
Kansas and Prevailing Wage Legislation

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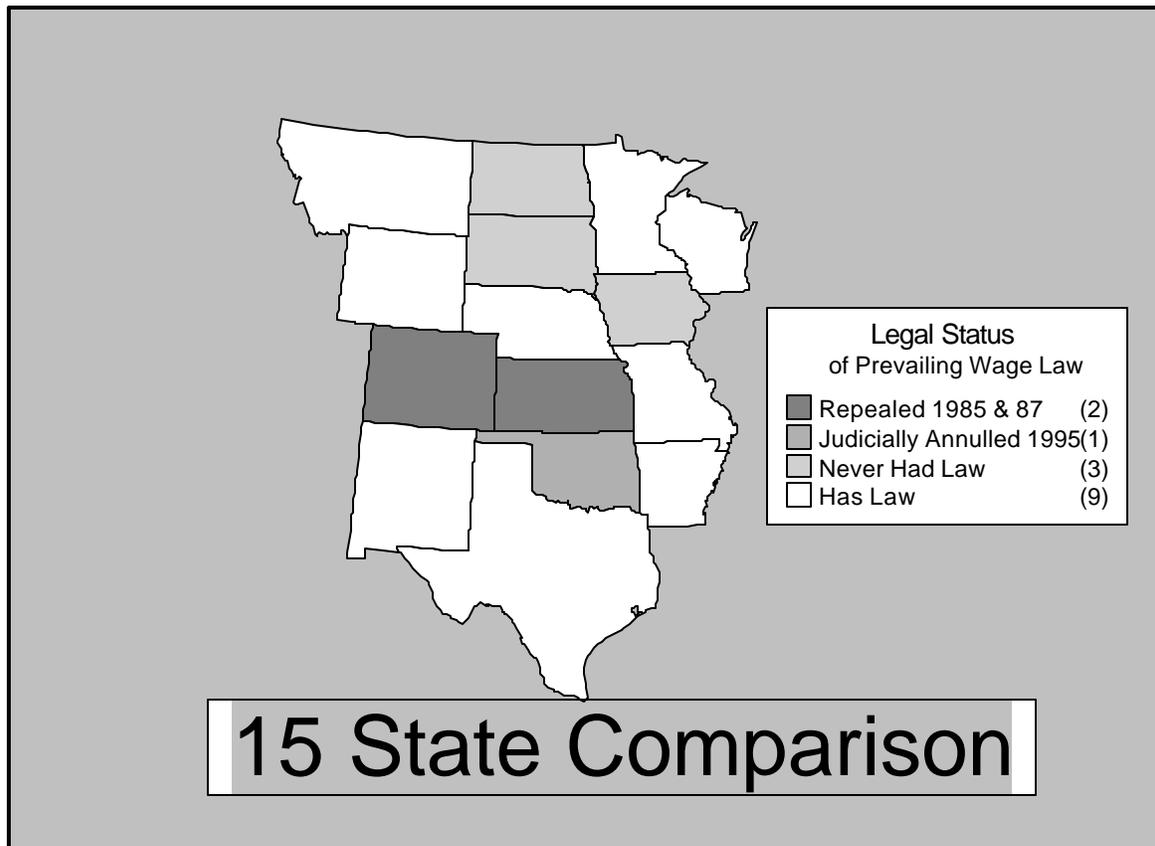
About the Author

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 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.

A

Executive Summary



A 15 Great Plains state comparison shows that after Kansas repealed its prevailing wage law in 1987

- Wage incomes in Kansas construction fell by 10% not just on public works but across all construction.
- Employer pension and health insurance contributions fell by 17%.
- While almost all construction workers covered by collective bargaining in Kansas receive health insurance and employer pension contributions, only 10% of the workers in

the open (or merit) shop receive pension coverage and only 4% receive health insurance from their employer.

- Apprenticeship training in Kansas construction fell by 38% after repeal. Minority apprenticeship training in Kansas fell by 54%.
- This was due to a shift away from collective bargaining towards open shop (or merit) shop construction. Merit shop contractors account for only 12% of all apprentices being trained in Kansas. As the merit shop share of the market grew after repeal, apprenticeship training fell substantially.
- With lower wages and benefits and less training, a new, younger, less-skilled, less-experienced work force entered Kansas construction. Serious-injury rates in Kansas construction rose by 21% after repeal of the state prevailing wage law.
- While the pain of repeal is real and measurable, the projected gain from repeal--a 6% to 17% savings on state construction costs--failed to materialize.
- Elementary school, middle school and high school new construction costs are virtually identical between Great Plains states with and without prevailing wage laws.

Overview. Kansas prevailing wage law--the first in the country--was passed in 1891 to help prod the Kansas labor market in general and the construction labor market in particular down a high-skilled, high-wage growth path. Confronted with falling wage rates and longer working days, the Republican government of Kansas embraced a series of reforms including child labor laws, compulsory schooling, convict labor laws, the eight-hour day and prevailing wages. All of these reforms were aimed at the same goal. The Kansas labor market was to be regulated so that young people were in school, apprenticeships would be encouraged, the working day would be limited, and competition would be built upon a system of skill-formation that generated and justified rising wages and incomes. Kansas legislators did not want businesses to prove profitable simply because people were working longer for less, and younger with less skills.

Almost 100 years after its original passage, Kansas' prevailing wage law was repealed on the promise that Kansas taxpayers would save from 6% to 17% on total construction costs depending on the project---and in some cases the savings would be even higher. To obtain these gains, workers wages on public works would have to be cut. If there were spill-over effects on wages outside public works, that would be the additional cost of saving money on public construction.

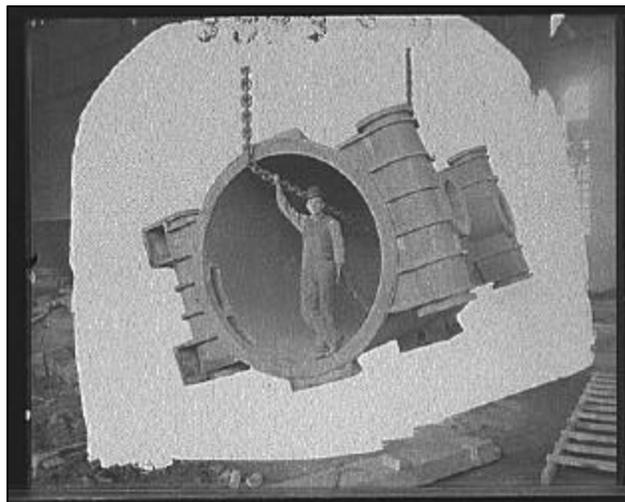
The immediate effect of the repeal of Kansas' prevailing wage law was that construction wages were cut--not only on public construction--but across the entire Kansas construction labor market. Adjusted for inflation, Kansas construction workers wage incomes fell by 11% from 1987, the year of the repeal to 1991. This amounted to a drop in average wages from \$25,573 to \$22,807. In the nine Great Plains states surrounding Kansas that retained their prevailing wage laws, wage income fell--but only by 2%. So the predicted pain of prevailing wage repeal had been achieved. Was there a corresponding gain for that pain? Were state construction costs cut by from 6% to 17% or even higher?

A case-study comparison of new school construction costs in Kansas compared to surrounding Great Plains states that have retained their prevailing wage laws finds no difference in square foot construction costs. The average square foot construction cost of building 365 elementary schools in nine Great Plains states with prevailing wage laws was \$76.86. The average square foot construction costs of building 81 new elementary schools in six Great Plains states--including Kansas--that do not have prevailing wage laws was \$76.23. Comparison of the square foot costs of middle schools and high schools yielded similar results. There is no statistically significant difference in school construction costs between comparable states with and without prevailing wage laws.

Why could wages be cut substantially and yet, no construction savings were forthcoming? The answer is--training and productivity fell with wage rates. Apprenticeship training in Kansas fell by 38% after the state repealed its prevailing wage law. Minority apprentices fell even more by 56% after the repeal of the Kansas law. The balance of construction shifted away from collective bargaining towards the open shop. Currently, open shop contractors account for only 12% of all enrolled apprentices in Kansas. Thus, as the unions declined, the open shop did not take up the slack in apprenticeship training. Rather, in the short-run, merit shop contractors hired union-trained journeymen at substantially lower wage rates and markedly reduced pension and health programs. Total employer contributions to pension and health insurance in Kansas fell by 17% after the state repealed its prevailing wage law. This was a drop from an annual average of \$20 million per year to \$16.6 million. This drop was due to a shift from collective bargaining to the merit shop. Almost all union contractors in Kansas provide pension coverage and health insurance. Currently, only 10% of merit shop workers in Kansas are covered by a company pension and only 4% receive company health insurance.

With lower wages and benefits, experienced and skilled workers eventually migrated out of the industry or retired. With a 38% fall-off in apprenticeship training, skilled and experienced older workers were replaced by younger, less-experienced, less trained workers. Thus, the promised construction savings were based on a false premise--that wage rates could be cut without effecting productivity, and collective bargaining could be terminated without effecting training. Both these premises proved false.

In place of lower construction costs, Kansas reaped a costly, higher injury rate in construction. Less trained, younger, inexperienced and poorly paid workers got hurt on the job much more often. In the five years after repeal, serious-injury rates in Kansas construction rose by 21% compared to prior to repeal. A comparison of Great Plains states with prevailing wage laws compared to those like Kansas shows that states without prevailing wage laws have a 26% higher injury rate in construction.



The History of Prevailing Wage Regulations in Kansas and the U.S.

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.¹ 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

¹ . *Topeka State Journal*, February 24, 1891, col.4, p. 4.

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."²

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-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.³

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

² . *Topeka Daily Capital*, February 25, 1891, p.1.

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

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.⁴

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."⁵

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,

⁴ . *Sixth Annual*, 215.

⁵ . *Sixth Annual*, 124.

workmen, mechanics and other persons so employed by or on behalf of the state of Kansas....⁶

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 which 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 force railroad companies, private contractors [i.e. private construction] and people of that class to pay a high rate of wages for unskilled labor.⁷

Some people have argued that the historic reason prevailing wage laws were passed was to exclude African Americans from construction job sites. Prevailing wage laws have been described by some as Jim Crow laws. This is a difficult case to make for Kansas. The Kansas law was examined by the U.S. Supreme Court in *Ashby v. Kansas*. The Supreme Court Justice who wrote the deciding opinion upholding the constitutionality of the Kansas prevailing wage law was Justice John Marshall Harlan. Harlan wrote:

When the eight hour law was passed the legislature had under consideration the general subject of the length of a day's labor,

⁶ . L. 1891 Ch. 114 p.192-193.

⁷ 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.

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.⁸

John Marshall Harlan, Supreme Court Justice

Harlan's opinion about the purpose of Kansas' law is especially interesting telling in light of the largely unsupported proposition that these laws were Jim Crow laws. Justice Harlan is known to history as the single Supreme Court Justice who spoke out against Jim Crow. In his famous dissent against the separate but equal doctrine that legitimized racial segregation in the case of *Plessy vs. Ferguson* in 1897, Harlan argue vigorously for equal treatment of the races. If the Kansas law had been a Jim Crow law in intent or effect, Justice Harlan would have been the first to declare it so and argue against its existence.

Those who have argued that prevailing wage laws are Jim Crow laws typically point to one incident associated with the passage of the federal prevailing wage law in 1931, the Davis Bacon Act. Republican Representative Robert Bacon complained of an Alabama contractor who came to his New York district in 1926 to build a federal veterans hospital. Rep. Bacon complained that the Alabama contractor was undercutting local wages and hours of work by importing cheaper southern labor. Critics of the Davis-Bacon Act have assumed that Rep. Bacon was aiming his complaint at black labor. But in fact Rep. Bacon had indicated that the Alabama contractor had brought up a mixed crew of both black and white workers. Indeed, at the time, two-thirds of all Alabama construction workers were white. While the hod carriers and laborers were likely to have been blacks from Alabama, the brick masons and carpenters were likely to have been white. The notion that Rep. Bacon was aiming his legislation as a Jim Crow attack on southern blacks is thinly supported speculation.

Republican Representative Fiorelo LaGuardia was familiar with this particular Alabama contractor. He mentioned this issue as he argued for the passage of the Davis Bacon Act in 1931. He argued on the floor of the House:

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

⁸ Quoted in: Oklahoma, Department of Labor, Second Annual Report, Oklahoma City, OK, 1909, p. 327.

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.]⁹

Prevailing wage laws were Republican legislation. The Davis Bacon Act was named after a Republican representative from New York and a Republican Senator from Pennsylvania. The Davis Bacon Act was signed by Republican President Herbert Hoover.

The rationale for prevailing wage laws is rooted in a philosophy of economic growth. Prevailing wage laws support higher wage rates and greater unionization in construction. The absence of prevailing wage laws permits the spread of lower wage rates and the growth of nonunion construction. As will be seen in later chapters of this report, states with and without prevailing wage laws have very different construction industries. The ones with prevailing wage laws have more apprenticeship training taking place, their workplace is safer, more construction workers have pensions and health insurance and construction workers are more productive and earn higher incomes.

Despite these advantages associated with prevailing wage policies, beginning in 1979, there was a widespread effort to repeal existing prevailing wage laws. Between 1979 and 1988, nine states repealed their state prevailing wage laws. In 1995, the Oklahoma law was judicially overturned based on the notion that the state's prevailing wage survey was unconstitutionally over-reliant on the federal survey. The major reason state laws were repealed is that proponents of repeal promised substantial savings on public construction costs. As the next chapter demonstrates, there is no evidence that Kansas has saved a significant amount of money because it repealed its state prevailing wage law. If little was gained by repealing Kansas' law, it is time to consider what was lost. That topic will be taken up in subsequent chapters.

⁹ U.S., Seventy-First Congress, Third Session, *Congressional Record*-House, February 28, 1931, p. 6510.

The Cost of School Construction in Kansas and Surrounding Great Plains States

A Case Study of the Effect of Prevailing Wage Repeal on State Construction Costs by Looking at School Construction in States with and without Prevailing Wage Laws

The effect of inflated wages and deflated productivity combines to a net increase in cost to the Kansas Tax Payer for state construction of from 6% to 17% depending on the project and in some cases higher.

Carl Conrod, Associated Builders and Contractors Testimony before the Senate Labor and Industry Committee on Bill 112, February 16, 1987¹⁰

Kansas taxpayers were promised a 6% to 17% reduction in their state construction costs with the repeal of the state prevailing wage law. Sometimes the saving would be higher. This chapter looks for those savings by looking at the cost of school construction--broken down separately into new elementary schools, new middle schools and new high schools--built in Kansas and surrounding states, from July 1991 to June 1997. If Kansas taxpayers have saved 17% or even more on school construction costs, then the cost of building schools in Kansas should be substantially cheaper than the cost of building schools in surrounding states that have retained their prevailing wage laws. Even if Kansas has saved only 6% on its school construction costs, with enough observations this sort of savings should be clear.

Kansas is surrounded by a set of states, some of which have prevailing wage laws governing school construction and some of which do not have these regulations. By comparing the square foot cost of new school construction in these differing states, we can estimate the effect of prevailing wage laws on public construction costs.

In this chapter we examine separately the mean and median square foot cost of building new public schools. Schools are broken down into three types—elementary schools, middle schools and high schools. Square foot costs are the total cost of construction excluding land acquisition, architect fees or construction management fees divided by the total square feet of the project.

¹⁰ George Barbee, Executive Director of Kansas Consulting Engineers in testimony the same day on SB112 characterized the general estimate at the hearings of cost savings from repeal as being 20%.

The data are from the start of construction as reported by the F.W. Dodge Corporation, the standard bid reporting service for the construction industry. The time period of the analysis is July 1991 to June 1997.¹¹ Earlier construction costs are brought to constant 1997 dollars by using the consumer price index for housing costs.

The map below shows the 15 states in the cost comparison. Nine states have state prevailing wage laws, five including Kansas do not. One state—Oklahoma--switched from having a law to not having a law during the time period of the comparison.

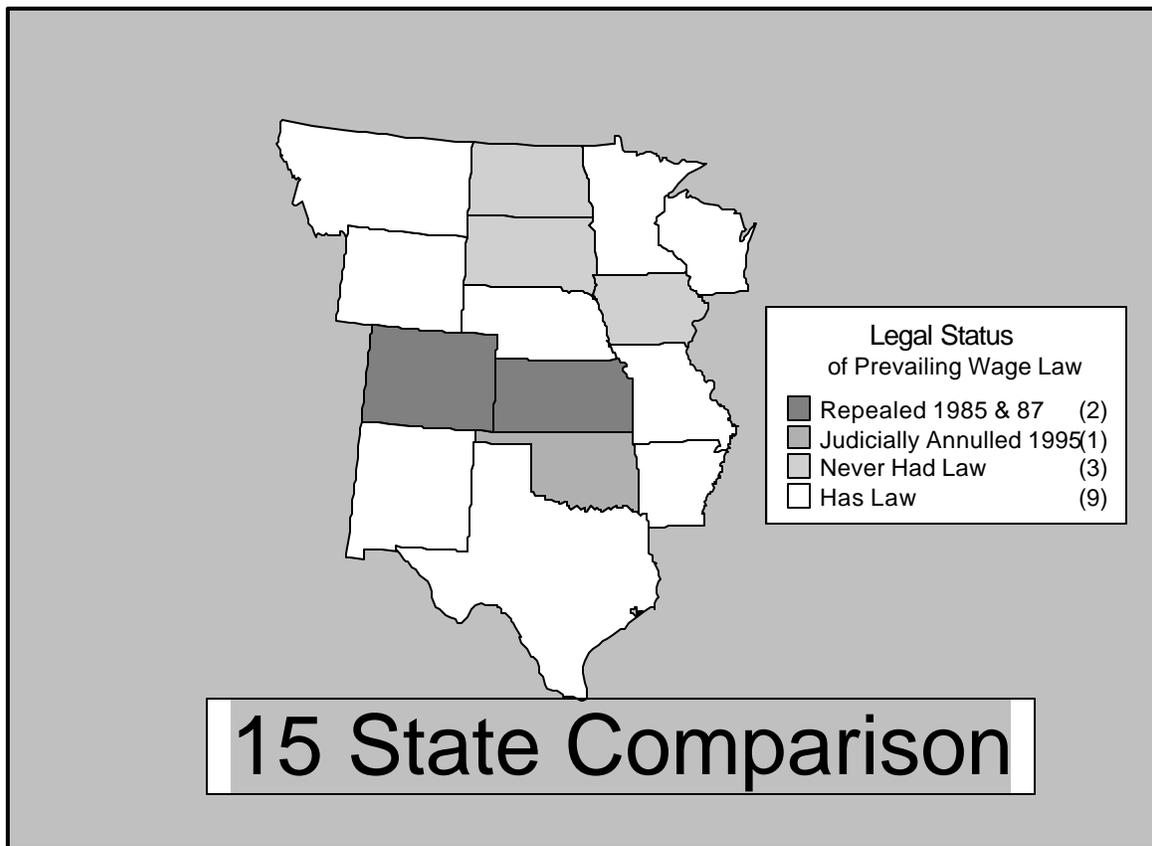


Table 1 presents both the mean and the median square foot cost of construction for elementary schools. The mean is the numerical average

¹¹ F.W. Dodge Corp. "Dodge Reports" Start Cost for New Construction. (Earlier data are not available.)

while the median is the midpoint cost between the cheapest and most expensive elementary school built in that state.¹²

Table 1: Square Foot Construction Costs of Public and Private Elementary Schools by State and Legal Status 1991-97 (in constant 1997 dollars)

ELEMENTARY SCHOOLS								
No Law State					PW Law State			
State	Public or Private	Mean	Median	Number of Schools	Mean	Median	Number of Schools	
AR	Public Owner	.	.			\$53	\$52	N=17
CO	Public Owner	\$82	\$85	N=40	.	.	.	
IA	Public Owner	\$72	\$70	N=8	.	.	.	
KS	Public Owner	\$83	\$75	N=18	.	.	.	
MN	Public Owner	.	.			\$88	\$87	N=24
MO	Private School(s)	.	.			\$66	\$76	N=5
	Public Owner	.	.			\$68	\$70	N=30
ND	Public Owner	\$56	\$56	N=2	.	.	.	
NE	Private School(s)	.	.			\$34	\$34	N=1
	Public Owner	.	.			\$80	\$84	N=11
NM	Public Owner	.	.			\$83	\$82	N=27
OK	Public Owner	\$49	\$48	N=8	.	\$55	\$55	N=14
SD	Private School(s)	\$109	\$109	N=1	.	.	.	
	Public Owner	\$67	\$66	N=5	.	.	.	
TX	No Public Owner	.	.			\$98	\$94	N=4
	Public Owner	.	.			\$81	\$71	N=195
WI	Private School(s)	.	.			\$71	\$71	N=2
	Public Owner	.	.			\$68	\$66	N=45
WY	Public Owner	.	.			\$83	\$83	N=2

¹² Along with public elementary schools, a handful of private elementary schools were built in some of the states. While the small number of private schools makes statistical cost comparisons difficult, these are nonetheless interesting observations simply because private construction is not governed by prevailing wage laws. There are some data in Table 1 that a critic of prevailing wage laws might take as evidence that these laws raise construction costs. Missouri has a prevailing wage law governing public school construction. Private elementary schools in Missouri on average, cost slightly less per square foot than public schools. Perhaps this is due to Missouri's prevailing wage regulation. But when one looks at the median square foot cost, private schools are more expensive to build in Missouri. The average or mean is more sensitive to outliers—an extremely expensive or extremely cheap new school. Setting aside the effect of one or two exceptions, the median actually suggests that private construction is more expensive than prevailing wage construction of elementary schools in Missouri. However, one should not rush to this conclusion because the number of private schools built (5) is small. In Texas with a similar number of private schools (4), both the median and mean square foot construction cost for private elementary schools is higher than the public schools built under prevailing wage regulations. In Nebraska, the one private elementary school built since 1991 was built quite cheaply at \$33 per square foot. On the whole, a comparison of private and public elementary school construction yields ambiguous results. Sometimes private elementary schools are more expensive. Sometimes they are less. This is precisely the result you would expect if prevailing wage laws had little effect on construction costs.

Table 2 shows the mean or average square foot construction cost of elementary schools broken down into those built in states with prevailing wage laws and those states without such regulations. The Table shows that the average square foot cost for 365 new elementary schools built in states with prevailing wage laws is \$76.86. The average square foot construction cost of elementary schools in states that do not apply prevailing wage regulations is \$76.23. Applying a standard statistical test comparing the values of sample means, we can say emphatically that there is no statistically significant difference between these two numbers.¹³ The cost of elementary school construction is basically the same whether or not the state applies prevailing wage regulations.

Table 2: A Comparison of the Average or Mean Square Foot Cost of Building a New Elementary School in States with and without Prevailing Wage Laws

	Legal Status	N	Mean	Std. Deviation	Std. Error Mean
Square Foot Cost in 1997 Dollars Using CPI-Housing Deflator	No Law State	81	\$76.2309	\$21.3523	\$2.3725
	PW Law State	365	\$76.8644	\$54.5442	\$2.8550

Table 1 has one more item that a critic of prevailing wage laws might seize upon to demonstrate how costly these laws are. Oklahoma's law was overturned by judicial decision in 1995. Square foot construction costs of elementary schools in Oklahoma were lower after the law was eliminated. Surely this is evidence of the laws costly impact.

If such an analysis were true, then one would expect that the cost of new middle school construction in Oklahoma would decline after the law was eliminated. Table 3 repeats the calculations in Table 1 for middle schools. In Oklahoma, average middle school construction costs rose after the termination of the state prevailing wage law.

¹³ Formal results of tests for statistical significance are presented in the Appendix to this chapter.

Table 3: Square Foot Cost of New Public and Private Middle School Construction by State and Legal Status

MIDDLE SCHOOLS							
State	Public or Private	No Law State			PW Law State		
		Mean	Median	Number of Schools	Mean	Median	Number of Schools
AR	Private School(s)	.	.	.	\$45	\$45	N=2
	Public Owner	.	.	.	\$47	\$46	N=13
CO	Public Owner	\$84	\$82	N=10	.	.	.
IA	Public Owner	\$67	\$67	N=3	.	.	.
KS	Public Owner	\$69	\$68	N=12	.	.	.
MN	Private School(s)	.	.	.	\$126	\$126	N=1
	Public Owner	.	.	.	\$80	\$80	N=14
MO	Public Owner	.	.	.	\$75	\$69	N=26
MT	Public Owner	.	.	.	\$59	\$59	N=4
ND	Public Owner	\$65	\$65	N=2	.	.	.
NE	Public Owner	.	.	.	\$71	\$71	N=8
NM	Public Owner	.	.	.	\$90	\$90	N=9
OK	Public Owner	\$54	\$54	N=2	\$51	\$49	N=11
SD	Private School(s)	\$70	\$70	N=1	.	.	.
	Public Owner	\$72	\$72	N=1	.	.	.
TX	Private School(s)	.	.	.	\$99	\$73	N=3
	Public Owner	.	.	.	\$70	\$68	N=131
WI	Private School(s)	.	.	.	\$70	\$70	N=1
	Public Owner	.	.	.	\$76	\$73	N=20
WY	Public Owner	.	.	.	\$65	\$65	N=2

After the elimination of Oklahoma's law, average (mean) square foot costs of middle school construction (controlling for inflation) rose 6%. But given the number of schools built (2) this result has little statistical significance. An examination of public versus private construction yields few result also. In Arkansas, a state with a prevailing wage law, private middle school come in about \$2 cheaper per square foot. But in South Dakota, a state without a prevailing wage law, private middle schools also come in about \$2 cheaper per square foot. In Wyoming, a law state, one private middle school was built slightly below the public average. But in Minnesota, another law state, the one private middle school built during the period was substantially more expensive. Generally, the number of private schools is small and comparison of averages is consequently statistically unreliable.

A comparison of average square foot costs for new public middle schools broken down by states with and without prevailing wage laws yields the same result as with elementary schools. There is no statistically significant difference in the average cost of the two groups of schools.¹⁴ In states with no state prevailing wage law, the average square foot new construction cost was \$72.35. In states with prevailing wage laws, the average was \$70.02. The lower cost of construction in states with prevailing wage laws is not statistically significant.

¹⁴ See Appendix to this chapter for formal test results.

Table 4: Average (Mean) Square Foot Construction Costs of Middle Schools by States with and without Prevailing Wage Laws

Group Statistics

	State With PW	N	Mean	Std. Deviation	Std. Error Mean
Square Foot Cost in 1997 Dollars Using CPI-Housing Deflator	No Law State	30	\$72.3547	\$19.7813	\$3.6116
	PW Law State	238	\$70.0225	\$23.7157	\$1.5373

square foot construction costs broken down by public and private high schools and then broken down by states with and without prevailing wage laws. Private high schools in Minnesota and Texas (both states with laws) were cheaper to build than public high schools. But in Kansas this was also true even though Kansas does not have a prevailing wage law. In Wisconsin there was little difference in the cost of building a high school privately or publicly even though the public school were built under prevailing wage regulations.

Table 5: Square Foot Cost of New Private and Public High School Construction by State and Legal Status

States		HIGH SCHOOLS					
		No Law State			PW Law State		
		Mean	Median	Number of Schools	Mean	Median	Number of Schools
AR	Public Owner	.	.	.	\$60	\$55	N=13
CO	Public Owner	\$81	\$82	N=12	.	.	
IA	Public Owner	\$70	\$70	N=6	.	.	
KS	Private School(s)	\$24	\$24	N=1	.	.	
	Public Owner	\$66	\$69	N=9	.	.	
MN	Private School(s)	.	.	.	\$64	\$64	N=1
	Public Owner	.	.	.	\$81	\$83	N=23
MO	Public Owner	.	.	.	\$62	\$63	N=20
MT	Public Owner	.	.	.	\$65	\$68	N=3
ND	Public Owner	\$102	\$102	N=1	.	.	
NE	Public Owner	.	.	.	\$83	\$88	N=3
NM	Public Owner	.	.	.	\$97	\$96	N=5
OK	Public Owner	\$53	\$50	N=5	\$53	\$53	N=4
SD	Public Owner	\$62	\$62	N=2	.	.	
	Private School(s)	.	.	.	\$65	\$59	N=7
TX	Public Owner	.	.	.	\$76	\$71	N=86
	Private School(s)	.	.	.	\$69	\$69	N=2
WI	Public Owner	.	.	.	\$69	\$70	N=25
	Public Owner	.	.	.	\$65	\$57	N=5

When we compare average public high school square foot construction costs by states with and without prevailing wage laws (Table 6), the results are similar to what we found for elementary and middle schools. High schools in states with prevailing wage laws cost, on average, \$72.87 per square foot while high schools in states without prevailing wage laws cost \$70.72 per square foot. This \$2 difference was not statistically significant.¹⁵ Once again, there is no measurable difference among these 15 states in school construction costs associated with the presence or absence of prevailing wage laws.

Table 6: Average Square Foot Construction Costs of New High Schools by Great Plains States with and without Prevailing Wage Laws

Group Statistics

	State With PW	N	Mean	Std. Deviation	Std. Error Mean
Square Foot Cost in 1997 Dollars Using CPI-Housing Deflator	No Law State	35	\$70.7255	\$20.7515	\$3.5076
	PW Law State	187	\$72.8742	\$37.7920	\$2.7636

How can this be when wage rates on prevailing wage projects are usually substantially higher than the wage rates on private jobs done by nonunion contractors?

Wage Rates and Labor Costs as a Percent of Total Costs

When Kansas repealed its prevailing wage law, Kansans were promised anywhere from a 6% to a 17% savings on public construction costs. How were such estimates calculated?

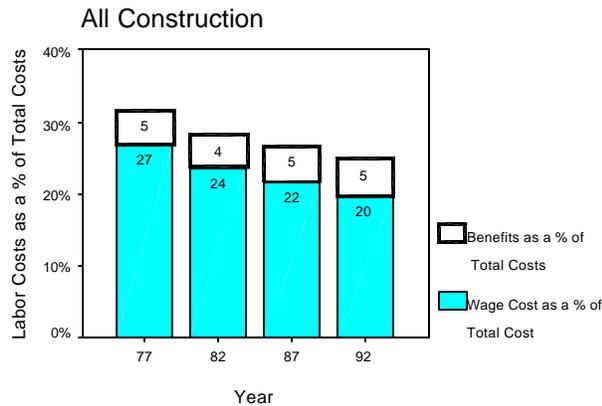
The answer is the estimates were hypothetical calculations. The calculation typically went like this.

- Assume that labor costs are 50% of total construction costs.
- Assume wage rates fall by 12% to 40% with the repeal of Kansas' prevailing wage law.

¹⁵ See Appendix to this chapter for formal test results.

- Assume labor productivity does not fall when wage rates fall by 12% to 40%.
- With these three assumptions in hand, the hypothetical calculation is simple. If 50% of total costs fall by 40%, then 100% of total costs will fall by 20%. If 50% of total costs fall by 12%, then total costs fall by 6%. There you have it. A savings of 6% to 20% on total construction costs. Kansans can now build five schools for the cost of four (a 20% savings) by repealing the state's prevailing wage law.

The only problem with this hypothetical calculation is that all its assumptions are wrong. Labor costs are not 50% of total costs. They are around 30% in building construction and less on street and highway construction. Furthermore, labor productivity is not constant when wage rates fall. Skilled and experienced workers leave for better jobs elsewhere. Training falls off. Consequently, productivity falls--offsetting in part, or in full, the fall in wage rates. The key source on information for the construction industry is the U.S. Census of Construction. This Census comes out every five years. The results for 1997 are not yet released. In 1992, for all construction in Kansas, labor costs--wages, benefits, payroll taxes of construction workers--as a percent of total construction costs were 25%. Total cost here does not include land acquisition, architect fees or construction management fees. It also adjusts for possible over-counting by netting out of each contractor's value of construction the cost charged to that contractor by subcontractors. So total cost is the net value of construction built by each contractor and subcontractor. Figure 1 shows for Kansas, labor costs as a percent of total costs for each census year, 1977 to 1992. Kansas repealed its state



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 in All Kansas Construction, 1977-1992

prevailing wage law in 1987. Labor costs as a percent of total costs subsequently fell. But this cannot be laid at the feet of the law's repeal. Labor costs have been falling at least from 1977 onward at a fairly steady rate. This decline has more to do with increased labor productivity and the use of prefabricated material in construction than it has to do with repealing prevailing wage regulations.

The Census of Construction does not break out school construction contractors as a separate category. However, 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: Wage Costs as a Percent of Total Costs in School Construction by Regions of the U.S.

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 data but their age make them more instructive. In 1972, prevailing wage laws were widely enforced on school construction outside the South.¹⁶ 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 compared to 27.3% in the South.

Table 7 shows that the U.S. Bureau of Labor Statistics found that in school construction, hourly wage rates varied considerably. For instance, hourly wage rates were 50% higher in the Northeast region compared to the South in 1972 (\$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:

¹⁶ The only non-southern states without prevailing wage laws in 1972 were North and South Dakota, Iowa and Vermont. Virginia, North Carolina, South Carolina, Georgia and Mississippi also did not have prevailing wage laws in 1972.

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.¹⁷

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 to better train their workers and provide them with new, better equipment? Could it be, in other words, that it is wrong to assume that a major wage cut would not effect, whatsoever, in the short run or in the long run, labor productivity in construction? In sum, can wage rates go up without increasing labor costs as a percent of total costs?

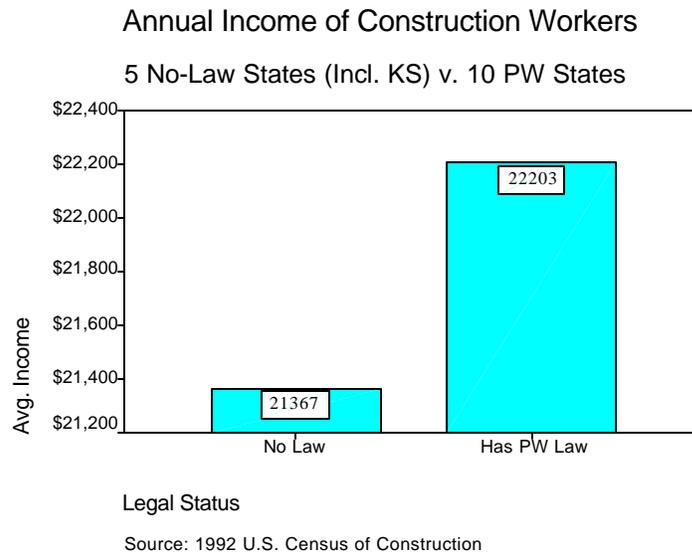


Figure 2: Average Wages of Construction Workers in 5 States with No Prevailing Wage Law (Including Kansas) Compared to Surrounding States with Prevailing Wage Laws

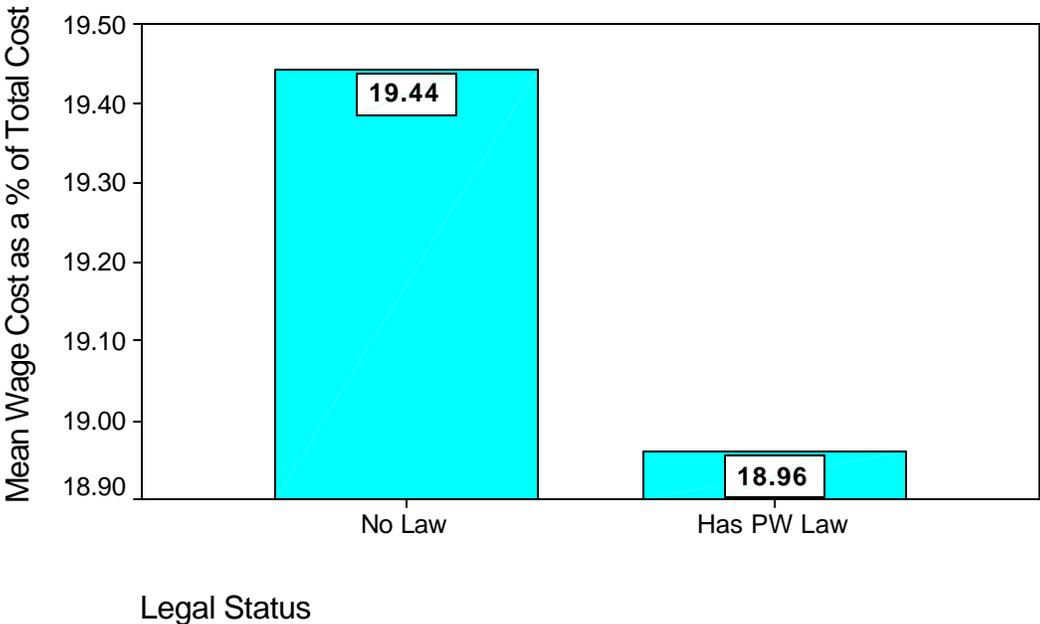
Figure 2 shows that on average, for the ten states around Kansas that do have state prevailing wage laws, the average wage income of construction workers was \$22,203 in 1992. In contrast, in the five states including

¹⁷ 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, pp. 40-41.

Kansas without state prevailing wage laws, the average construction worker annual wages was \$21,367--4% less than in the surrounding states with prevailing wage laws. Did these lower wages result in lower wage costs as a percent of total construction costs? No. Actually, as Figure 3 shows, wage costs as a percent of total construction costs were slightly higher in the lower wage states.

Wage Costs as a Percent of Total Costs

5 No-Law States (Incl. KS) v. 10 PW States



Source: 1992 U.S. Census of Construction

Figure 3: Wage Costs as a Percent of Total Costs in Five No-Law States (Including Kansas) Compared to 10 Surrounding States with State

So the result found by the U.S. Bureau of Labor Statistics in 1972--that higher wage rates do not necessarily mean higher wage costs as a percent of total costs--still holds true today. Prevailing wage regulations support higher wages but not necessarily higher costs. How can this be? The answer lies in the incentives prevailing wage regulations put in place to encourage training, the retention of skilled workers, and the use of modern equipment. We now turn to the issue of training.

Appendix to Chapter 2

Statistical Output from Test Results Comparing Means of Square Foot Construction Costs

Elementary Schools

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Mean	
									Lower	Upper
Square Foot Cost in 1997 Dollars Using CPI-Housing Deflator	Equal variances assumed	.972	.325	-.103	444	.918	-\$.6335	\$6.1671	-\$12.7538	\$11.4868
	Equal variances not assumed			-.171	328.197	.865	-\$.6335	\$3.7121	-\$7.9360	\$6.6690

Middles Schools

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Mean	
									Lower	Upper
Square Foot Cost in 1997 Dollars Using CPI-Housing Deflator	Equal variances assumed	.153	.696	.516	266	.606	\$2.3322	\$4.5178	-\$6.5630	\$11.2274
	Equal variances not assumed			.594	40.298	.556	\$2.3322	\$3.9251	-\$5.5989	\$10.2633

High Schools

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Mean	
									Lower	Upper
Square Foot Cost in 1997 Dollars Using CPI-Housing Deflator	Equal variances assumed	.179	.672	-.327	220	.744	-\$2.1487	\$6.5738	-\$15.1044	\$10.8069
	Equal variances not assumed			-.481	83.436	.632	-\$2.1487	\$4.4656	-\$11.0299	\$6.7324

3

The Loss of Construction Worker Income Associated with the Repeal of Prevailing Wage Laws

With a Focus on the Effect of Kansas' Repeal

High school coaches are fond of advising their players that there is no gain without pain. Such was the philosophy of prevailing wage repeal in Kansas. The gain was alleged to be savings on public construction costs. The pain was that workers would have to endure wage cuts. We saw in Chapter Two that the gain was not there. There are no measurable savings in public construction costs that can be attributed to Kansas' repeal of its prevailing wage law. But while the gain was not real, the pain was.

There is one fact upon which all analysts of prevailing wage law repeals agree. These repeals have cut the wages and incomes of construction workers. After all, the precise purpose of prevailing wage law repeals is to cut worker wages--in the hopes that this will save on public construction costs. We saw in Chapter Three that construction cost savings were so minimal that they did not register on standard statistical tests. In fact, we cannot say that there were any savings at all. Is this because construction workers' wages did not decline substantially? No. All analysts agree that construction workers' wages and income have declined due to the elimination of prevailing wage regulations. And the negative effect of repeals have not been limited to the wages of construction workers on public projects. Repeals have lowered construction workers wages across-the-boards in states that have repealed their prevailing wage laws. Before looking at the general effect of prevailing wage repeals on wages, let us examine what happened in Kansas.

Average Construction Wage by Legal Status, 1986-1991

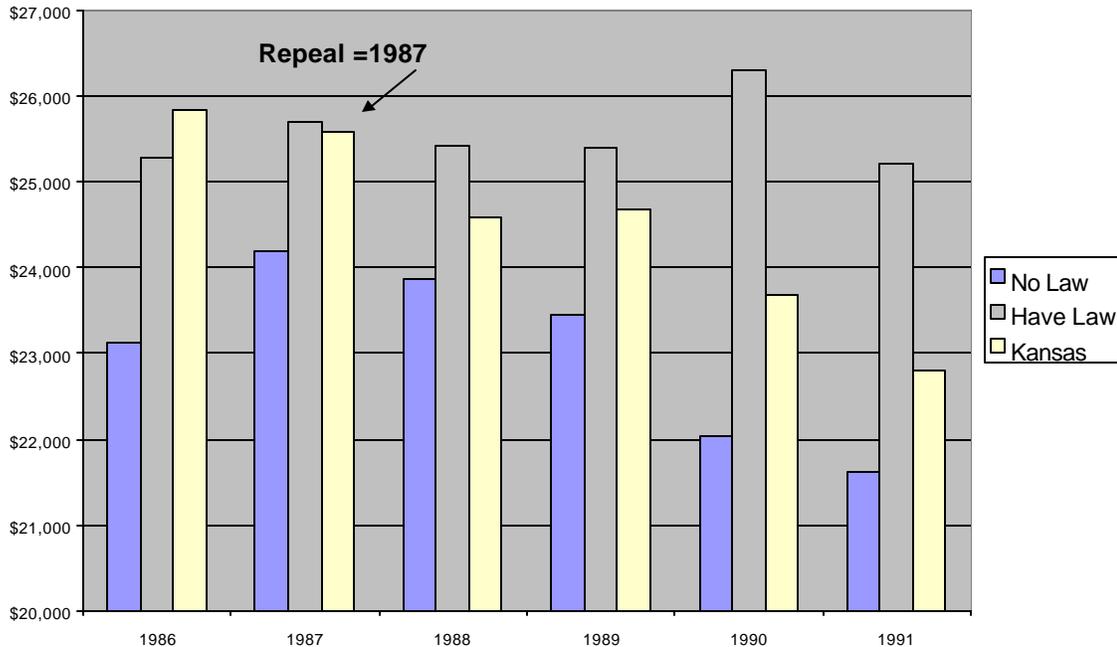


Figure 4: Average Inflation-Adjusted Wage Income of Kansas Construction Workers Compared to Four Surrounding States with No Prevailing Wage Law and Ten Surrounding States with Prevailing Wage Laws, 1986 to 1991. Source: U.S. Bureau of Labor Statistics

Figure 4 shows the average wages of Kansas construction workers from 1986, just prior to the repeal of Kansas' state prevailing wage law to 1991. These wages are adjusted for inflation by presenting all years in 1991 dollars. Kansas' wages were slightly higher than the average for ten surrounding states that also had prevailing wage laws at the time.¹⁸ The average construction wage in Kansas was substantially higher than the average for four surrounding states that did not have prevailing wage laws in 1986.¹⁹ With the repeal of Kansas' state prevailing wage law in 1987, these wage relationships began to change. Over the next five years, the average wages for ten states with prevailing wage laws fluctuated but remained basically the same in inflation-adjusted dollars. In 1987 the

¹⁸ These ten states, from north to south, were Montana, Minnesota, Wisconsin, Wyoming, Nebraska, Missouri, Arkansas, Oklahoma, New Mexico and Texas.

¹⁹ These four states were North Dakota, South Dakota, Iowa and Colorado. Two cities in Colorado did have city prevailing wage regulations, Denver and Pueblo.

average construction wage in these ten prevailing wage law states was \$25,692. In 1991, these inflation-adjusted wages averaged \$25,216. This was a drop in real wages and real consumer power of 2%. Having your wages fall by 2% over five years is no fun. But compared to what happened in the states without prevailing wage laws, a real drop in income of 2% looks good.

The real, inflation-adjusted wages of construction workers in the four states surrounding Kansas that did not have prevailing wage laws fell by 11%. That means, adjusting for the cost of living, construction workers in these four states found their annual wages cut, on average, from \$24,204 in 1987 to \$21,609 in 1991.

Having repealed the state prevailing wage law in 1987, Kansas construction workers shared in the fate of surrounding states that did not have prevailing wage laws. Between 1987 and 1991, average construction wages in Kansas--adjusted for inflation--fell from \$25,573 to \$22,807. This was a drop in real consumer power of 11%. The pain was real.

However, other factors may have contributed to the decline in construction worker wages in Kansas after the state repealed its prevailing wage law. Although it is difficult to identify what that might be. General unemployment in Kansas was at 5.4% in 1986 and fell steadily to 4.4% in 1991. In inflation adjusted terms, all Americans' wages were falling during this period--although only by a small percentage, not by 11%. The 2% decline in the real wages of construction workers in surrounding states with state prevailing wage laws reflects the general downward trend in real wages.

Would re-establishing prevailing wage regulations in Kansas restore construction worker wages to where they were prior to repeal? Probably not entirely and certainly not right away. The damage of repeal goes deep. Apprenticeship training has fallen substantially. The provision of health insurance and pension contributions has fallen by 25%. The Kansas construction work force needs rebuilding. This needs time. But re-instituting Kansas prevailing wage regulations is part of the solution to moving this industry back towards a high-skill, high-wage growth path.

4

Prevailing Wage Regulations and Apprenticeship Training

The construction industry is in a training and skills crisis. A January, 1996 report "Gulf Coast Staffing/Retention" commissioned by Brown and Root, Fluor Daniel, and H.B. Zachry--three of the largest nonunion contractors in the country--described the problem. The report wrote:

Magnitude of the Problem While the overall availability of construction manpower is declining, the quality of the workforce or crews of highly skilled craftsmen is the real issue....The project execution problems associated with this issue (schedule slippage, work quality, turnover/absenteeism) haven't changed but their magnitude is greater....Failure to address this issue may create an interesting paradox--large contractors shifting more of their work from self-perform to subcontract status and small contractors become even less capable of dealing with the problem due to lack of resources and capital.

Driving Forces....Wage erosion has become increasingly worse over the past decade and is causing substandard living conditions. Clients have created a "playing field" which forces contractors to undercut one another to obtain work. Owners do not understand the impact their decisions have on field activities. The accounting/procurement mentality is driving them, thus the industry. Combined with the fact that craftsmen are treated as expendable commodities, woefully inadequate training opportunities over the years, and alternative service sector jobs which are now available at competitive wage rates with superior benefits, it is easy to understand why large numbers of people aren't knocking at the industry's door.

Key Issues--Results/Consequences There will be no total system collapse, but the end result of inaction will be a higher cost of doing business. Both clients and customers will pay for the industry's inability/unwillingness to creatively address the problem. The intensity

of regional labor shortages will continue to increase with "high skill" craft areas being the worst impacted.²⁰

The crisis in the training and retention of skilled construction workers has been a long time in coming. The 1980s were a period of de-regulation, de-unionization and the breakdown in apprenticeship training in many parts of the United States. To understand what has happened, the industry trade magazine--*Engineering News Record (ENR)*--surveyed the "Top 400 U.S. general contractors and the Top 600 specialty contractors." This is what *ENR* found:

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. Only 10% of the union crafts have a severe craft shortage problem while 29% of the nonunion crafts are severely short.

"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. "Its 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....

Some of the journeymen "pirated" by the open shop may be returning to union construction. "Union contractor backlogs are such that some guys that had been working nonunion are coming back." Says G. Scot Haines, director of business development for union electrical contractor L.E. Meyers, Co, Rolling Meadows, Ill....

But the battle for the hearts, minds and wallets of skilled workers knows no bounds of union and nonunion loyalty. In Phoenix, nonunion Haci Mechanical Contractors Inc. reports severe shortages of sheet metal workers and pipefitters. The open shop has an active local training program, but the union sector has been stealing journeymen as soon as they are trained, complains Vice President Tim King. "We pay about \$12 an hour and the union pays \$18," he notes....

²⁰ "Gulf Coast Staffing/Retention-Cause and Mitigation" by Maxim, Inc. commissioned by Brown and Root, Fluor Daniel and H.B. Zachry, January 17, 1996.

The spreading craft labor shortage problem is underscored by the results of an open-shop survey....Of the 2,437 [open shop contractor] responses, 1,808 or 74% reported shortages in their areas for 14 crafts.²¹

Why has the industry known for almost a decade that it would face skilled labor shortages once the business cycle picked up? Why would that labor shortage affect nonunion contractors most? Why would nonunion contractors rely upon the ability to hire away union-trained craftsmen? Once the business cycle picked up, why would some union-trained skilled craftsmen return to union shops? And why would nonunion-trained journeymen migrate over to the union sector? Finally, and most important, is this kind of labor shortage good for the industry, for owners and for the community?

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 sub-contracting. 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. For example, as the Brown and Root, et al., report quoted above states:

Failure to address this issue [i.e. skilled labor shortages], may create an interesting paradox--large contractors shifting more of their work from self-perform to subcontract status and small contractors become even less capable of dealing with the problem due to lack of resources and capital.²²

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. With the exception of harvest labor in agriculture, there is no major industry with as high a labor turnover rate as in construction. The worker you train in

²¹ "Craft Shortages Creeping In," Engineering News Record (ENR), December 25, 1995, Vol. 235, No. 26, pp. 34-5.

²² "Gulf Coast Staffing and Retention" op. cit.

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 because he has lower costs today because he does not train. And he has just as much chance as you 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.

Some of the very largest contractors might be able to get around these problems. They may be big enough to always have new jobs on-line when old jobs go away. They might just be able to train internally like in many other industries, have on-going jobs available and have the internal incentives to retain skilled workers. But the smaller contractor cannot follow this strategy except for in the case of a few key workers. Even the largest nonunion companies have difficulty training and retaining skilled workers in the face of industry competitive pressures. Again from the Brown and Root et al. study:

Clients have created a "playing-field" which forces contractors to undercut one another to obtain work. Owners do not understand the impact their decisions have on field activities. Combined with the fact that craftsmen are treated as expendable commodities, woefully inadequate training opportunities over the years, and alternative service sector jobs which are now available at competitive wage rates with superior benefits, it is easy to understand why large numbers of people aren't knocking on the industry's door.²³

The historical solution to the market failing 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 get screwed by you. 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

²³ Ibid.

in place, the contract serves as a mechanism for the market to provide training.

Who provides construction apprenticeship training in Kansas today?

Table 8: Distribution of Apprenticeship Training by Craft and Program Type, Kansas 1989-95

Trade	Distribution of Apprentices in Kansas 1989-95	
	Type of Program	
	Nonunion	Collectively Bargained
Bricklayers	0%	100%
Carpenters	4%	96%
Electricians	28%	72%
Ironworkers	0%	100%
Painters	0%	100%
Pipefitters	21%	79%
Plumbers	9%	91%
Roofers	10%	90%
Sheetmetal Workers	18%	82%
Other	1%	99%
Total	12%	88%

Source: U.S. Bureau of Apprenticeship Training

Table 8 shows the distribution of construction apprentices in Kansas over the period 1989 to 1995. These data do not include Kansans serving in apprenticeship programs headquartered in Kansas City, Missouri. However, for registered apprenticeship programs in Kansas, Table 8 shows that overall 88% of all apprentices are trained in collectively bargained apprenticeship programs. This may understate the number of apprentices trained by nonunion contractors by not measuring programs that are less formal and unregistered. Almost always, collectively bargained apprenticeship programs are registered and entail formal training procedures. Some informal, nonunion programs may exist but go unrecorded by the U.S. Bureau of Apprenticeship Training.

Nonetheless, the overall pattern is clear. Apprenticeship training in Kansas construction takes place primarily under the auspices of collective bargaining. This fits with what we know about the market dynamics of construction. The problem is, with the repeal of Kansas' prevailing wage law, collective bargaining in construction has declined. With it, apprenticeship training in construction has also declined.

Table 9: Construction Apprentices in both Union and Nonunion Programs by State, 1973-1990

Apprentices in Construction by State, 1973 to 1990															
	AR	CO	IA	KS	MN	MO	MT	NE	NM	ND	OK	SD	TX	WI	WY
1973	863	1949	1388	604	3543	3276	813	824	1135	388	1378	467	7870	3005	348
1974	1019	2548	1633	849	3600	3464	981	961	1213		1851	403	8761	3687	435
1975	1184	2415	1849	900	3621	3619	1153	981	1252	682	2092	420	10514	3358	571
1976	1053	2061	1950	854	3004	3299	1020	873	1335	690	2046	423	10365	3030	554
1977	1117	1702	1747	846	2919	3100	1081	844	1236	753	2070	396	10144	3010	569
1978	1131	1644	1859	950	3101	3596	1079	788	1291	759	1907	413	9989	3495	613
1979	980	1712	2176	1023	4024	4609	1134	887	1491	841	2370	391	10852	3832	682
1987	869	1415	847	559	2656	5536	295	424	993	169	1253	144	5939		143
1988	1468	1141	799	559	2858	5285	279	378	1013	172	1222	161	5253	2719	155
1989	782	1070	1089	501	6309	2837	641	310	1033	186	1182		5079		143
1990	787	1047	1200	502	2684	4444	296	350	1221	203	1323	144	4904	3621	138
Average:															
1973-1979	1050	2004	1800	861	3402	3566	1037	880	1279	686	1959	416	9785	3345	539
1987-1990	976	1168	984	530	3627	4526	378	366	1065	182	1245	150	5294	3170	145
Percent Change	-7%	-42%	-45%	-38%	7%	27%	-64%	-58%	-17%	-73%	-36%	-64%	-46%	-5%	-73%
Average Percent Change															
Law States		-27%													
Repeal and No Law States		-53%													

Indicates No Prevailing Wage Law

Source: U.S. Bureau of Apprenticeship Training

Table 9 shows construction apprentices in training by year for Kansas and for the fourteen states we have been comparing with Kansas. The highlighted numbers refer to the states during the years in which--in that state--there was no prevailing wage law. These data are from the U.S. Bureau of Apprenticeship Training. Data in their records were not available for 1980 to 1986.

The first thing to notice in Table 9 is that on average for the 1970s, 861 apprentices were in construction programs in Kansas each year. In the first four years after Kansas repeals its state prevailing wage law, the number of apprentices fell to an annual average of 530.²⁴ This is a decline of 38%. But can we attribute this decline to the elimination of prevailing wage regulations?

Apprenticeship training has been on the decline for other reasons, most notably a decline in collective bargaining independent of prevailing wage regulations. In some stronger union states such as Minnesota and Missouri, apprenticeship training did not decline. In others such as Wisconsin, the decline was small. But in Oklahoma and Texas, union decline independent of prevailing wage regulations led to declines in apprenticeship training equal to that in Kansas.

However, if we take all these states as a group, we can tease out an independent effect of prevailing wage regulations on the decline in apprenticeship training. In the five states, including Kansas, where

²⁴ In 1995, the number was less than half that average--248 apprentices. While this undoubtedly reflects a further decline in apprenticeship training, it may also reflect a movement of training to Kansas City as programs shrank in Kansas.

prevailing wage laws were absent or repealed, apprenticeship training declined on average -53% from the 1970s to the late 1980s. In the states with prevailing wage laws, apprenticeship training declined, on average, -27%. Thus, repealing prevailing wage regulations acted like rubbing salt into a wound. Training was on the decline anyway, and the elimination of prevailing wage regulations made this trend worse.

And what was bad for construction was even worse for minority construction workers.

Table 10: Minority Participation in Construction Apprenticeship Programs by State, 1973-1990

Minority Apprentices in Construction by State, 1973 to 1990															
	AR	CO	IA	KS	MN	MO	MT	NE	NM	ND	OK	SD	TX	WI	WY
1973	148	595	140	107	120	566	47	78	622	13	332	28	1977	231	48
1974	175	544	152	114	154	618	83	107	722	375	17	2413	237	49	
1975	146	498	154	109	106	623	70	111	737	35	405	21	2530	176	47
1976	182	420	101	110	99	568	56	118	721	36	399	24	2374	155	50
1977	181	382	97	133	103	610	55	127	711	29	391	28	2443	171	52
1978	174	385	105	134	118	741	52	138	777	38	547	16	2674	186	56
1979	148	446	115	134	149	772	62	122	852	37	527	34	2934	175	60
1987	87	233	46	60	148	495	34	55	627	8	227	11	1452		26
1988	408	265	47	50	158	417	38	53	656	6	201	18	1309	114	33
1989	57	216	50	53	803	150	114	32	701	17	202		1233		31
1990	54	308	75	57	169	430	54	37	821	17	295	20	1336	174	39
Average:															
1973-1979	165	467	123	120	121	643	61	114	735	31	425	24	2478	190	52
1987-1990	151	256	55	55	319	373	60	44	701	12	231	16	1333	144	32
Percent Change	-8%	-45%	-56%	-54%	163%	-42%	-1%	-61%	-5%	-62%	-46%	-32%	-46%	-24%	-38%
Average Percent Change															
Law States	-11%														
Repeal and No Law States	-50%														
<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: cyan; margin-right: 5px;"></div> Indicates No Prevailing Wage Law </div>															
Source: U.S. Bureau of Apprenticeship Training															

Table 10 shows minority participation in construction apprenticeship programs in Kansas and the fourteen comparison states. Comparing the 1970s to the late 1980s, we see that in Kansas minority participation dropped by -54%. This was typical of states with no prevailing wage law. The average drop in minority participation in the five states that never had or repealed their prevailing wage law was -50%. In contrast minority participation in the ten states with prevailing wage laws fell by only -11%, much less than the overall drop in apprentices in those states. This was in part due to a big jump in minority participation in Minnesota. However, even excluding Minnesota, the drop in minority participation is only -27% compared to -50% in states without prevailing wage laws.

Table 11: Female Construction Apprenticeship Participation by State, 1973 to 1990

Female Apprentices in Construction by State, 1973 to 1990															
	AR	CO	IA	KS	MN	MO	MT	NE	NM	ND	OK	SD	TX	WI	WY
1973	1	11	1	1	1	1	5	0	1	0	1	0	8	2	0
1974	1	7	2	1	5	1	32	1	0	0	6	0	32	6	1
1975	1	12	6	2	2	4	50	3	5	1	17	0	54	7	0
1976	2	13	7	3	1	16	59	2	13	1	21	0	99	10	4
1977	5	34	9	4	8	21	79	7	16	2	25	0	104	11	7
1978	15	58	25	25	23	47	82	15	36	4	81	0	188	34	16
1979	17	117	62	29	63	147	101	22	90	12	113	5	434	73	32
1987	17	31	30	7	105	159	16	7	34	2	21	3	210	.	7
1988	65	40	23	10	104	145	17	5	41	5	24	4	152	63	5
1989	8	32	25	6	283	93	32	6	42	4	19	.	133	.	4
1990	3	50	36	9	105	140	15	13	35	5	31	1	155	82	6
Average*															
1973-1979	6	36	16	9	15	34	58	7	23	3	38	1	131	20	9
1987-1990	23	38	28	8	149	134	20	8	38	4	24	3	162	73	5
Percent Change	288%	6%	77%	-14%	914%	296%	-66%	8%	65%	20%	-37%	250%	24%	255%	-37%
Average Percent Change															
Law States				171%											
Repeal and No Law States				68%											

Indicates No Prevailing Wage Law

Source: U.S. Bureau of Apprenticeship Training

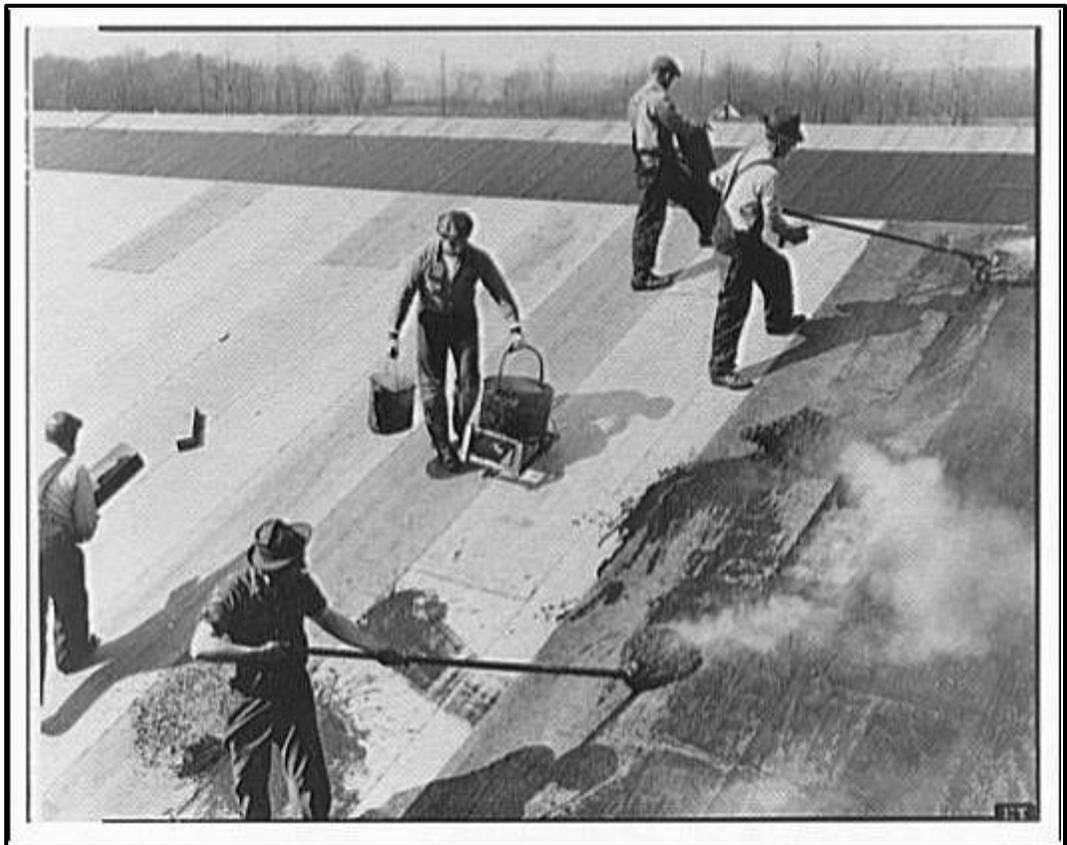
Table 11 shows female participation in construction apprenticeship programs in Kansas and the fourteen comparison states. There are more minority apprentices than females in construction generally including Kansas. In 1979, there were only 29 female construction apprentices in Kansas compared to 134 minority apprentices. By 1990 there were only 9 female construction apprentices in Kansas compared to 57 minority apprentices. Looking at these numbers alone, the female participation fell by two-thirds while minority participation fell by around one-half. But there were so few female apprentices in Kansas in the early 1970s that the average for that decade was substantially less than its peak of 29 in 1979. Consequently, comparing the drop in female participation in the 1970s as a whole compared to the late 1980s shows a drop of only -14%.

But with some exceptions, female participation has been on the rise elsewhere. Particularly in Minnesota, female apprentices rose between the 1970s and late 1980s by over 900% from 15 to 149. In Missouri, they rose from 34 to 134. On average in the states without prevailing wage laws including Kansas and Colorado²⁵ that repealed their laws, women construction apprentice participation rose by 68% from the 1970 to the late

²⁵ Two cities in Colorado retain city prevailing wages, Denver and Pueblo.

1980s. However, female participation rose much faster, on average 171%, in the states that retained their prevailing wage laws. Why?

Collectively bargained apprenticeship programs involve many contractors. Consequently, on average, they are larger than non-collectively-bargained programs that usually involve a single contractor. Affirmative action regulations do not apply to apprenticeship programs of less than 5 apprentices. Consequently, when training on the collectively bargained side of the industry declines, the programs most likely to fall under affirmative action regulations become a smaller percentage of all apprenticeship training. There is an interrelationship between prevailing wage regulations and affirmative action regulations in the construction labor market. The repeal of prevailing wage regulations brought with it a diminution of legal pressure to enroll women and minorities into construction apprenticeships. Not only will there be fewer trained construction workers in Kansas due to the repeal the states prevailing wage law, but of those that remain, fewer will be skilled minority or women craft workers.



5

The Increase in Injuries in Kansas Construction After the State Repealed Its Prevailing Wage Law

And a Comparison with Surrounding States

The General Relationship Between Prevailing Wage Regulations and Safety

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.²⁶ Repeals of state prevailing wage laws set in motion a train of events that lead to the proliferation of less experienced contractors teaming up with less trained and less experienced workers. This leads to more injuries.

Cutthroat competitiveness in contracting. The repeal of the state prevailing wage laws often 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

²⁶. C. Culver, M. Marshall, and C. Connolly, *Construction Accidents: The Workers' Compensation Data Base, 1985-1988*, Washington, DC, OSHA Office of Construction Engineering, 1992.

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.

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. In response to the decline in union membership and training, contractors attempted to reduce turnover — to retain skilled workers and to minimize screening and training costs. Still, the decline in wages and in health and pension benefits drove experienced construction workers from their trades for 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 know less 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 speed up and take more chances. Workers are put at increased risk in an already hazardous industry.

The Rise in Injuries in Kansas

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. In Table 5 of the survey, 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 surveys for the period 1976 to 1991. For this period, Figure 5 shows the number of injury cases per worker. Kansas repealed its prevailing wage in 1987. The number of injuries per worker in construction immediately jumps from an annual average of .11 to above .13. That is, injury cases rose after repeal from an annual average of 11 injury cases per 100 construction workers to more than 13 annual injury cases per construction worker. **This is a 19% increase in injuries annually after repeal.**

Number of Injuries per Worker in Kansas

All Cases

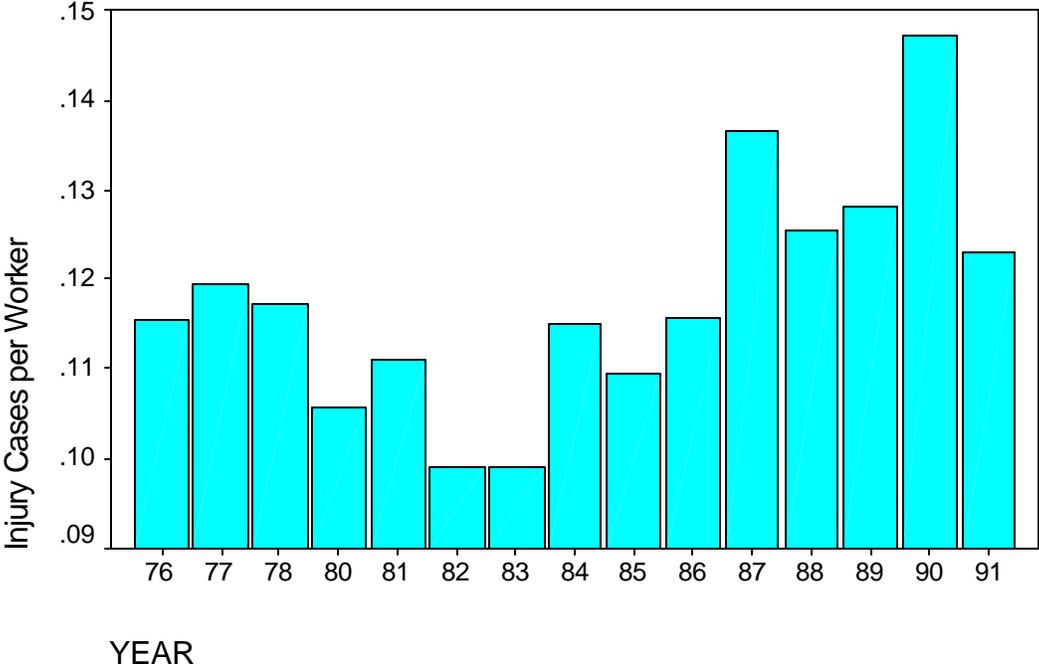


Figure 5: Number of Injury Cases per Construction Worker in Kansas, 1976 to 1991. Source: U.S. Bureau of Labor Statistics

Serious injuries that resulted in several lost days of work rose from 4.4 serious cases per 100 construction workers to 5.3 serious cases per 100 Kansas construction workers. **Thus, there was a 21.5% increase in serious injuries after Kansas repealed its state prevailing wage law.** Figure 6 shows these data.

Number of Injuries per Worker in Kansas Resulting in Lost Workdays by Year

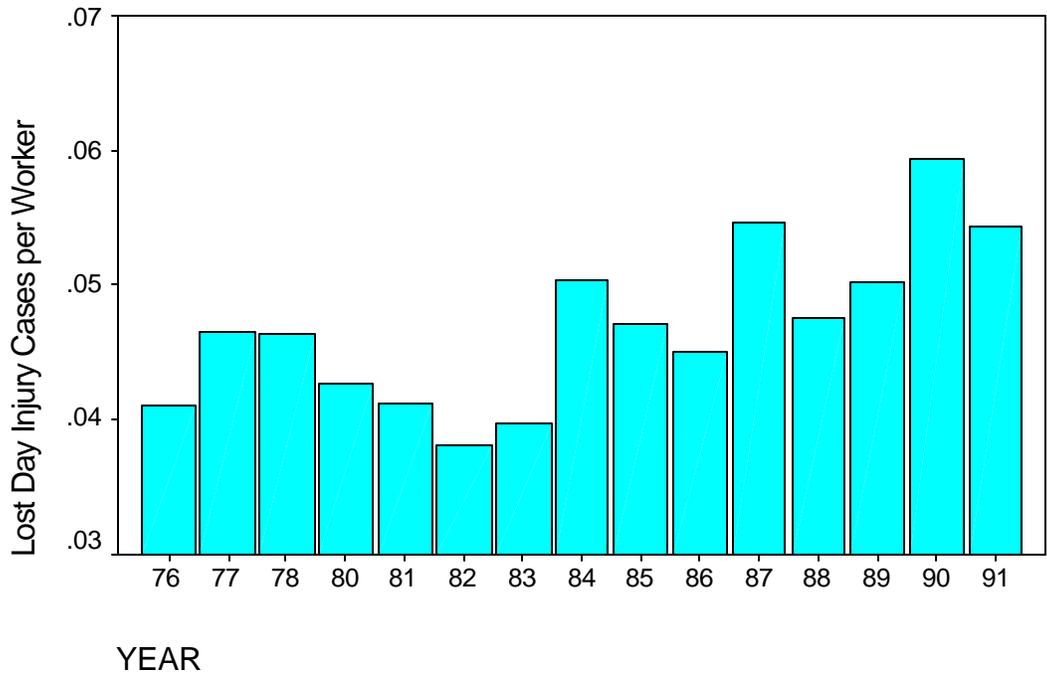


Figure 6: Serious Injuries per Worker (Resulting in Lost Days from Work) in Kansas Construction, 1976 to 1991. Source: U.S. Bureau of Labor

A statistical test of whether or not these increases in injury rates are significant yields the answer Yes. (See Appendix.) Table 12 shows the basic data for this test. At all standard levels of statistical significance, we can say that both injury rates and serious injury rates rose in Kansas construction after the repeal of Kansas' state prevailing wage law.

Table 12: Mean and Standard Deviation of Injury Rates in Kansas Construction Before and After the Repeal of Kansas' State Prevailing Wage Law

Group Statistics					
	Legal Status	N	Mean	Std. Deviation	Std. Error Mean
Lost Day Cases per Worker	Has PW Law	10	4.382E-02	3.901E-03	1.234E-03
	No Law	5	5.324E-02	4.521E-03	2.022E-03
Cases per Worker	Has PW Law	10	.1107	7.325E-03	2.316E-03
	No Law	5	.1320	9.857E-03	4.408E-03

In the second Chapter of this report, school construction costs were compared in states around Kansas that do not have a prevailing wage law to states around Kansas that do have this regulation in construction. A similar comparison of injury rates in construction can be made. This allows us to check the results of our analysis of Kansas by itself.

Table 13 shows injury rates per worker and serious injury rates per worker in construction for the years 1976 to 1991 broken down by injuries that occurred in states with prevailing wage laws and in states without prevailing wage laws. The states in the analysis are the fifteen states used in Chapter Two of this report. These include Iowa, North Dakota and South Dakota--states that never had a prevailing wage law. It also includes Colorado and Kansas--states that had a prevailing wage law during the first part of the period but later repealed their law. However, Colorado data are only available for two years, both during the period in which it had a prevailing wage law. The data also include Montana, Wyoming, Minnesota, Wisconsin, Missouri, Arkansas, New Mexico, Texas and Nebraska--all states with prevailing wage laws. Oklahoma is also included. During the time period under consideration, 1976 to 1991, Oklahoma public construction was regulated by a prevailing wage law.

Table 13: Injury Rates and Serious-Injury Rates in Construction for 15 States Broken Down by Having or Not Having a Prevailing Wage Law, 1976-1991
Source: U.S. Bureau of Labor Statistics

Group Statistics

Legal Status		N	Mean	Std. Deviation	Std. Error Mean
Lost Day Cases per Worker	Has PW Law	106	4.654E-02	7.689E-03	7.469E-04
	No Law	20	5.301E-02	8.329E-03	1.863E-03
Cases per Worker	Has PW Law	106	.1134	1.737E-02	1.687E-03
	No Law	20	.1425	6.431E-02	1.438E-02

While the number of observations has risen substantially in Table 13 compared to Table 12, the basic result is the same. Total-Injury rates and serious-injury rates are higher where prevailing wage laws are absent. Injuries per worker rise from 11 per 100 construction workers to 14 per 100 construction workers. Serious injuries resulting in lost work days rise from 4.7 per 100 workers to 5.3 per 100 workers. **These are increases in**

injury rates of 26% and 14% respectively. And these differences are statistically significant. (See Technical Appendix to this Chapter for results of statistical significance tests.) Prevailing wage laws regulate the construction industry in a way that promotes safety. The absence of prevailing wage laws leads to a less safe work place with all the explicit and hidden costs injuries create for the worker, the industry and the community.



Chapter 5 Technical Appendix

Tests of Statistical Significance for Table 12: Injury Rates in Kansas Construction Before and After Repeat

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Mean	
									Lower	Upper
Lost Day Cases per Worker	Equal variances assumed	.033	.858	-4.195	13	.001	-9.42E-03	2.247E-03	-1.43E-02	-4.57E-03
	Equal variances not assumed			-3.979	7.095	.005	-9.42E-03	2.369E-03	-1.50E-02	-3.84E-03
Cases per Worker	Equal variances assumed	.773	.395	-4.750	13	.000	-2.13E-02	4.485E-03	-3.10E-02	-1.16E-02
	Equal variances not assumed			-4.278	6.300	.005	-2.13E-02	4.980E-03	-3.33E-02	-9.26E-03

Tests of Statistical Significance for Table 12: Injury Rates in Kansas Construction Before and After Repeat

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Mean	
									Lower	Upper
Lost Day Cases per Worker	Equal variances assumed	.005	.946	-3.409	124	.001	-6.47E-03	1.899E-03	-1.02E-02	-2.71E-03
	Equal variances not assumed			-3.226	25.482	.003	-6.47E-03	2.007E-03	-1.06E-02	-2.35E-03
Cases per Worker	Equal variances assumed	6.140	.015	-3.998	124	.000	-2.91E-02	7.269E-03	-4.35E-02	-1.47E-02
	Equal variances not assumed			-2.007	19.526	.059	-2.91E-02	1.448E-02	-5.93E-02	1.185E-03

Pension and Health Benefits in Construction Before and After the Repeal of Kansas' Prevailing Wage Law

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.

**Annual Average Employer Contribution to Pension and Health Insurance in Kansas Construction in 1996
Dollars by Before and After Repeal**

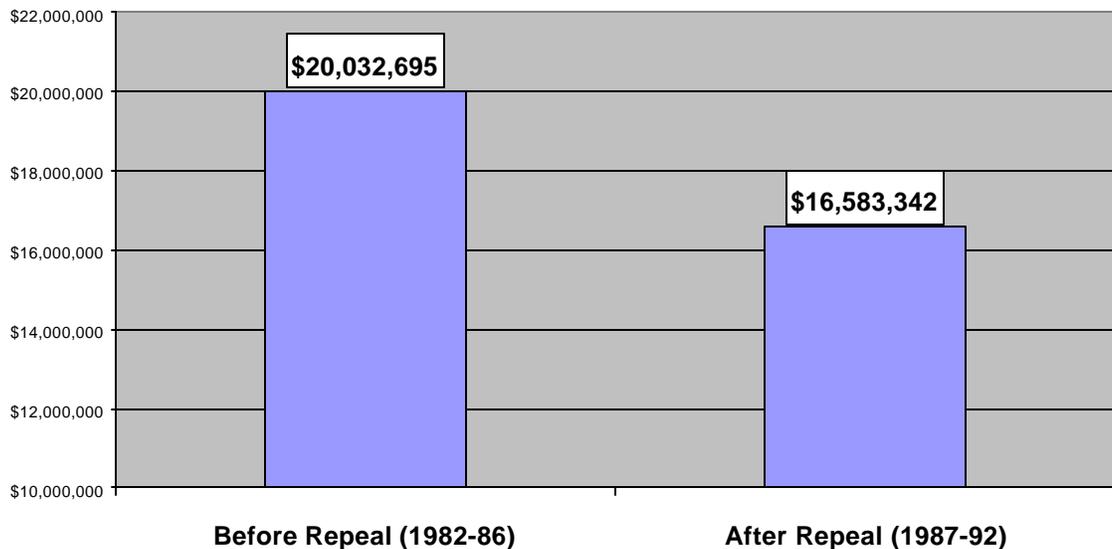


Figure 7 : Total Annual Employer Contributions to Pension and Health Insurance in Kansas Before and After Repeal. Source: U.S. Labor Department Form 5500

As Figure 7 shows, total annual average employer contributions towards pensions and health insurance in Kansas construction fell by 17% after the 1987 repeal of the state's prevailing wage law. Why?

The simple answer is that the repeal helped shift Kansas construction work away from collective bargaining towards the merit or open shop. 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 have to 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 that 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 that can afford a doctor when a child is ill--neighbors who can take care of themselves when they are old--these are neighbors that are less a burden on the community as a whole.

Table 14 shows the average employer contribution per worker in Kansas construction on an annual basis from 1982 to 1992. The figures are inflation adjusted so that earlier years can be directly compared to later years.

Table 14: Annual Average Kansas Employer Contributions per Worker to Pensions and Health Insurance in Kansas Construction 1982 to 1992 And the Percentage of Merit (or Open) Shop Workers Covered by Insurance in Kansas

	Employer Contribution per Worker				Percentage of Workers Covered By Insurance in the Open Shop	
	Union Employer		Open Shop Employer		Pension	Health
	Pension	Health	Pension	Health		
1982	\$3,228	\$2,700	\$99	\$31	3%	1%
1983	\$2,429	\$2,653	\$88	\$43	4%	2%
1984	\$3,011	\$3,104	\$79	\$58	3%	2%
1985	\$2,637	\$3,345	\$90	\$74	3%	2%
1986	\$2,771	\$3,429	\$89	\$69	3%	2%
1987	\$2,793	\$3,070	\$94	\$54	3%	2%
1988	\$2,415	\$3,306	\$143	\$119	6%	4%
1989	\$2,332	\$3,048	\$165	\$138	7%	5%
1990	\$2,338	\$3,122	\$219	\$248	9%	8%
1991	\$3,211	\$4,252	\$223	\$292	7%	7%
1992	\$2,890	\$4,897	\$287	\$190	10%	4%

Source: U.S. Labor Department Form 5500
 In constant (or inflation adjusted) 1996 dollars

Looking at union employers first, Table 15 shows that over the ten years--1982 to 1992--in Kansas, union contractors have contributed around \$3,000 per year to pension programs for their workers. In inflation-adjusted dollars, this contribution has been fairly steady over the time period. In contrast, union employer contributions to health insurance almost doubled over the period, from \$2,700 per worker to almost \$5,000 per worker. The reason for this is clear. Health costs rose dramatically over the period. Union contractors attempting to preserve their workers' health benefits found they had to pay an increasing premium for health coverage.

Nonunion contractors in Kansas also increased their health premium per worker over the period 1982 to 1992. However, the average premium per worker was low to begin with (\$31 per worker) and low at the end (\$190). This is not because merit contractors could find cheap health insurance that would give coverage for \$190 per worker per year. Rather it is because most of the merit shop workers simply were not covered.

Interestingly, Kansas merit shop contractors pay more per worker in pension contributions that they do in health contributions. Under collective bargaining, union employers pay more in health premiums. The reason for this is the advent of 401k plans. This has allowed employers to contribute to pensions that can move with the worker.

What percentage of merit shop workers are covered by health insurance from their employers? An estimate can be made from looking at the average health premiums of a merit shop and a union shop worker.

Assuming the merit shop contractor does not provide substandard health insurance for the worker who is covered, then the cost of insurance for a construction worker should be roughly the same on the union and merit side of the industry. Thus, if the merit shop contractor pays the same for health insurance as the union shop contractor, and the average premium on the merit shop side of the market is only 4% of the contribution per worker on the union side of the market, then only 4% of the merit contractor's workers are being covered by health insurance. If more than 4% are being covered, then it is because the merit shop contractor is buying less health coverage.

A similar analysis can be made for pensions. If all merit shop workers are covered by a pension, then merit contractors in Kansas are paying only \$287 per year to help out their workers in retirement. Alternatively, if the merit contractor contributes almost \$3,000 per year towards his workers' retirement, then only 10% of his workers are being covered by pensions.

In sum, the repeal of Kansas' prevailing wage law helped shift the state's construction away from collective bargaining. On the merit shop side of Kansas construction, only 10% of the workers are covered by pensions and only 4% are covered by health insurance. So quite naturally, total contributions into pension and health insurance fell after the repeal.

We saw in Chapter Three that construction worker wage incomes across the entire state fell by around 10% after the repeal of the state prevailing wage law. Now we see that pension and health insurance contributions fell by even more--17%. This is a problem for construction workers in Kansas. But it is also a problem for Kansas. 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 two that the alleged gain from prevailing wage repeal does not exist. In this chapter we find that the pain of lost health insurance and a less secure old age is real and measurable.

Summary and Conclusions

Kansas was the first state to pass a state prevailing wage law regulating the payment of wage rates on public works. The Republican legislators who wrote this law, embedded it in larger legislation seeking to reduce the working day in Kansas from 10 or 12 hours to 8 hours per day. Kansas' prevailing wage law came within a broader legislative initiative to impose factory safety inspections, to limit the use of child labor and prison labor, and to make schooling compulsory. The general purpose of all these laws--including Kansas' prevailing wage law--was to encourage the Kansas labor market to develop up a high-skill, high-wage growth path. Competition was to focus upon which employer could train and equip a skilled labor force to do a quality job. Kansas Republican legislators specifically wanted to avoid competition over which employer could stretch out the day longer, employ more children, employ more prison workers, sacrifice safety to the bottom line and/or dodge long-term training costs for short-term market victories. Eventually, 41 states and the Federal Government followed Kansas' example and passed prevailing wage laws of their own.

Between 1979 and 1988, nine states repealed their prevailing wage laws. Repeals came with the promise that by cutting wage rates and benefits on public works, taxpayers could save substantial sums of money on public construction costs. In Kansas, merit shop contractors predicted that Kansas would save from 6% to 17% on state construction costs, and in some cases even more money would be saved. The pain of lower wages and fewer benefits for Kansas construction workers would be more than offset by the gain to the taxpayer.

In this study of the effects of the repeal of Kansas' prevailing wage law, we looked for the construction costs savings that proponents of repeal predicted. Kansas new school construction costs from 1991 to 1997 were compared to new construction costs in 14 Great Plains states. Five of those states (including Kansas) did not have prevailing wage laws. Nine

of these states retained their prevailing wage law. And Oklahoma's prevailing wage law was judicially annulled in 1995, in the middle of the study years.

Schools provide a useful example of the effects of prevailing wage laws on public construction costs for three reasons. First, schools are a major part of state and local public construction expenditures. Second, when broken down into elementary, middle and high schools, these building types make for a good apples-to-apples comparison. Third, many public schools are built--more than any other single type of government building. So enough observations are available in the case of schools to make meaningful statistical comparisons.

The results of this study are clear. There were no statistically significant differences in the construction costs of new schools in Great Plains states with prevailing wage laws compared to those states without prevailing wage laws. Furthermore, Kansas fits into this pattern precisely. On average, Kansas does not build schools any cheaper than surrounding states that have prevailing wage laws regulating the construction of their schools. For example, in the case of elementary schools, we have the most observations, and the structure types are the most similar from one school to the next. The average square foot construction costs of new elementary schools in Great Plains states with no prevailing wage law was \$76.23. The average square foot construction costs on new elementary schools in Great Plains states with prevailing wage laws was \$76.86. This difference of 66 cents per square foot was not statistically significant. Kansas' average square foot cost on 18 new elementary schools from 1991 to 1997 was \$83 per square foot.²⁷ This higher average cost, however, was not statistically significantly different from the overall average for all Great Plains states. For new construction of elementary, middle and high schools, there were no statistically significant, measurable cost differences between states with prevailing wage laws compared to states without prevailing wage laws. The predicted substantial gains from the repeal of Kansas' prevailing wage law are simply not there.

But the predicted pain from the repeal of Kansas' prevailing wage law did arrive. Wage income for all construction workers in Kansas--not just on public works but on all construction sites--fell by 11% after the repeal. In contrast, the wage incomes of construction workers in surrounding states that retained their prevailing wage law fell by 2%. Roughly speaking, Kansas construction workers wages are 10% lower due to the repeal of the state prevailing wage law.

Construction contractor contributions to pensions and health insurance in Kansas fell by an even larger amount after repeal. In inflation adjusted

²⁷ All cost comparisons are adjusted for inflation and in 1996 dollars.

dollars, annual average employer contributions to pension and health insurance fell by \$3.5 million per year. This represents a 17% drop in contributions to pension and health coverage for Kansas construction workers.

The reason for the fall in pension and health coverage in construction is not hard to find. While the major rationale for repeal was to cut public construction costs, advocates of repeal also argued that the elimination of Kansas prevailing wage law would open up business opportunities for merit shop contractors. Union contractors collectively bargain over wages and benefits and sign a contract binding all signatories of that contract to specific hourly contributions into apprenticeship training, pensions and health coverage. Merit shop contractors do not have collectively bargained contracts. They are free to pay each of their workers on each individual's own merit. As a consequence of this freedom from collective bargaining, only 10% of merit shop workers in Kansas are covered by pensions contributed to by their employers. Only 4% of merit shop workers are covered by health insurance provided by their employers. Only 12% of all registered apprentices in Kansas are trained by merit shop contractors.

This is not because merit shop contractors do not want to train their workers or provide good benefits and health coverage. It is because outside the workings of collective bargaining in construction, it is difficult to provide for these long-term needs of the industry.

Under collective bargaining, the contractors as-a-group agree with the workers as-a-group to provide so much per hour for apprenticeship training, so much per hour for health insurance and so much per hour for old-age and disability pensions. Each contractor must--by the rules of the contract--include these costs in each and every bid they submit. Consequently, the contract forces long-term industry needs and costs into the short-run bid considerations of each signatory contractor.

On the merit shop side of the industry, no collective contract governs bidding. A contractor may wish to include training costs and health insurance. But that contractor--in a cutthroat bidding environment--always must face the prospect that his competitor will skip those long-term costs to get this job in the short-run. So apprenticeship funds go wanting. Pension and health benefits are shaved.

The problem is exacerbated by the fact that in construction, workers go from contractor to contractor as jobs ramp-up and then shut down. Under collective bargaining, each contractor agrees to pay for the training of not only his own apprentices but also those of his signatory competitors. The contract requires it. And it makes sense. Your competitor's apprentice may one day soon be your journeyman.

But in the merit shop sector of the industry, each contractor has an incentive not to train. If I train at my cost an apprentice that later goes to work for my competitor, I am simply cutting my own throat by subsidizing my competitor. Consequently it is not surprise that merit shop contractors in Kansas account for only 12% of all registered apprentices. Many merit shop contractors try to avoid apprenticeship training. If they train, they train informally--only for the immediate skills needed on this job, and only as a last resort if they cannot find the needed skills out in the market.

The first result of the repeal of Kansas' prevailing wage law on training was that apprenticeship training fell by 38%. But the long-run effect was the creation of a labor force with not only fewer skills but a narrower base of skills. Registered apprenticeship training seeks to train workers in the general skills of their craft not the narrow skills of one specific job. Consequently, the shift away from formal apprenticeships to informal, problem-at-hand training has proven to be a shift towards thinly skilled workers with limited commitment to construction as a craft or career.

While this study documents the effect of Kansas' repeal of prevailing wage regulations on the skill and manpower crisis in construction, the problem is wider than simply in Kansas. In a story "Craft Shortages Creeping In," *The Engineering News-Record* surveyed the top 400 general contractors and top 600 specialty contractors around the country. *ENR* stated:

"The industry has known for the past decade that it was headed for manpower trouble...Nonunion contractors working in bustling areas appear to have the biggest manpower problems. 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."²⁸

ENR stated that the South had the greatest craft labor shortages. (The Deep South is the one area in the country where no state has a prevailing wage law.) But the problem really is tied to the movement away from the disciplines given to the industry by prevailing wage regulations and a reasonable amount of collective bargaining. Nonunion contractors, themselves, recognize the problem. In a report commissioned by three major merit shop contractors, the writers state:

Clients [i.e. owners purchasing construction services] have created a 'playing field' which forces contractors to undercut one another to obtain work. Combined with the fact that craftsmen are treated as expendable commodities, woefully inadequate training opportunities over the years, and alternative service sector jobs which are now available at competitive wage rates and superior benefits, it is easy to understand why large numbers of people aren't knocking on the industry's door.

²⁸ *ENR*, December 25, 1995, p. 34.

States that have repealed their prevailing wage laws have joined the group of construction industry "clients" that have created a cutthroat playing field where under-bidding today is the only rule of business. As a result craftsmen become "expendable commodities". As a result, training opportunities becoming "woefully inadequate". As a result, the service sector provides "competitive wages and superior benefits" compared to construction.

Kansas construction has seen a loss of its experienced workers to other industries and retirement. These skilled workers are being replaced by a younger cohort of less trained, less skilled, less experienced and less career-committed workers. Consequently the industry has become less safe.

Serious-injury rates in Kansas construction rose by 21% after the repeal of the state prevailing wage law. A comparison of Great Plains states with prevailing wage laws to those--including Kansas--without this regulation finds that injury rates are 26% higher in the states without prevailing wage regulations. These are not simply injuries on public works. These are injuries across all of Kansas construction.

Prevailing wage repeal contributes to these injuries by cutting out the support for apprenticeship training that makes the worker more knowledgeable of job site hazards.

Prevailing wage repeal contributes to higher injuries by cutting out support for the payment of pensions and health insurance. Experienced, middle age workers are safer workers. But the absence of pension and health benefits in construction encourages construction workers to leave the industry once they start forming families. This leaves the playing field to younger, less experienced, less trained workers who are more injury-prone.

Prevailing wage repeal contributes to a higher injury rate by helping further erode construction wages. When construction wages become secondary wages, people no longer see construction as a place to develop a career. The loss of career workers creates a more dangerous workplace for those who remain. Inexperienced workers are a danger to those who work around them as well as themselves. On a job site replete with career workers, the inexperienced worker receives guidance. An inexperienced workforce--left to its own devices--measurably increases the risks and costs of injuries.

The original purpose of prevailing wage laws was to avoid the costs of an unskilled and inexperienced work force. These costs are social as well as economic. A construction worker who has health benefits and can look forward to a pension is less likely to become a burden on his or her family and community. The promise of repeal was lower public construction costs. But that promise went unfulfilled. The cost of prevailing wage repeal in Kansas has been substantial.

Construction workers, themselves have lost income and benefits--but that was the predicted by supporters of repeal. Construction in Kansas has become more dangerous. That was an unforeseen consequence. Skilled workers have left the industry. That too was unforeseen. Training has declined substantially. Again this was not predicted by repeal proponents. Now, and in the future, Kansas as a community will face the problems of an uninsured construction labor force. The health and old age problems of Kansas construction workers may simply go unmet, or the cost of these peoples' health and old age may be shifted to Kansas taxpayers. This too was an unforeseen cost of repeal.

Because the benefits of repeal in terms of cost savings on public construction are minimal at best--and more likely simply not there--now may be the time to revisit Kansas' repeal of the first prevailing wage law in the country. Because the costs of repeal are significant, measurable and on-going, now may be the best time to re-enact Kansas' prevailing wage law.