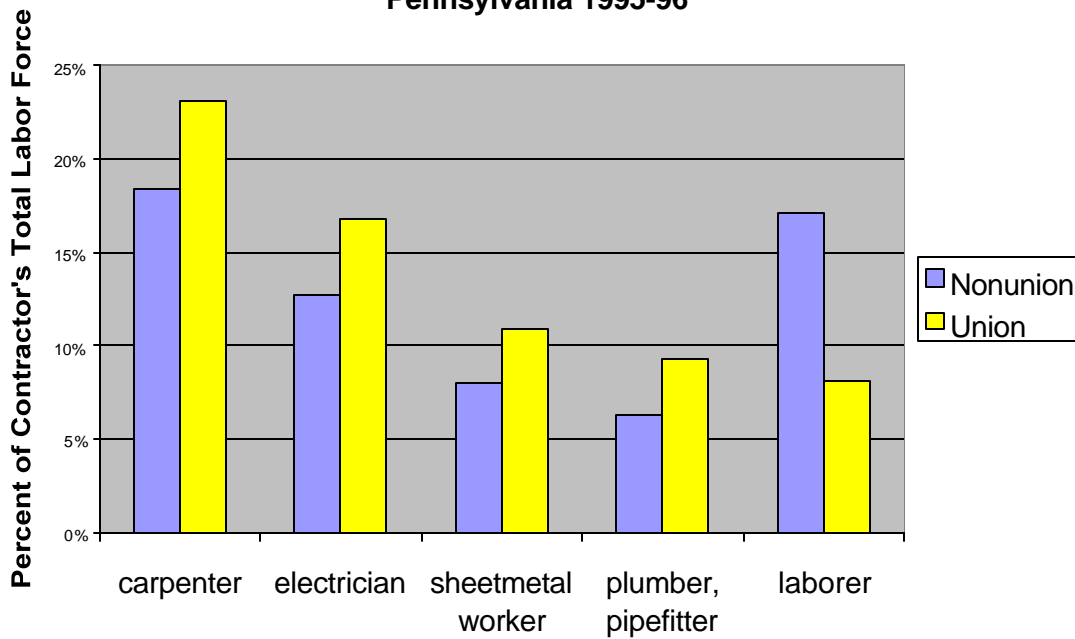


Figure 13: Relative Use of Skilled and Unskilled Labor by Union and Nonunion Contractors, Pennsylvania, 1995-96

KENTUCKY'S PLUMBER AND PIPEFITTERS

- The Mechanical Contractors Association of Kentucky and the United Association of Plumbers and Pipefitters Train around 220 apprentices per year.
- Plumbing and pipefitting apprentices go through a 5-year program consisting of 1200 hours of classroom instruction and 8,500 hours of on-the-job training. Journeymen continue their education with courses on OSHA safety, hazardous materials, computer aided design drawing, clean room working environments, medical gas certification, welding certification, plumbing code and other craft related courses to keep members on the cutting edge of changes in the plumbing and pipefitting industry.
- Value of training facilities: \$2,575,000

Table 10: Nonunion Contractor Use of Skilled and Unskilled Labor Compared to Union Contractors, Pennsylvania 1995-96

Occupation	Nonunion	Union	Nonunion as a Percent of Union
carpenter	18%	23%	79%
electrician	13%	17%	76%
sheetmetal worker	8%	11%	73%
plumber, pipefitter	6%	9%	67%
laborer	17%	8%	211%

To see more clearly the relative use of skilled and unskilled labor under collective bargaining and in the open shop, Table 10 repeats the foregoing data in Figure 13 on carpenters, electricians, sheetmetal workers, plumbers-fitters and laborers. By taking the ratio of nonunion to union use of these occupations in their crew mix, we see that on average, nonunion contractors in Pennsylvania in 1995-96 use 79% as many carpenters, 76% as many electricians, 73% as many sheetmetal workers, 67% as many plumbers and pipefitters but over twice as many laborers. The employment of relatively fewer skilled workers by open shop contractors may help explain, in part, why open shop contractors train fewer apprentices. But the fact that open shop contractors train fewer apprentices may also help explain why they end up using relatively fewer skilled workers.

Possible Reasons Why the Open Shop Trains Less and Uses Fewer Skilled Workers

Why do [open shop] contractors not train? Many reasons are given. It is cost prohibitive. Investment is lost when a trained worker moves to a competitor. Many fail to recognize the need or appreciate the productivity effects.

---"Confronting the Skilled Construction Work Force Shortage," The Business Roundtable, Construction cost Effectiveness Task Force, October, 1997, p. 6.

Training in the construction industry is a classic case of what economists call a market failure. Construction is a boom-bust industry in many respects. Not only does the construction business cycle swing much more widely than does the economy as a whole, but also, specific contractors have to gear up and slow down their operations based on their own particular fortunes at winning construction bids. Along with this boom-bust, ramp-up/shut-down structure that is fairly unique to construction, the industry is organized along a complicated structure of subcontracting. Subcontracting is a way for a contractor to allow a more expert subcontractor to handle a particularly difficult or specialized part of a project. It is also a way to export headaches. When in doubt, it is sometimes better to contract out. Labor skill shortages can be just the kind of headache worth contracting out.

The boom-bust, ramp-up/ramp-down, subcontract-out headaches structure of construction makes most contractors focus on the short-run. In the short-run, the available supply of trained construction workers is fixed. If you have a shortage, all you can do is bid craftsmen away from someone else. It takes four to five years to turn an electrician, plumbing, fitter or sheet metal apprentice into a skilled journeyman. By the time you train someone for the job, the job is gone.

Anyway, if you train someone, you might just be subsidizing your competitor. The worker you train in all likelihood will be down the road and working for your competitor in the not too distant future. If you undergo training costs and your competitor does not, then your competitor can have his cake and eat it too. He can win that job today, since he has lower costs today because he does not train. And, he has just as much chance as you do of having skilled labor tomorrow because skilled labor moves around. You, the honest contractor that diligently trains for the future--you're a chump in the cutthroat competition that is the construction industry.

The historical solution to the market's failure to train in construction has been collective bargaining. A collectively bargained contract between a union representing construction workers and an association representing contractors has traditionally resolved the problem of meeting long-term training needs in a market that rewards only the short run calculations of contractors. If you and I as contractors are signatories to a collectively bargained contract, that contract will not allow me to be injured by you, my competition. Together, you and I and the other signatory contractors have agreed that for the good of the industry in the long-run, so much per hour (say 50 cents) will be put into an apprenticeship training fund. That means for every hour any of my workers are on a job, 50 cents goes for training apprentices. When I write up my bid, I know I have this cost. But what is more, I know you have this cost as well. I know that you might win the bid over me, but it won't be because I kept in mind the future training needs of the industry and you didn't. We both have to put the collectively bargained training costs into our bid. No pirating is possible because in the future I may hire the worker you trained but I shared in the cost of that worker's training. Thus, with collective bargaining in place, the contract serves as a mechanism for the market to provide training.

KENTUCKY'S CARPENTERS

- The Carpenters have an investment of \$1,500,000 in a training facility.
- The annual operating budget is \$600,000, of which \$114,796 is for instructor costs.
- On an average there are 31 apprentices who complete training annually.
- On an average there are 250 apprentices enrolled annually.

Conclusion.

Public policies that reduce construction apprenticeship training in the face of a critical skills shortage are wrong-headed and self-defeating. Repealing Kentucky's prevailing wage law would seriously threaten the ability of the state's construction industry to provide a well-trained workforce to meet the public and private needs for high-quality construction services. The fact is that over 8 out of every 10 graduating construction apprentices in the United States come from programs financed and managed by collective bargaining. In some crafts such as operating engineers and structural steel workers (also known as iron workers) collective bargaining accounts for virtually all the apprentices trained in these skills. Construction apprenticeship programs jointly managed by contractors and unions are one of the best examples of the labor-management cooperation that many observers believe is crucial for world-class competitive success in the next century. Public policy should encourage this kind of cooperation. And that is just precisely what prevailing wage laws encourage. By tolerating and promoting the practice of collective bargaining in construction, prevailing wage laws promote labor-management cooperation, apprenticeship training, continued training of the journeyworker and the development of a high-skilled labor force.

Solid, high-quality, registered and monitored apprenticeship training also makes for a safer labor force. Safety training is a central focus of each and every collectively bargained apprenticeship program in Kentucky. It stands to reason that a more carefully trained labor force is a safer labor force. As the next chapter will show, the exemption of Kentucky schools and municipalities from Kentucky's prevailing wage law in 1982 led to higher serious injury rates in Kentucky construction. Higher injury rates hurt the worker and the worker's family. They also increase workers compensation costs and interfere with construction schedules. Construction is an inherently dangerous industry. Prevailing wage laws keep down the costs of injuries the right way by encouraging the training that reduces the risk of injury in the first place.

Innovative Training for Unionized Electrical Workers

“One of organized construction’s greatest strengths is its craft training. And the union electrical sector’s program is one of the best of the best. A key reason it is that those directing the National Electrical Contractors Association—International Brotherhood of Electrical Workers effort keep looking for new approaches to improve their product.”

**Cockshaw’s Construction Labor News+Opinion
September 1999**

5

The Rise in Serious Injuries in Kentucky Construction After Schools and Municipalities Were Exempted from the State's Prevailing Wage Law

The general recipe for safety in construction is simple: larger, more experienced contractors working with well-trained and experienced crews are safer than smaller, less-experienced contractors working with less experienced and less trained workers.⁶⁴ The suspension of Kentucky's prevailing wage law for schools and municipalities in the 1980s set in motion a train of events that led to the proliferation of less experienced contractors teaming up with less trained and less experienced workers. This led to more and longer serious injuries for Kentucky construction workers.

The General Relationship Between Prevailing Wage Regulations and Safety

Cutthroat competitiveness in contracting. The repeal of the state prevailing wage laws often will lead to a burgeoning of start-up contractors with limited track records. These new entrants join existing contractors in a heated bidding process that can put safety at risk.

Because of their relative inexperience, new firms tend to face greater on-site coordination problems than firms with longer track records. Such problems can add to costs, but also directly endanger safety. Problems in coordination, perhaps related to delivery of materials and equipment, or in scheduling work with subcontractors, lead to greater uncertainty with respect to the construction schedule. Uncertainty is a breeder of safety risk, as workers can less easily anticipate and plan for the daily contingencies of work.

⁶⁴. C. Culver, M. Marshall, and C. Connolly, *Construction Accidents: The Workers' Compensation Data Base, 1985-1988*, Washington, DC, OSHA Office of Construction Engineering, 1992.

New entrants in the industry also are generally smaller in size than established firms. Smaller firms have worse safety records than larger firms, in part because of greater laxity of enforcement of safety rules and the relative absence of formal safety programs.

Of greatest importance, however, is the firm's reaction to increased pressure to cut costs in the face of intensified competition and cost overruns. There is a tendency to speed up work and cut back on safeguards in the face of such pressures.

Workforce turnover. When state prevailing wage laws were repealed, worker turnover increased significantly, as the industry found it harder to retain workers for long-term careers (see Chapter Three). Repeals resulted in a decline in the union share of the construction labor market, driving down average construction wages in the state and decreasing union apprenticeship training for construction. The decline in wages and in health and pension benefits (see Chapter Five) drove experienced construction workers from their trades to careers in other industries.

In states that retain their prevailing wage law — compared with those that never had such a law or repealed such a law — the proportion of construction workers receiving training is higher and injury rates are lower. A decline in wages and benefits leads to a flood of inexperienced workers into the industry as well as a decline in skilled, experienced workers needed to supervise the recruits and to assure that they work safely.

Decline in the skill base of the construction labor market. Experience is a major determinant of safe work performance — and productivity. Training of skilled construction workers is normally conducted through apprenticeship training programs, most of which are operated by unions and employers through joint trust funds. An integral part of this training is learning on the job while properly supervised. In that way, workers learn from experience while on a variety of projects. Among other things, apprentices are trained to identify and correct ergonomic problems, to detect physical hazards, and to detect the presence or release of hazardous chemicals. Knowledge about safety and health hazards, appropriate protective measures, and hazard communication methods are all important elements that apprenticeship programs provide.

When prevailing wage acts are repealed, training and apprenticeship programs decline and the skill base of workers erodes. Without employer incentives to continue apprenticeship programs, knowledge of proper safety and health procedures declines as well.

Summary. The combination of these factors — cutthroat competition, a decline in training, and an erosion of career attachments to the industry — affects the safety-related skill and experience base of the construction labor force. Workers become more injury-prone and less knowledgeable about the kinds of risks they are taking. Furthermore, as the workforce becomes less skilled and its wages in construction decline, workers are forced to take more safety risks to simply make a living. Furthermore, contractors caught in the competitive speed-up often press their workers to hurry and take more chances. Workers are put at increased risk in an already hazardous industry.

The Rise in Serious Injuries in Kentucky After Schools Were Exempted in 1982

Annually, the various state departments of labor in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics, conduct an occupational injury and illness survey. This survey reports for a variety of industries, including construction. The survey reports the number of workers employed in each industry category, the number of injury cases and the number of injury cases that result in lost days from work. I have gathered these data for Kentucky for the period 1976 to 1991. This allows us to examine injury rates in Kentucky construction prior to and after schools were exempted from the state prevailing wage law in July of 1982. The Bureau of Labor Statistics reports the number of injury cases, the number of serious injury cases, the days lost from work from serious construction injuries. These data are reported annually along with the average number of construction workers employed for each year. From these data we can calculate three indices of the prevalence of serious injuries in construction. In Table 11, we compare serious injury cases as a percent of all construction workers average for the six years prior to suspension (1976 to 1981) and for the nine years after suspension (1983 to 1991).⁶⁵

Table 11: Comparing Annual Average Serious Injury Rates in Kentucky for the Six Years Prior to and the Nine Years After the 1982 Exemption of Schools and Municipalities from the State Prevailing Wage Law

	Serious Injuries per Worker	Lost Days per Serious Injury	Serious Injuries as a Percent of All Injuries
Before School & Municipal Exemptions	4.9%	18.6	45.3%
After School & Municipal Exemptions	5.4%	21.6	48.9%
Increase	0.5%	3.0	3.6%
t statistic	2.4	2.6	3.2
Statistically significant?	Yes	Yes	Yes
Percent Increase	11%	16%	8%

⁶⁵ 1982 is omitted because until July 15, 1982, the law was applied to schools and municipalities and after July 15 the law was suspended. These annual data cannot break down 1982's injuries into before and after months within the year.

Serious injuries are defined by the BLS as work injuries that result in lost days from work. In the period 1976 to 1981, on average 45.3% of all injuries were serious enough to result in lost days from work. In this pre-exemption period, on average 4.9% of all construction workers were annually seriously injured enough on-the-job to lose days from work. On average, these seriously injured workers lost 18.6 days of work. In the nine years after schools and municipalities were exempted from prevailing wage regulations, 48.9% of all injuries annually were serious injuries. Annually, 5.4% of all construction workers were injured on-the-job seriously enough to miss days of work. On average, these seriously injured workers missed 21.6 days of work. In each case, the average index of serious injuries rose after exemption compared to before exemption. And in each case this increase was statistically significant. (The t statistics are a measure of statistical significance and in each case statistical significance is found at the 5% level or lower). These differences are statistically significant. Are they practically significant?

Increase in Kentucky Serious Injury Rates After Prevailing Wage Exemptions in 1982

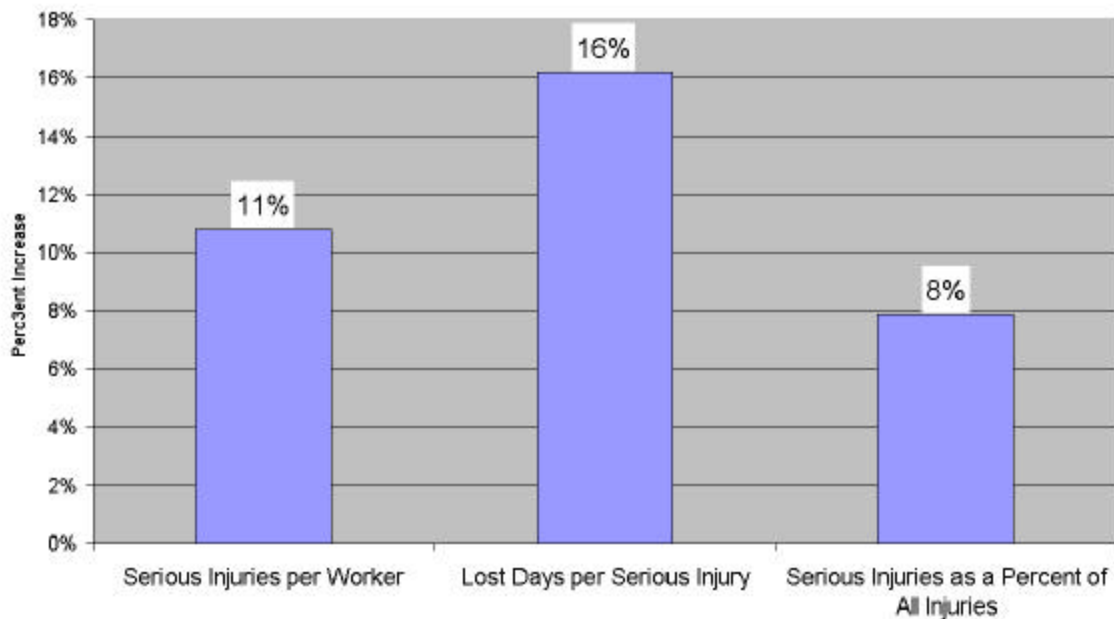


Figure 14: The Increase in the Measures of Serious Injuries After the Exemption of Kentucky School and Municipalities from the State Prevailing Wage Regulations

Figure 14 shows the relative magnitude of the increases in serious injury after prevailing wage regulations were lifted. Serious injuries per worker rose by 11 percent. Serious injuries as a share of all injuries rose by 8 percent and lost work days per serious

injury rose by 16%. Serious injuries create costs to the worker and to construction. The worker is partially compensated for his injury through workers compensation. To the extent the worker is compensated, the industry and eventually the consumers of construction services pay for this increase in serious injuries. But the costs do not stop there. To the extent the worker is not made whole or cannot be made whole, the worker and his or her family pay for the injury in lowered earning capacity and lost quality of life. Everyone wants to reduce workplace injuries. Open shop and union shop contractors abhor workplace injuries and seek to promote workplace safety. Prevailing wage regulations are one means of doing this. By encouraging skill formation, nurturing and preserving experience, prevailing wage regulations cut the hidden but very real and sometimes tragic costs associated with workplace accidents and injuries.



Prevailing Wage Regulations Support and Promote Family Health Insurance and Old Age Security

Pension and health benefits play two crucial roles in the construction industry. First, by providing needed income security in old age and needed health coverage today, these benefits permit adults with families to participate in the industry while knowing that their families' basic needs are insured. Second, pension and health benefits help create and preserve needed skills within the industry. People willing and capable of acquiring the skills needed for solid, high quality construction are also people capable of acquiring the skills needed by many industries. If the construction industry cannot provide the basic benefits needed by families, the construction industry will steadily lose its better and more experienced workers to other industries that will provide these benefits.

Merit shop contractors have difficulty paying their workers pension benefits or health insurance. This difficulty is rooted in the same market failure that prevents training on the open shop side of the industry. Construction workers move from job to job. They must move simply because today's building gets built and today's road gets paved. So eventually, the construction worker has to move on. In doing so, the worker often changes employers. Merit shop contractors find it both awkward, and not worth their while, to insure the health and old age of workers who will be with them a limited amount of time. So merit shop contractors develop insurance programs for their key workers who do stay for years. But the merit shop contractors find little reason and much difficulty in providing these same insurance benefits to the transient worker.

Collective bargaining provides a mechanism for allowing and inducing contractors to provide health insurance and pensions. Construction projects still come to an end. Construction workers still move on to new employers. But the new employer like the old is a signatory to the collective bargaining agreement. That agreement requires that each employer contribute so much per hour on the worker's behalf into a pension fund and into health insurance. Thus, when a union construction worker's child gets sick, the child is covered by health insurance. And when a union construction worker retires, he or she has something more than Social Security to look forward to. This is not only good for the construction worker and his or her family, it is good for the community as well. Construction represents around 5% of the labor market. Thus, in round terms, construction workers and their families represent 5% of our neighbors--neighbors one would hope could afford a doctor when a child is ill and neighbors one would hope could take care of themselves when they are old. Such

neighbors are less of a burden on the community as a whole and better neighbors to live next to.

**Annual Average Employer Contribution per Worker to ERISA
Regulated Construction Pension and Health Programs in Kentucky
1982-1992**

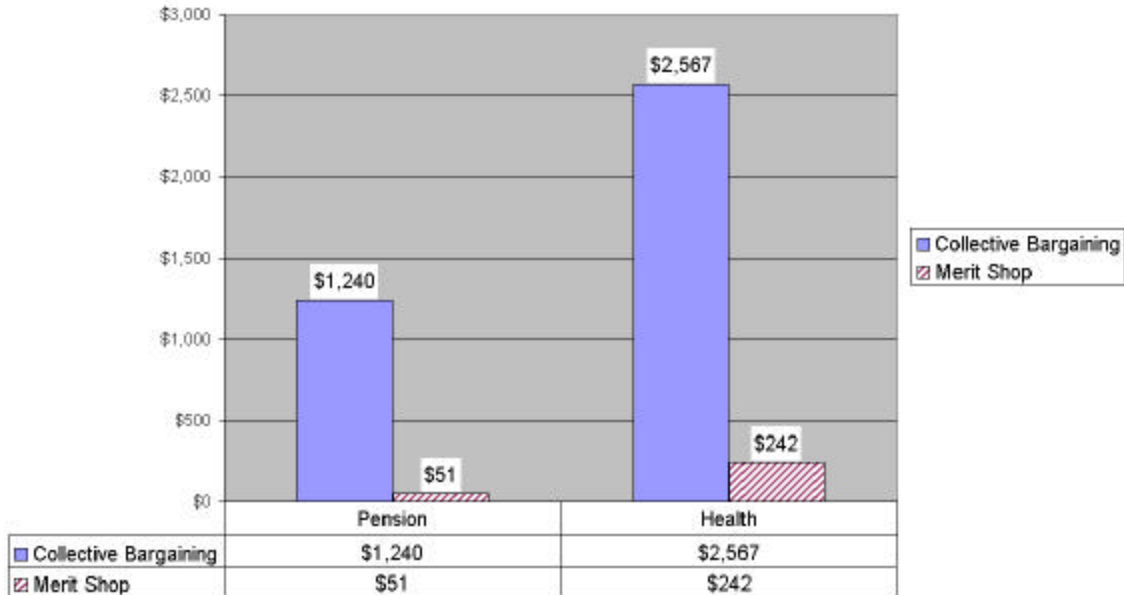


Figure 15: Comparison of Employer Contributions to Worker Pension and Health Plans in Kentucky under Collective Bargaining and Within the Open Shop

Figure 15 shows the average per worker employer contributions to pension and health plans in Kentucky that are regulated by ERISA.⁶⁶ In Kentucky, over the decade 1982 to 1992, the annual average employer contribution per worker to pensions was \$1,240 under collective bargaining and \$51 among merit shop contractors. This underscores the problems merit shop contractors have in paying worker benefits.

This does not mean that no merit shop contractor pays worker benefits. In fact, while in the minority, three types of merit shop contractors do pay benefits. The first is the merit shop contractor that is trying to slip-stream behind the collectively bargained contract in his or her area and trade. This merit shop contractor follows a high-end strategy of using highly trained workers through paying top dollar wages and benefits. This contractor tries to beat his competitors by avoiding the administrative costs of collective bargaining (contractor organization dues, union dues, grievance-arbitration costs and sometimes apprenticeship costs). This high-end merit shop contractor has to pay benefits to attract and keep an experienced, trained workforce. He or she often tries to hire workers trained under collective

⁶⁶ Employee Retirement Insurance Security Act (ERISA) is a federal law that regulates all worker benefits that are held in trust. These data come from the ERISA required form 5500 and cover the years 1982 to 1992. All pension benefits will be regulated by ERISA but some forms of health insurance will not.

bargaining. A second merit shop contractor who pays benefits is a small contractor that tries to avoid the ups and downs of the construction business cycle and provide his small crews with steady work. This contractor has to stay small so as not to get caught up in the booms and busts of construction employment. Often this contractor will focus on maintenance work and sometime he (or she) will platoon his workers through the unemployment system when work gets slow. This employer will pay benefits to hang on to an experienced and trusted workforce through the years. But this merit shop contractor is and has to be exceptional. By its nature construction booms and busts. All contractors, indeed most contractors cannot avoid this instability. Only by staying small and out-of-the-way, can the exceptional contractor in either the union or open shop avoid the ups and downs of the employment cycle. The last and most common merit shop contractor that pays benefits plays the business cycle. This contractor expands in the boom to take on new and profitable work and necessarily hunkers down when things slow down. This contractor cannot keep all the workers he or she hired in the boom nor can the larger contractor platoon large numbers of workers through the unemployment office. So he lets them go. He does, however, try to keep his key experienced workers. These he tries to keep steadily busy even when things slow down. And he pays them benefits.

Not all merit shop workers want benefits anyway. Merit shop workers are younger, and younger people are not as worried about old age or health problems. This is a chicken and egg phenomenon. Not only are the younger and less experienced merit shop workers less concerned about old-age and family benefits, but also because the merit shop contractor is not offering those benefits to most workers, the merit shop contractor attracts a younger and less experienced workforce. So while the lack of benefits may not be a problem for some open shop workers, it becomes a problem for the construction industry and society.

When construction work is staffed by a younger and less experienced workforce, construction becomes more dangerous. Younger, less experienced workers are more prone to accident. This puts pressure on workers compensation costs and third-party wrongful death and injury costs. Less experienced workers are also more prone to shoddy work. This puts pressure on downstream building and road maintenance costs. Inexperienced workers can also be one cause of cost-overruns. But societal costs rise as well. Construction workers form around 5% of the labor market. When these workers go year after year without pension contributions, eventually society pays higher costs in old-age services. Even in the short run, the failure to provide health insurance for construction workers and their families puts pressure on public health services.

We can estimate how many open shop workers in Kentucky construction are not covered by pensions and health insurance. Virtually all Kentucky construction workers working under collective bargaining receive employer contributions into a pension plan. The average contribution is \$1,240. If we assume that the merit shop contractor who is paying pension contributions pays the same amount per worker as the union shop contractor, then we can calculate how many merit shop workers are being covered by pensions. On average, the merit shop contractor in Kentucky pays \$51 per worker in pension contributions. If each merit shop worker who actually receives a pension contribution receives \$1,240 per year, then 4.1% are getting \$1,240 and 95.9% are getting \$0 per year. (This breakdown will yield an average of \$51). Who are these chosen few—this 4%? They are the key workers in many open shop

companies, and all the workers among the exceptional merit shop contractor that either slip-streams behind the union shop or works the quiet non-fluctuating, segments of construction.

A similar calculation can be made for health insurance. Based on Form 5500 data and assuming that the merit shop contractor pays the same health insurance premium for his (or her) worker as the signatory contractor pays for his , slightly less than 10% of Kentucky’s open shop workers are covered by health insurance. This is undoubtedly an underestimate. Unlike pensions, not all health programs are regulated by ERISA. But even if we assume that there are four times as many non-ERISA health insurance programs in the open shop, still half of all merit shop workers would go without health insurance in Kentucky.

Do prevailing wage regulations encourage the payment of benefits? Yes. They do this in two ways. First, prevailing wage laws encourage collective bargaining in construction. And collective bargaining makes the payment of benefits possible even when you are working in the main stream of construction demand. Second, it encourages merit shop contractors who do work on public construction to establish qualified pension and health plans of their own. We can look at this phenomenon through the lens of another data source—the U.S. Census of Construction.

Average Employer-Contributed Voluntary Benefits per Worker, 1992

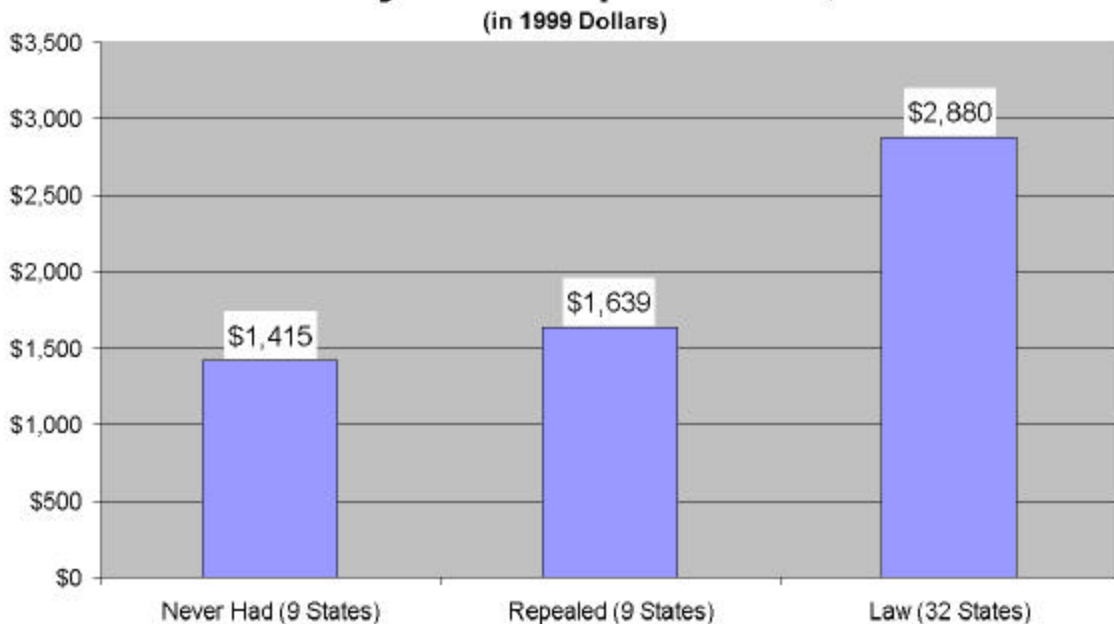


Figure 16: Comparing Average Employer Contributions to Health, Pension, & Apprenticeship Benefits by States--Those with Prevailing Wage Laws and Those Without in 1992

Source: 1992 Census of Construction

Figure 16 shows employer contributions to benefits not by union and nonunion contractors but by states with and without prevailing wage laws. So in states with prevailing wage laws, the contributions are an average of union and nonunion contractors in those states. Similarly, in states that never had prevailing wage laws and in states that repealed their prevailing wage laws, Figure 16 shows the average voluntary employer benefit contributions to health insurance, old-age pensions, and apprenticeship training. In states with prevailing wage laws, union and nonunion contractors together set aside on average \$2,880 for health, pensions and training. In states that never had prevailing wage laws, union and nonunion contractors together set aside about half that amount, \$1,415. In states that repealed their laws, union and nonunion contractors together set aside \$1,639 for health, pensions and apprenticeship training. In short, the health of construction workers' families were better taken care of in states with prevailing wage laws. The old age of construction workers and their spouses were better provided for in states with prevailing wage laws. The training of young construction workers was better assured in states with prevailing wage laws.

Solid communities need solid health and old age insurance. People who cannot take care of themselves when they are ill or when they are old become burdens on their families and burdens on the community. We saw in Chapter 3 that the alleged cost savings from prevailing wage repeal do not exist, or, at best are insubstantial. In this chapter we find that the policies that discourage collective bargaining in construction or the payment of prevailing wages on public works pose a real and measurable threat of lost health insurance and a less secure old age for many of Kentucky's citizens. Prevailing wage laws encourage nonunion contractors to pay benefits when doing public construction. These merit shop contractors can chose to put legally mandated fringe benefit contributions in the worker's pocket. But they can, and some do put those contributions into pension and health plans. Prevailing wage laws also encourage collective bargaining in construction. Collective bargaining, in turn, ensures the payment of health and pension benefits not simply to a handful of key construction workers who move with the contractor from job to job, but also to the majority of construction workers who move from contractor to contractor. Collective bargaining, in short, privatizes the cost of health and old age. Without prevailing wage regulations and collective bargaining in construction, Kentucky risks pushing onto the taxpayer the health and retirement costs of caring for Kentucky construction workers and their families.

