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Evaluating the Impact of Project Labor Agreements on the Cost of Affordable Housing Projects: Proposition HHH in Los Angeles

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Abstract

The effect of Project Labor Agreements (PLAs) on construction costs has been a source of debate for a long time. This research note evaluates the impact of PLAs on the costs of affordable housing construction projects under Proposition HHH in Los Angeles, making it a critical case study given the city's efforts to address homelessness. Drawing on empirical data from completed projects, we employ a methodological approach that contrasts with previous studies by using actual total development costs. Results indicate no statistically significant relationship between the use of PLAs and the actual development costs of Proposition HHH projects, suggesting that PLAs did not lead to per-unit cost increases. We acknowledge the need for a multifaceted evaluation of PLAs, considering factors such as workforce unionization, their impact on non-residential spaces, and the duration of the approval process. Additionally, we emphasize the broader benefits of PLAs, including enhanced cost efficiency, improved work quality, and broader economic impacts, which should be factored into a comprehensive assessment.

Introduction

The construction industry has long debated the cost impacts of Project Labor Agreements (PLAs). PLAs, or pre-hire contracts between unions and contractors, aim to ensure that projects are completed on time and within budget, by a diverse, skilled labor force.

However, the effectiveness and other implications of PLAs have sparked considerable discussion. Critics argue that PLAs hinder competition, particularly putting nonunion contractors at a disadvantage by increasing bid costs (Burke and Tuerck, 2019). Conversely, proponents assert that PLAs contribute to on-time and on-budget project completions, and improved worker safety, among other benefits (Kotler 2009). Despite these contrasting views, empirical evidence examining the true impact of PLAs, especially on project costs, is limited and inconclusive, due to the lack of good data and/or concerns about the methods used by researchers.

This research note evaluates the impact of PLAs on the costs of affordable housing projects using data on projects developed under Proposition HHH in Los Angeles. We focus on Proposition HHH projects for two reasons. First, with the increasing demand for affordable housing in California and many other parts of the US, we anticipate a rise in both affordable housing projects and the use of project labor agreements in affordable housing construction. Therefore, it is crucial to have reliable evidence on the relationship between these projects and PLAs. Second, a 2021 study by the RAND Corporation looked at the impact of PLAs on Proposition HHH projects, but the analysis used estimated costs, instead of realized costs of completed projects. Thus, we re-examine this analysis using the same methodology, but with updated actual total development costs for projects that are completed and in service.

The next section provides a brief review of the literature on PLAs and construction projects, especially affordable housing projects. The third section provides an overview of Proposition HHH. Section 4 describes our data and methodology. Section 5 presents our results. We then conclude and describe future work we plan to undertake in this area.

Literature Review

Research findings are mixed, with some studies linking PLAs to higher construction bids (Burke & Tuerck, 2020). Conversely, other analysis observed potential cost savings associated with PLAs in areas with significant union presence, although it also noted possible cost increases in regions with lower union activity (Rider Levell Bucknall, 2009).

A study by Phillips and Waitzman (2021), which stands as a singular peer-reviewed examination of how Project Labor Agreements impact bidding competitiveness, found no significant effect of PLAs on the number of bidders, even when controlling for project size and other relevant factors. Ward's (2021) investigation into Los Angeles affordable housing projects under PLAs suggested that such agreements might lead to increased costs and could potentially limit

the scope of development. Similar findings emerge from studies on school construction in Massachusetts, where PLAs have been associated with increased building costs (Bachman and Haughton 2007).

Other scholarly literature challenges the assertion that PLAs have a marked impact on project costs, suggesting instead that methodological nuances may influence perceived cost implications. Philips and Littlehale (2015) compared construction costs of nine affordable housing projects under Project Labor Agreements (PLAs) in Los Angeles with 121 similar non-PLA projects between 2008 and 2012. Using methods including average cost comparison, visual data inspection, and nearest neighbor analysis, the researchers consistently found that PLA projects were not more expensive to build than their non-PLA counterparts, across all evaluations. More recently, Ormiston and Duncan (2022) point to a lack of a statistically significant relationship between PLAs and project costs, suggesting an ongoing need for robust, methodologically sound investigations to fully clarify PLAs' economic impacts.

Furthermore, evidence suggests that PLAs enhance worker safety, promote equity, and increase project satisfaction among employers and clients. One analysis focusing on both New York City and New York State as a whole shows that these agreements can lead to higher on-time and on-budget project completion rates, and are especially valuable when used for larger, longer, and more complicated projects since they provide certainty and standardized schedules, pay arrangements, and dispute resolution processes (Kotler 2009). There is also evidence that PLAs are associated with better outcomes in worker safety, equity, and project satisfaction among employers and customers (Belman, Bodah, Philips 2007). According to the Department of Labor, PLA agreements can facilitate the establishment of apprenticeship and other training programs, and expand employment opportunities for workers of color and women in otherwise predominantly white and male-dominated industries, leading to a more equitable workforce (U.S. Department of Labor).

The HHH Project Labor Agreement

Proposition HHH (Prop HHH), a $1.2 billion bond measure approved by Los Angeles voters in 2016, aims to address homelessness by building affordable housing. Project Labor Agreements play a pivotal role in Proposition HHH, ensuring standardized working conditions and wages to streamline construction processes for affordable housing projects. The inclusion of PLAs in Proposition HHH represents a strategic effort to integrate fair labor standards with ambitious housing goals, following extensive discussions among city officials, labor unions, and housing advocates.

Prop HHH in Los Angeles serves as a critical case for examining the impact of Project Labor Agreements on affordable housing projects aimed at addressing homelessness. This city initiative provides a distinctive perspective on evaluating the effectiveness and financial implications of PLAs within a framework of significant social responsibility.

Data and Methods

Our analysis focuses on projects identified within the City of Los Angeles Prop HHH Progress Report 2024 and the Los Angeles Housing Department (LAHD) Affordable Housing Projects List. We specifically selected projects marked as in service to utilize Total Development Cost (TDC) data to accurately assess post-completion costs. This methodological choice allows us to capture the true cost impacts of PLAs, in contrast to previous studies that have relied on estimated costs. We use data from LAHD Affordable Housing Projects List published in February 2024.

We adopt the methodological approach used by Ward (2021) which is akin to a "difference in regression discontinuities" (DRD), combining a difference-in-differences (DD) framework with a regression discontinuity (RD) design. However, it diverges from traditional RD assumptions due to evidence of developers adjusting project sizes in response to the PLA threshold, violating the non-manipulation requirement for a causal estimate. Consequently, the analysis pivots to an alternative interpretation as a cross-sectional DD model, incorporating economies of scale and assuming that project size distributions are comparable across HHH and non-HHH samples. For a more detailed explanation of the methodology please see Ward (2021).

The analysis incorporates numerous controls for project characteristics, including unit composition, wage requirements, and supportive housing provisions, among others. It also adjusts for construction cost fluctuations over time using year-fixed effects. Moreover, all HHH-funded projects are required to pay workers residential prevailing wages. HHH projects with five or more stories must pay commercial prevailing wages. Other information used in the analysis such as the number of units, the existence of parking and elevators, and other variables listed in Table 1A are derived from Ward (2021).

Findings

The key variable under consideration, the HHH Project Labor Agreement (HHHPLA), is an interaction term between the binary PLA variable and the HHH project indicator. The associated coefficient of HHHPLA provides an estimation of the PLA's impact on construction costs. The PLA variable is designated for projects with 65 or more housing units, while the HHH variable indicates the project's classification as an HHH project.

Following Ward (2021), we run two models to estimate the effect of the HHHPLA on actual development costs. Model 1 employs data from all completed projects that were marked as in-service by LAHD and for which we had all relevant information on control variables, totaling 75 projects. Model 2 refines the sample by removing projects smaller than the 5th percentile and larger than the 95th percentile in project size, mitigating the effect of size outliers on cost estimations, totaling 67 projects.

Table 1 presents our estimation results. Both models show no statistically significant relationship between the use of PLAs on Proposition HHH projects and the actual development cost of these projects, suggesting that HHHPLA did not lead to a per-unit cost increase in HHH projects governed by the agreement.

For model 1, the t-statistic of the HHHPLA coefficient equals 1.52. For model 2, the t-statistic of HHHPLA coefficient equals 1.09. The low values of these statistics mean that we cannot assert any cause and effect between the PLA on Proposition HHH projects and their actual development costs.

Table A1 in the Appendix lists and defines all the variables used in our analysis, and table A2 in the Appendix presents results for each specification with estimation coefficients and standard errors for all included controls.

Table 1. Estimates of Effect of PLA on Construction Costs

	Model 1: Full Sample	Model 2: Exclude Outlier Projects by Size
HHH PLA	172.3 (113.1)	109.0 (100.2)
Adjusted R^2	0.486	0.543
N	75	67

Notes: Outcome is construction cost in $1000s. Standard errors in parentheses.

Conclusion

Our analysis using updated total development costs for completed projects shows no evidence that the HHHPLA caused an increase in per-unit costs for affordable housing projects developed under Proposition HHH. This finding is opposite to that by Ward (2021), which used projected development costs rather than actual total development costs. Additionally, our result is consistent with previous research indicating that projects built under PLAs are more likely to be completed on time and within budget, a factor that could not be considered in studies comparing projected versus actual costs.

Research on the cost implications of PLAs is still evolving, current studies, including this research note, are constrained by data limitations and methodological issues. A thorough evaluation of PLAs should incorporate several critical factors omitted from the methodology used by Ward (2021) which we also employ in our study, such as:

- Commercial and Ancillary Spaces: The inclusion of non-residential spaces within housing projects affects costs due to unique commercial construction requirements, necessitating careful consideration of their financial impact.

- Approval Process Duration: The timeline for the approval process can significantly influence costs through financing and insurance costs, and should be factored into a comprehensive cost analysis.

Beyond these immediate considerations, assessing PLAs' impact requires a multifaceted approach, including a cost-benefit analysis to account for their broader benefits, including:

- Enhanced Cost Efficiency and Project Management: PLAs can streamline project management and reduce disputes, potentially leading to lower overall costs through a more cooperative work environment.

- Wage Standards and Work Quality: PLAs attract skilled labor, which can result in better workmanship and efficiency, reducing the likelihood and costs of rework.

- Broader Economic Benefits: PLAs support community economic development and workforce training through local hiring and apprenticeship programs, presenting long-term economic benefits that may offset any upfront cost increases.

In sum, a comprehensive assessment of PLAs should extend beyond direct cost metrics to encompass various economic, labor, and management dimensions.

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Appendix

Table A1: List of all variables used in the analysis

For motivations behind the use of specific control variables please refer to Ward (2021).

Variable	Definition
HHHPLA	Interaction of HHH project and PLA
Prevailing wage	1 if project is subject to prevailing wage laws, 0 otherwise
Commercial Prevailing wage	1 if project is subject to commercial prevailing wage laws, 0 otherwise
HHH project	1 if project is HHH funded, 0 otherwise
Units	Number of units
Units above 65	Number of units above 65
Share (one, two, three) bedroom	Shares of unit type in each project (i.e., proportion of units that are studio, one bedroom, two bedroom, or three or more bedrooms).
Elevator	The presence of elevators that serve 95 percent or more of the units
Parking	Underground or freestanding parking structure
Transit-oriented development	Whether a project's location qualifies it as a transit-oriented development
Stories	Number of stories
PLA	1 if project has more than 65 units, 0 otherwise
Families	Variables for the target populations of the included PSH units
Share PSH	The share of units that are permanent supportive housing

Table A2: Estimates of Effect of PLA on Construction Costs

Variables	Model 1	Model 2 (Excluding outliers)
HHHPLA	172.3 (113.1)	109.0 (100.2)
Prevailing wage	-8.720 (98.69)	-47.68 (87.16)
Commercial Prevailing wage	-24.12 (71.47)	14.68 (61.36)
HHH project	-16.91 (109.3)	18.06 (96.43)
Units	-3.739 (2.527)	-3.269 (2.635)
Units above 65	0.0662 (3.762)	-4.722 (4.264)
PLA	-42.84 (128.4)	114.3 (122.7)
Stories	54.95 (52.01)	45.28 (42.94)
6-8 stories	-103.6 (110.6)	-108.7 (91.95)
Share one bedroom	34.07 (86.55)	23.90 (75.31)
Share two bedroom	-106.0 (190.6)	127.2 (162.8)
Share three bedroom	329.0 (308.7)	95.38 (308.3)
Share PSH	22.31 (134.8)	-15.05 (118.0)
Parking	33.93 (49.17)	-7.806 (43.83)
Transit-oriented development	21.64 (63.87)	-62.55 (54.84)
Elevator	25.17 (76.12)	36.55 (64.70)
Families	77.92 (73.38)	32.34 (60.53)
Special Population	5.837 (49.74)	26.46 (41.13)
2016 year	226.4 (136.1)	-102.7 (182.9)
2017 year	87.02 (92.93)	113.1 (81.43)
2018 year	59.21 (113.3)	67.42 (102.6)
2019 year	166.4 (110.6)	167.2* (97.33)
2020 year	99.44 (105.8)	93.02 (94.24)
2021 year	-164.1 (145.6)	-160.8 (122.0)
Constant	118.5 (312.9)	258.1 (271.7)
Observations	75	67
R-squared	0.485	0.543

Notes: Dependent variable is the construction cost in $1,000s. Sample is limited to projects that are in service. Standard errors in parentheses.

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