

## WHY PROJECT LABOR AGREEMENTS ARE NOT IN THE PUBLIC INTEREST

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Project labor agreements (PLAs) are agreements between owners of construction projects and construction unions, under which firms retained to work on a construction project must enter into collective bargaining with the unions, hire workers through union hiring halls, and pay union wages and benefits. Contractors must operate, in effect, as union contractors, whether they ordinarily use union labor or not. Workers must usually pay union dues whether they belong to a union or not.

PLAs do not preclude nonunion contractors from bidding on construction projects. But they authorize the unions to negotiate the wages and work rules under which a contractor (whether it uses union labor or not) must operate. For that and other reasons, nonunion contractors generally oppose PLAs. The construction unions favor PLAs, and with increasing vigor.

PLAs are common on major projects in both the private and the public sector. Disney World and the Trans-Alaska Pipeline, both private projects, were conducted under PLAs. The discussion here is focused on public projects, however. Both private and public owners are under pressure, politically, to enter into PLAs for major projects and, in negotiating a PLA, to agree to terms favorable to the unions. But public owners are governmental entities made up of elected offi-

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cial or persons appointed by elected officials, who must answer to the unions, along with other powerful voting blocs, through the political process. Private owners are accountable, instead, to their shareholders. School boards and state transportation authorities do not have to make a profit on their projects. Builders of theme parks and pipelines do.

Thus, private owners can decide on whether to use a PLA on the basis of whether it reduces construction costs and thus increases profitability (that is, assuming the choice is freely made without the threat of union retaliation should the decision go against a PLA). Public owners, on the other hand, are constrained only by competitive bidding laws, the effectiveness of which is arguably compromised by the very decision to enter into a PLA. Elected officials have an incentive, in contracting for projects, to weigh political concerns against cost effectiveness. A decision by public owners to enter into a PLA is a signal that they are willing to subordinate the interests of the general public to those of the unions. Private owners do not have the luxury, or the incentive, to subordinate the interests of their shareholders in a similar manner.

By one estimate, PLAs add 12–18 percent to the cost of public projects. PLAs were banned from federally funded construction projects throughout the administration of President George W. Bush. Had they not been banned and had they been applied to major federal construction projects conducted in the final year of the Bush administration, they would, by the same estimate, have increased construction costs by \$1.6 to \$2.6 billion in that year (Tuerck, Glassman, and Bachman 2009).

## Unions in Decline

Despite the clout they continue to exercise in the political arena, the power of unions to set wages and to control work rules is declining. Over the period 1983–2008 (the period over which comparable data are available), there was a decline in the percentage of workers who belonged to unions and a decline in the wage “premium” earned by union members. The fraction of all U.S. workers who belonged to unions fell from 20.1 percent in 1983 to 12.4 percent in 2008 (U.S. BLS 2009a). In 1983, union workers earned 38.2 percent more than nonunion workers. By 2008, this wage premium had shrunk to 28.2 percent (BLS 2009b).

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Among union members, construction workers experienced a similar trend. According to one report, 87.1 percent of construction workers belonged to unions in 1947 (Baskin 1998). The percentage was 27.5 percent in 1983 and 15.6 percent in 2008 (BLS 2009c). The wage premium earned by union construction workers fell in tandem with that earned by all union workers. In 1983, union construction workers earned 74 percent more per week than nonunion construction workers. In 2008, they earned 51.8 percent more (BLS 2009d).

The decline in the wage premium for construction workers has been particularly steep. In 1983, construction workers, both union and nonunion, earned 14.2 percent more per week than all workers, both union and nonunion. In 2008, they earned 1.4 percent less. The decline in relative earnings has been steep also among union members. In 1983, union construction workers earned 31.2 percent more per week than all union workers. In 2008, they earned 14.5 percent more.

The increasing energy with which the construction unions and some elected officials encourage PLAs on public projects can be seen as an effort to shore up the construction union wage premium against further decline. The question, however, is whether there is a legitimate public policy reason for slowing or reversing this decline. The construction unions, as shown below, seldom couch their pleas for PLAs in terms of their own interests. But, political considerations aside, an elected official might see these trends as arguing for policies that would strengthen the unions, to the end of protecting workers' wages from erosion brought about by declining union influence.

The idea that it is possible to help construction workers in general by helping union construction workers in particular is, however, contradicted by the evidence. First, the decline in the union wage premium does not necessarily reflect a general decline in wages. The reason that the union wage premium has declined is that nonunion wages have risen faster than union wages, for both construction workers and all workers. It could well be that some workers have abandoned the unions because wages are growing faster for nonunion workers. Moreover, and as shown below, the very process by which the construction unions keep union wages higher than nonunion wages consists in part of using PLAs to exclude nonunion contractors and workers from public projects.

Finally, the construction industry is far too fractionalized for even the biggest construction firms to be able to suppress wages or impose onerous work rules. According to the U.S. Census Bureau (2007),

there were 725,101 construction establishments in the United States in 2007. There were, on average, 10 workers per establishment. According to the U.S. Small Business Administration (2009), 86.1 percent of construction firms have fewer than 500 workers.

Thus, it is not possible to rationalize a decision to use a PLA as an action that will improve the lot of the average construction worker. PLAs benefit only the minority of construction workers who belong to unions.

### The History of PLAs

PLAs date back at least to 1938, when work began on the Shasta Dam in California. In those days, when strikes against public projects were commonplace, a contractor taking on a project of this size would see a PLA as a method of maintaining labor peace. In view of the tumultuous labor conditions at the time, the general contractor under the Shasta Dam PLA readily agreed to hire only members of the recognized unions and to pay union scale. The project was completed without incident, apparently as a result of this arrangement (Johnston-Dodds 2001).

Although the construction unions remained strong for decades thereafter, the short-term nature of most construction work posed an obstacle to union organization efforts. Thus, in 1959, a sympathetic Congress passed the Landrum-Griffith Act (U.S. Labor-Management Reporting and Disclosure Act of 1959), which made it possible for unions to represent workers even when only a minority of workers actually belonged to unions. By passing this act, Congress opened the door to “pre-hire” agreements, such as PLAs, that owners could sign with the unions before any workers were hired.

Another milestone was reached when the U.S. Supreme Court upheld a 1987 PLA entered into by the Massachusetts Water Resources Authority, which was conducting a court-ordered cleanup of the Boston Harbor. The MWRA had required its contractors, whether union or not, to accept the terms of the PLA. The court decision (*Building Trades v. ABC* 1993) constituted a serious rebuke to efforts by nonunion contractors to mount a legal challenge to PLAs.

The Boston Harbor decision prompted the construction unions to press more aggressively for PLAs on public projects. Boston’s “Big Dig,” which became the most expensive (and probably the most controversial) public works project in U.S. history, was conducted under a PLA.

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By the time that the Court approved the Boston Harbor PLA, however, the decline of the construction unions was in full bloom. Indeed, the decisions to use PLAs on the MWRA project and the Big Dig can be seen as made in order to protect Boston area construction unions from further decline.

By the 1980s, a PLA was no longer necessary in order to get a contractor to take on a major public construction project, as it had been as with the Shasta Dam project. Instead, PLAs had become arrangements into which public owners would enter out of deference to the unions, whose political significance had come to outweigh their ability to pose a threat to labor peace. As one union official (Northrup and Alario 1998: 21) put it, the purpose of PLAs now was “to fight the growing nonunion element throughout the country.”

This growing nonunion element was not the result of any organized attempt by nonunion contractors to diminish union power. It was the result, rather, of shifting living patterns and of technological progress.

One author who has analyzed these changes points out that the post-World War II housing boom shifted a large portion of the construction business from the cities, where the unions are strong, to the suburbs, where they are not. Over the years, “standardized factory-made sub-assemblies, materials, and fasteners, . . . specialized tools and techniques, and . . . other engineering solutions” rendered traditional skills obsolete (Thieblot 2002: 562–64). Highly skilled craftsmen found it possible to delegate much of the work that they previously performed to less skilled craftsmen. At the same time, new specializations emerged with the development of new building components and construction methods. And contractors found that they could increase productivity by switching workers from one task to another, unencumbered by union work rules. These developments made it increasingly difficult for the construction unions to justify the practice of forcing workers into rigid job descriptions and of requiring that every job be performed by highly skilled, expensive labor (Thieblot 2002: 566–67).

### The Nexus between PLAs and the Prevailing Wage Law

The construction unions have relied mainly on two weapons in their efforts to protect the union wage premium against these developments. One is the PLA. The other is the prevailing wage laws, imposed by the federal government and by most states, the purpose

of which is to put a floor on wages paid construction workers on public projects. The prevailing wage is calculated in such a way as to be heavily weighted toward the union wage rather than the lower nonunion wage. Thus the prevailing wage law, which sets wages for given trades in given geographical areas, reinforces union efforts to keep members' wages above market levels.

Because the legally mandated prevailing wage for a given trade is usually far greater than the average (union and nonunion) wage for that trade, the unions consider it necessary to prevent competition from nonunion contractors from driving the union wage down to the market-clearing level. The prevailing wage laws, which are aimed at protecting the unions, therefore require contractors to pay the prevailing wage on a public project, whether or not the contractor hires union labor and whether or not the project is conducted under a PLA.

However, the fact that most construction workers no longer belong to unions creates another threat to the union wage premium. The above-described demographic and technological changes have made it increasingly difficult for union contractors to compete with nonunion contractors. Without a PLA, and despite the fact that they must pay the prevailing wage, nonunion contractors often have a competitive advantage in bidding on public projects. If a nonunion contractor has the flexibility to get a particular task done with less labor and cheaper labor than a union contractor, that adaptability puts downward pressure on the union wage premium. What a PLA does is neutralize this threat—forcing the nonunion contractor to operate as a union contractor and thereby to forgo its competitive advantage.

The PLA reduces the competitive advantage of nonunion contractors on public projects by artificially raising the contractors' costs and, often, by reducing their workers' net pay. The unions use PLAs to bring about this result by forcing nonunion contractors to accept work rules that undermine their efficiency and by forcing them to pay twice for fringe benefits.

Here's how: Nonunion contractors big enough to work on major public projects typically develop and retain their own workforce by offering health, retirement, vacation, training, and other benefits. But if a contractor signs onto a PLA-governed project, the workers it hires come to it through the union hiring hall and will therefore not ordinarily be part of its own workforce. The employer has to pay

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wages and fringe benefits for the workers it ends up hiring for the project, while continuing to pay for the fringe benefits that it has guaranteed its own workers.

Nonunion workers seek employment with nonunion contractors in part because they can get the benefits offered by those contractors without having to pay union dues or submit to the union's hiring rules. Under a PLA, they have to pay dues and accept deductions from their paychecks that go toward benefits that they already receive from their employer and that they, as nonunion workers, will never collect from the union. They also have to put themselves at the disposal of the union hiring hall if they wish to work on PLA projects conducted by their own employers.

The problem is illustrated by a lawsuit (*Electrical Contractors* 2009) that was brought by an electrical contractor against the state of Connecticut after the contractor, which was the lowest bidder, was denied a school building project for refusing to operate under a PLA. In an affidavit filed in connection with the suit, an officer of the firm pointed out how the PLA at issue undermined his firm's ability to compete for the project (Flynn 2009).

The officer reported that his firm provides its workers with benefits that include vacation and sick days, profit sharing, and health insurance. These benefits cost the firm \$9.33 per hour for a journeyman electrician. The prevailing wage law requires the firm to pay \$53.36 per hour, including benefits, for the same worker when he is employed on a public project. Unencumbered by a PLA, the contractor would satisfy its obligation under the prevailing wage law by providing the promised benefits and paying the worker a net wage of \$44.03 (= \$53.36 - \$9.33) per hour. The cost to the employer would be \$53.36 per hour whatever benefit package the employer offers. The cost of the benefits would simply come out of the worker's paycheck.

Things would change, however, under the PLA. Under the PLA, the contractor would acquire an added responsibility to the union, which is to pay the mandated \$53.36 per hour for the labor supplied to it by the union. It would at the same time have to continue providing the fringe benefits promised its workers at a cost of \$9.33 per hour, whether or not they ended up working on the school project—or any project. The cost of labor would rise thus by 17.5 percent, from \$53.36 to \$62.69 per hour.

The firm's workers would lose as well. If the project discussed here had not been governed by a PLA, the electrician would have received his fringe benefits and his net pay of \$44.03 per hour. Under the PLA, however, and assuming that he would end up working on the project through the union hiring hall, his net pay would be less.

The reason is that, under the PLA governing the project, every contractor must pay \$18.96 toward union benefits, whether it is a union contractor or not. In this instance, the mandated benefits are more than twice what the contractor already provides its own workforce. Under the PLA, the worker's net pay would be \$34.40, equal to the prevailing wage of \$53.36 minus the mandated benefits \$18.96, of which all but an annuity portion would go straight to the union treasury.<sup>1</sup> The worker's net pay would fall by \$9.63 (= \$44.03 - \$34.40) plus whatever he must pay in union dues. He would suffer this fall in net pay even though he would not, except for the annuity portion, receive any of the benefits for which his paycheck is docked.

For the two school projects, the total fringe benefits that would have been deducted from workers' paychecks in this fashion came to \$463,970.16. The PLA would add \$228,314.43 to the firm's costs.

This example is typical of PLAs entered into on public projects. In comments filed in opposition to a presidential executive order encouraging PLAs on federal construction projects, Associated Builders and Contractors (ABC, undated), an association that represents nonunion contractors, cited two federal projects that cost its workers \$2.2 million in take-home pay. John R. McGowan (undated) cites other examples in a report performed for ABC.

Thus, a PLA on a public project has the purpose and effect of reducing the competitive advantage of nonunion contractors, first by forcing them to pay twice for benefits already offered their workers and second by forcing pay cuts on their workers. It amounts to a straightforward effort by the construction unions to put nonunion firms and workers at a competitive disadvantage.

It can also be interpreted as a decision to confer a degree of monopoly power on the construction unions. A monopoly works by taking actions that discourage rivals from entering the market in which it operates—in this instance, the market for public projects. While the details vary from project to project, the example presented

<sup>1</sup>Of the \$18.96, all goes to the union except for an annuity portion equal to \$4.55.

here shows how the unions use PLAs to discourage nonunion contractors from entering this market.

Ordinarily, one expects a seller that exercises monopoly power over its market to dominate the market in which it sells. Because the construction unions serve only a small portion of the construction market, their monopoly power would be nonexistent but for their ability to discourage the entry of nonunion contractors through the process just described and through other methods.

### Union Arguments for PLAs

Such are the motives that underlie the unions' support for PLAs. The arguments used to pitch PLAs to voters and politicians are quite another matter. Once we leave the world of motives and enter the world of politics and public relations, the picture changes dramatically. There we have a public-relations campaign by the unions to make their case before water authorities, school committees, government agencies, the courts, and the public. The task of the unions, in conducting this campaign, is to show that PLAs serve the public interest rather than merely the interests of their members and officials.

The unions' approach to this task is to argue that PLAs are necessary for projects that are particularly "complex." It is necessary, so the unions argue, for construction owners contemplating such projects to enter into pre-hire arrangements with the unions before they put the project out to bid. Failing to understand this principle, so they warn, will create the prospect of disruptions, delays, and cost overruns once these particularly complex projects have gotten under way. PLAs, we are told, are necessary to assure "labor peace" over the life of a project (Waites and Mancini 2002).

One often-cited article, written by Fred B. Kotler (2009), the head of a union leadership school operated by Cornell University, puts it as follows:

PLAs provide job stability and prevent costly delays by: 1) providing a uniform contract expiration date so that the project is not affected by the expiration of various local union agreements while the PLA is in effect; ... 2) guaranteeing no-strikes and no-lockouts; 3) providing alternative dispute resolution procedures for a range of issues; 4) assuring that contractors get immediate access to a pool of well-trained and highly-skilled workers through union referral procedures during the hiring phases and throughout the life of the project.

The logic employed by PLA advocates like Kotler is none too subtle: Owners can enjoy “labor peace” and “job stability” if only they are enlightened enough to enter into a PLA before they put a project out to bid. Owners proceed without a PLA at their peril. Failure to sign up invites “costly delays.” The threat to shut down a project or otherwise cause trouble lies just below the surface of the high minded appeals for cooperation that come from the unions and their advocates.

Decades ago, when the construction unions commonly disrupted public projects, it was not necessary to fashion arguments about contract expirations and access to skilled labor in order to get a public owner to sign a PLA. The threat to labor peace was evident without the need for studies bearing the imprimatur of an Ivy League university.

The threat doesn’t always remain below the surface, even in recent times. Northrup and Alario (1998) describe episodes of suspicious, or overtly disruptive, union behavior. In one such episode, unidentified vandals destroyed electrical work performed by nonunion workers at a Boston building project that had been picketed by the International Brotherhood of Electrical Workers. New York Thruway authorities came to support a PLA after a riot took place in response to the award of a project to a nonunion contractor.

### How Real Are the Threats to Labor Peace?

Although worries about union shenanigans, or even violence, continue to be real enough, owners have little to fear, at least as far as any legal retaliation is concerned, should they decide not to enter into a PLA. And this is so whether or not a union contractor is selected to perform the project.

Consider what happens once a contractor is selected. If a nonunion contractor is selected, there will be no strikes or jurisdictional disputes to resolve in performing the work. Nonunion workers don’t strike. Nonunion contractors derive their competitive advantage largely from the fact that they, not their workers, decide who has jurisdiction over which job.

On the other hand, if a union contractor is selected, then the unions are largely in control of the terms and conditions under which their members will work. Because public owners have to pay the prevailing wage and because the prevailing wage imposes a floor on the

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wage that can be paid on a project, the unions get to set whatever wage they can at or above this floor. The unions can head off jurisdictional disputes by settling on the appropriate dispute resolution procedures in their agreements with contractors, even without a PLA. Once a union contractor gets a public project, therefore, there is seldom much of anything over which to cause trouble.

The union argument for PLAs is a curious one in that it is the unions that are the source of the very difficulties against which the PLA is intended to offer protection. It is an empty threat for the unions to raise worries about labor peace on non-PLA projects that take place under collective bargaining agreements to which they themselves are willing signatories. At any rate, the bid submitted by a union contractor in competing for a project will reflect any effect that the prospect of union jurisdictional disputes, strikes, contract expirations, and the like may have on costs. If the prospects for these problems are genuine, then nonunion contractors, which are immune from such problems, will have an advantage in competing for the project. On the other hand, if a union contractor submits the lowest bid, then it will be in part because the same problems were nonexistent in the first place. The threats to labor “peace” made by the unions’ subalterns in universities and consulting firms thus turn out to be little more than spin.

The reality is that strikes are disappearing from the landscape, in tandem with the unions’ shrinking market share. The Bureau of Labor Statistics reports major work stoppages going back to 1947. According to the BLS, work stoppages across all industries peaked in 1952 at 470, involving 2,746,000 workers. Since then, the number of major work stoppages has declined steeply. There were 15 work stoppages in 2008, the second lowest ever reported, involving 72,000 workers, or .05 percent of the labor force (BLS 2009e).

Politicians nevertheless continue to put stock in the union threats, and they do so at all levels of government. President George W. Bush was not intimidated. He banned the use of PLAs on federal construction projects over the course of his administration. But in February 2009, President Barack Obama revoked President Bush’s ban and issued an executive order permitting federal agencies to use PLAs on federal construction projects of \$25 million or more. Under President Obama, it is now “the policy of the Federal Government to encourage executive agencies to consider requiring the use of project labor agreements in connection with large-scale construction

projects in order to promote economy and efficiency in Federal procurement” (White House 2009).

Among the reasons given by the president for the change in policy was that “a lack of coordination among various employers, or uncertainty about the terms and conditions of employment of various groups of workers, can ... threaten the efficient and timely completion of construction projects undertaken by federal contractors.” The president was thus persuaded by the argument that PLAs are necessary to prevent labor disputes leading to cost overruns and delays.

### The Strikes That Didn't Happen

In a recent study, the Beacon Hill Institute (BHI) attempted to determine whether there is an empirical basis for this argument (Tuerck, Glassman, and Bachman 2009). If there is a basis for concerns about “lack of coordination” and “uncertainty” in construction projects not conducted under PLAs, there should have been many threats to “the efficient and timely completion” of federal construction projects that were initiated during the PLA-free Bush administration. The BHI study sought to identify projects costing \$25 million or more that were initiated during the Bush years and that suffered delays or cost overruns resulting from labor disputes that could have been prevented by a PLA.

The authors approached this task by examining three sources of data. First, they examined a website (*usaspending.gov*) that provides data on federal construction projects conducted during this period. The authors attempted to contact the contractor on every project identified on the website that took place over the period 2001–2008 and that cost \$25 million or more. The purpose was to determine from the contractor whether any of the projects suffered a delay or cost overrun that could have been prevented by a PLA. Second, they examined the results of a survey conducted by ABC to determine whether its members had any knowledge of relevant delays or cost overruns. Finally, they examined the responses to letters sent to federal agencies with procurement responsibilities, in which ABC asked the respondents to identify any delays or cost overruns on major projects initiated during the Bush administration that could have been prevented by PLAs.

This threefold effort yielded no reported instances of delays or cost overruns attributable to the Bush ban on PLAs. Unless every govern-

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ment agency that responded to ABC's letters, which were sent under the auspices of the Freedom of Information Act, falsely reported on its own records, the lack of PLAs over the course of the Bush administration ban had no effect on "efficiency" or "timeliness." The Bush administration was able to conduct almost \$60 billion in major construction projects with nary a hitch attributable to the ban.<sup>2</sup> Particularly telling is the fact that, when queried, the Office of Management and Budget, which has procurement responsibility over all federal spending, did not report any episodes that would illustrate the concerns expressed in President Obama's executive order.

From this record, it would appear that the union threat is indeed an empty one and that PLAs are not necessary to protect the labor "peace." There is no need for public owners to let the construction unions muscle their competition out of the bidding process. Still, there is interest in the empirical question how PLAs affect costs. If PLAs are in fact, anticompetitive, it should be possible to show that they raise winning bids on construction projects and that they raise final construction costs.

### Effects on Costs

But how do PLAs affect costs? In other studies, BHI conducted regression analyses on school building projects in Massachusetts (Bachman et al. 2003), Connecticut (Bachman, Haughton, and Tuerck 2004), and New York (Bachman and Tuerck 2006) to provide an answer to this question.

Regression analysis consists of determining how certain independent variables, such as number of days of sunshine and quality of soil, affect some dependent variable, such as crop yields. Here the purpose was to determine how PLAs and other independent variables, such as building size, affected the cost per square foot of building a school. BHI selected school building projects for analysis because they are sufficiently comparable to make it possible to identify a limited number of independent variables that explain cost differences.

The Massachusetts regressions were performed on a data set for 126 projects, 21 of which used PLAs. One regression included three independent variables: (1) a "dummy variable" for whether the

<sup>2</sup>The FOIA requests did unearth one project that suffered a two-day delay at a cost of \$16,000. Apparently, however, the delay was unrelated to the absence of a PLA (see Tuerck, Glassman, and Bachman 2009: n. 12).

project was done under a PLA or not, (2) another dummy variable for whether the project was for a new building or not, and (3) project size, measured by number of square feet. The dependent variable was “bid cost,” that is, the size of the winning bid. The regression showed that a PLA added \$18.83, or 14 percent, per square foot to bid cost. All three variables were significant at the 99 percent level (Bachman et al. 2003).

The regression was highly robust for alternative specifications, in which the authors used other independent variables, such as whether a school was an elementary school or not, and divided their samples between small, medium, and large projects and between new projects and renovations. A regression performed on projects for which data were available, showed that PLAs added \$16.51, or 12 percent, to final construction costs (Bachman et al. 2003).

BHI performed similar analyses for Connecticut and New York. It found that PLAs added \$26.07, or 17 percent, to bid costs and \$30.00, or 18 percent, to final construction costs in Connecticut. It found that PLAs added 20 percent to bid costs in New York (Bachman and Tuerck 2006). Those findings also were robust for alternative regression specifications.

Other analysts have used other approaches to measure cost effects. Max Lyons proceeded on the premise that a PLA requires a contractor to pay the union wage, rather than the prevailing wage, and that the union wage is generally higher. He calculated the fraction by which the average union wage exceeds the average prevailing wage and used that fraction to estimate the effect on costs of bringing a project under a PLA. He found that an executive order under the Clinton administration that removed a previous ban on PLAs added 1.7–7.0 percent to the cost of federal projects (Lyons 1998).

Defenders of PLAs have criticized BHI’s regression models as failing to account adequately for variables other than PLAs that account for the higher cost per square foot of construction on PLA projects (Kotler 2009; Belman, Bodah, and Philips 2007). This supposed problem is called “omitted variable bias” by statisticians.

Belman, Bodah, and Philips imply that the regressions used by BHI to analyze Massachusetts schools suffered from this bias. They complain that the BHI regressions ignored such matters as “whether the building is an elementary school, the construction of an auditorium, cafeteria or kitchen, whether the roof includes both low and steep pitches, and whether the project was located in an urban area.”

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These critics, however, have not proved that omitted-variable bias exists in the BHI regressions. Just adding more variables may reduce, rather than increase, the ability of a regression model to explain how a particular independent variable, such as whether there was a PLA or not, affects the variable being explained, in this instance the cost per square foot of building a school.

The specification of a regression model requires a tradeoff between the predictive power of the model and the statistical significance of the independent variables in the model. In general, adding more independent variables increases predictive power but invites “multicollinearity,” which decreases the statistical significance of individual independent variables (in this case, the PLA effect).<sup>3</sup> Thus, it adds nothing to our understanding of how PLAs affect costs merely to pile additional explanatory variables, many of which may be correlated with each other, into a regression model. Statistical significance falls also when using a smaller sample size.

BHI’s critics have run regressions of their own to show that PLAs are not significant. One research team used 30 independent variables in a sample of 70 schools and found that the PLA variable became insignificant (Belman et al. 2005: 13). There should be no surprise here. A determined statistician can always find a way to reduce statistical significance by adding independent variables and by making the sample size sufficiently small. The argument then goes as follows: “Because we can build a model in which PLAs are found not to affect costs, there is no need to pay attention to other models that show that they do.”

Defenders of PLAs sometimes argue that PLAs *reduce* construction costs. The above-cited Cornell University article illustrates the reasoning that is common to these efforts. It cites a “feasibility study” of a New York state highway project that purportedly showed “\$8.4 million in PLA-related cost saving.” According to the article, these savings were brought about by features of the applicable PLA that included “standardizing” the work week and work day, “elimination of premium rates,” “standardizing eight holidays” and increasing the “ratio of apprentices” (Kotler 2009).

Another study, this one performed for the Department of Veterans Affairs, examined the effects of PLAs in five cities—

<sup>3</sup>Multicollinearity arises when two or more explanatory variables have a strong linear relationship.

Denver, New Orleans, New York, Orlando, and San Francisco. The study found that PLAs increased costs in the cities where the union presence was “low” (Denver, New Orleans, and Orlando), but decreased costs in the other cities where there were strong unions but weak construction markets. The study used a formula for calculating cost savings attributable to a PLA, which “considers issues such as holiday pay concessions, increased apprenticeship ratios, relaxed overtime and shift differential costs, as well as other intangible cost benefits” (Rider Levett Bucknall 2009).

All such studies implicitly adopt a methodology in which they:

1. Take, as a given, the existence of costly work rules that benefit the unions (e.g., holiday pay concessions, favorable apprenticeship ratios, high overtime pay).
2. Identify work rules, among them costly rules given in (1), above, that would be modified under a PLA.
3. Show how much more it would have cost to perform the project had those rules not been modified.
4. Count (3) as a cost saving that argues for the PLA.

This methodology presupposes that we can count as a cost “saving” some feature of a PLA that corrects for a problem that might otherwise go uncorrected once the project gets under way. But therein lays the error: Why, if correcting for a problem cuts cost, would it go uncorrected? An open bidding process forces firms competing for a project to cut costs to the end of submitting a winning bid. If the unions want their employers to succeed in bidding for a project, they have every incentive to remove problems that lead to higher costs.

It is not a cost saving to modify work rules that are inefficient to begin with and that would not survive a competitive bidding process. If union contractors are underutilizing apprentices, then they are operating inefficiently and should not expect to win projects on which they bid. It makes no sense to score the modification of a work rule as a “cost saving” when a competitive bidder would have modified that work rule anyway.

On the other hand, it hardly matters in an open bidding process if the unions refuse to modify inefficient work rules or to cooperate in cutting costs. Some contractor, most probably a nonunion contractor (given the existing dominance of nonunion contractors over mar-

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ket share), will be perfectly willing to work out cost-saving adjustments in the work day or in the use of apprentices, without help from a PLA. Presumably, the contractor that is most successful in working out problems of this kind will submit the lowest bid. It makes no sense to say that failure to adopt a PLA precludes the adoption of cost-cutting measures, when those measures would have been adopted anyway without a PLA.

The purpose of the bidding process is to induce bidders to fashion work rules and assign tasks in such a way as to get the job done at the lowest cost. And the best way to achieve that purpose is to make sure that the bidding process is unencumbered by measures, such as a PLA, whose real purpose is to preserve work rules that benefit the unions at the expense of efficiency.

The unions want policymakers to believe that PLAs are effective for removing inefficient work rules before a project goes up for bid. But the unions push for PLAs for the very reason that a PLA is the best way to make sure that some of the inefficient work rules from which they benefit will survive the bidding process.

## Conclusion

PLAs are motivated by a desire on the part of the construction unions to shore up the declining union wage premium against technological changes and other changes that make traditional union work rules and job designations obsolescent. The earliest PLAs on public projects were instituted before these changes had begun and in an era when strikes against public projects were common. That era is over. Now the PLA has evolved into an instrument that the unions employ in tandem with the prevailing wage laws in order to reduce the competitive advantage of nonunion contractors. The unions are able to sell PLAs to government entities only by promising to modify work rules and potential jurisdictional disputes that are the creation of the unions themselves.

Kotler, the author of the Cornell article, argues that PLAs are “in the public interest.” But the public has no interest in an arrangement that forces taxpayers to accept an uncompetitive bidding process for the sake of getting a project done. Project owners don’t save on costs by wringing piecemeal concessions from unions on work rules. They save on costs by eliminating, from the start, the ability of the unions to foist costly work rules on their employers.

PLAs on public projects are a “heads-we-win, tails-we-break-even” proposition for the unions. At worst, from the point of view of the unions, a PLA modifies work rules that would have been modified anyway in the course of open bidding. At best, it preserves work rules that would have been modified had the bidding process not been encumbered by a PLA. The only explanation for a PLA on a public project is the reluctance of politicians to enforce open bidding laws against the resistance of a weakening, but still powerful, union monopoly.

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