Exploring the Link Between Worker Satisfaction and the Construction Labor Shortage: A Case Study

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Abstract
The U.S. construction industry is experiencing a significant labor shortage, with broad implications for economic stability and infrastructure development. This paper explores primary factors contributing to this shortage, including economic fluctuations, technological advancements, union dynamics, educational trends, industry image, and workforce aging. The economic rebound from the 1980s recession and the lack of new entrants into the field have created a persistent gap between labor demand and supply. Additionally, slow adoption of new technologies and perceptions of construction work as physically demanding and risky have discouraged potential workers. Declining union membership has reduced access to critical training and employment benefits, while an increased societal emphasis on higher education and negative stereotypes surrounding construction careers have further diminished the industry's appeal. The shortage is compounded by an aging workforce, as experienced workers retire, taking their valuable skills and expertise with them. Through surveys and existing literature, this paper examines current strategies employed to mitigate the labor shortage, particularly enhanced training programs and targeted incentives designed to increase worker satisfaction, retention, and overall productivity. Addressing these challenges is essential to maintaining productivity, ensuring worker safety, meeting growing construction demands, and strengthening the industry's contribution to national infrastructure growth.

Keywords
Labor shortage, workforce retention, job satisfaction, skilled labor

1. Introduction

The construction industry plays a critical role in the U.S. economy, employing approximately 8 million individuals and contributing roughly 4% of the nation's GDP (Associated General Contractors of America, n.d.). The significance of the industry extends beyond direct employment, substantially supporting manufacturing, mining, and various service sectors (Associated General Contractors of America, n.d.). Despite these substantial economic contributions, the construction industry currently faces a persistent skilled labor shortage, posing extensive implications for project efficiency, industry growth, and broader economic stability. This shortage stems from multiple interconnected factors, including economic fluctuations, technological advancements, declining union participation, educational shifts, negative public perceptions, and an aging workforce. Historically, the origins of the current labor shortage can be traced back to economic downturns such as the recession of the early 1980s. As the economy recovered, the construction sector did not adequately replenish its workforce, creating a persistent gap between labor supply and demand (Chini, Brown, & Drummond, 1999). This imbalance continues today, with recent projections suggesting the construction industry will require approximately 439,000 additional workers by 2025 to meet anticipated demand (Associated Builders and Contractors, 2023). The labor shortfall negatively impacts supply chains, material manufacturers, and overall economic productivity, highlighting the importance of urgently addressing this issue. Technological advancements have further exacerbated the shortage by creating significant skill gaps. Although technology in construction has evolved rapidly, workforce training programs have struggled to keep pace, making it challenging for workers to adapt and remain competitive. Consequently, potential workers often seek employment in

other sectors perceived as less physically demanding and more technologically progressive (Chini et al., 1999). Union dynamics represent another significant factor influencing labor availability. Union membership within the construction workforce has sharply declined, with about 88% of U.S. construction workers now unaffiliated with unions (Associated Builders and Contractors, 2023). Traditionally, unions provided structured training, competitive wages, and comprehensive benefits; their declining presence has reduced worker retention and contributed to workforce instability. Educational trends and prevailing societal perceptions have further intensified the labor shortage. Increasing societal emphasis on higher education has positioned construction careers as less desirable. Negative stereotypes portray construction jobs as physically demanding, lower-paying, and less prestigious compared to professions requiring college degrees, discouraging young individuals from entering the industry (Chini et al., 1999). Additionally, an aging workforce significantly compounds this shortage. Currently, over 20% of construction workers are aged 55 or older and nearing retirement (Live5News, 2025). The retirement of experienced workers results in a loss of crucial expertise, intensifying existing skills gaps and emphasizing the urgent need for effective knowledge transfer mechanisms and succession planning (Bridgers & Johnson, 2006).

The practical impacts of these shortages are substantial, manifesting in higher project costs, delays, quality control challenges, and increased safety risks. Recent industry surveys indicate that approximately 91% of construction firms face difficulties filling open positions, underscoring the widespread nature of this issue (Rebusiness Online, 2022). Labor constraints have also forced firms to be more selective when bidding on new projects, potentially limiting national infrastructure development (HWA Alliance, 2022). In response to these challenges, industry stakeholders have implemented various mitigation strategies, including enhanced training programs, increased monetary incentives, flexible scheduling arrangements, and worker recognition initiatives designed to attract and retain skilled labor. Specifically, promoting construction careers among younger demographics, adjusting wages to match inflation, offering performance-based bonuses, improving work-life balance, and providing comprehensive paid training are emerging as effective solutions (NCCER, 2023).

This provides a case study examination of these underlying causes and impacts of the labor shortage. Through the analysis of survey data collected directly from construction workers, the paper evaluates current industry strategies and identifies which practices most effectively enhance worker satisfaction, retention, and productivity. By integrating both scholarly literature and firsthand perspectives from industry professionals, the paper contributes insights for industry stakeholders to strategically address the labor shortage and ensure the construction industry's continued ability to meet growing demands and effectively support national infrastructure development.

2. Methodology

This study employed a mixed-methods, exploratory case study design to examine worker satisfaction and perspectives on labor shortage strategies within the residential construction industry. The research was conducted at a housing development site that has been under phased construction for approximately 18 years. This single project provided a unique context for examining labor practices, as it involved a wide range of trades and long-term continuity of work. A total of 28 construction workers participated in the study, each representing a distinct subcontractor and trade. The sample included electricians, drywallers, stucco applicators, painters, landscapers, masons, low-voltage technicians, carpenters, and concrete workers. This cross-section of trades was selected to capture diverse viewpoints and enhance the breadth of qualitative and quantitative insights.

Data were collected through a custom-designed survey composed of 22 questions, structured into three primary sections: (1) personal and career demographics, such as age, years of experience, and employment history; (2) perceptions of current work conditions and company practices; and (3) individual values, incentive preferences, and opinions regarding the labor shortage. The survey instrument included ten multiple-choice questions, four binary (yes/no) questions, and eight open-ended questions. The questions were developed based on themes derived from existing literature related to workforce retention, incentive structures, job satisfaction, and work-life balance (Chini et al., 1999; NCCER, 2023). A summary of the survey topics is provided in Appendix A.

Quantitative responses were analyzed using basic descriptive statistics, including frequency counts and percentages, to identify the prevalence of specific attitudes and preferences. For instance, responses were tallied to determine the percentage of participants who favored alternative work schedules or ranked certain factors as most important to job satisfaction. Qualitative responses were examined through manual thematic coding. This method involved reading all handwritten open-ended responses, identifying recurring concepts, and organizing them into thematic categories such as "value of recognition," "pride in work," "commuting concerns," and "scheduling

flexibility." These emergent themes were then used to contextualize the numerical findings and offer deeper insight into worker sentiment.

All surveys were administered in person using paper forms. This approach was intentionally selected to foster direct interaction between the researcher and participants, promote trust, and allow clarification of questions. The researcher's prior internship experience on the project site further contributed to participant openness and the reliability of responses. However, this familiarity also introduces a potential limitation related to site-specific bias and preexisting relationships. Therefore, the findings should be considered exploratory and context-specific rather than broadly generalizable.

Following data collection, survey responses were transcribed into an online database for analysis. Quantitative results were visualized using bar graphs and pie charts to highlight trends, while qualitative themes were integrated to interpret the data holistically. Although limited in scope, the study provides a preliminary, worker-centered contribution to understanding how job satisfaction and labor shortage challenges are perceived at the trade level. These insights can inform future multi-site and longitudinal research to assess broader patterns across the industry.

3. Results

The analysis of survey responses revealed several significant trends regarding worker satisfaction and retention amid the construction labor shortage. When asked to rank factors that most influenced their current job satisfaction, 71% of respondents chose "relationships with coworkers and supervisors" among their top three, making it the most frequently cited factor. Conversely, only 21% identified "jobsite location" as a major influence on satisfaction, despite over half of the participants indicating in separate questions that they had previously changed employers due to inconvenient job locations. This contrast suggests that while location influences initial employment decisions, satisfaction becomes more closely linked to interpersonal and workplace dynamics once a worker is settled on a project.

The survey also asked workers to rank the importance of different incentives. While 89% appreciated holiday bonuses, 63% preferred performance-based recognition—such as acknowledgment of quality work or project goal achievement—over generic or uniform rewards. An open-ended response highlighted this perspective, stating, "A bonus is nice, but it means more when someone notices the effort I put in every day." This desire for personal recognition consistently appeared in qualitative responses and was categorized under "value of recognition" during thematic analysis. Several participants also expressed a strong sense of "pride in work," motivated not only by external rewards but also by visible progress and craftsmanship in their labor.

Scheduling flexibility was another major concern. When asked, "Would you be interested in a four-day workweek (10 hours/day) instead of a traditional five-day schedule?" 68% responded yes. Follow-up open-ended responses emphasized benefits such as reduced commuting time and more opportunities for rest or family engagement. One participant noted, "I'd gladly work longer days if I could get a full day off to recharge or handle personal stuff." These responses contributed to an emerging theme called "scheduling flexibility," which was frequently linked to improved work-life balance.

The survey also explored the combined influence of three core satisfaction drivers: the nature of the work, relationships at the workplace, and jobsite location. When asked whether satisfaction in at least two of these three areas would significantly increase their likelihood of staying with an employer, 82% of respondents agreed**.** This finding reinforces the idea that retention is often multifactorial and suggests that addressing even two major satisfaction areas may improve workforce stability.

All survey responses were cross-tabulated and reviewed for consistency between qualitative themes and numeric trends. For example, while workers appreciated financial bonuses, qualitative responses emphasized the emotional value of being seen and respected for one's contributions. Similarly, although job location alone was not a dominant satisfaction driver, its role in prior job changes demonstrates its continued relevance during recruitment phases.

Overall, the results suggest that worker retention in construction is strongly influenced by non-monetary factors—particularly workplace culture, recognition, and flexibility. These findings, while based on a small and site-specific sample, provide measurable insight into trade-level attitudes and offer practical considerations for management strategies aiming to reduce turnover and increase satisfaction within the industry.

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4. Discussion

The results of this study provide valuable insights into the perceptions of construction workers regarding job satisfaction and labor retention strategies. Among the factors evaluated, interpersonal relationships were identified as the most influential element in determining job satisfaction. Seventy-one percent of respondents ranked relationships with coworkers or supervisors among their top three satisfaction factors. In contrast, jobsite location, while cited as a reason for changing employers in the past, was ranked lowest in terms of its contribution to current job satisfaction. This finding suggests that although geographic proximity influences initial employment decisions, long-term satisfaction is more strongly associated with relational and task-related dynamics. These conclusions are consistent with existing research that emphasizes the importance of jobsite culture and team cohesion in promoting workforce retention.

Incentive preferences revealed a clear distinction between general financial rewards and individualized recognition. While 89 percent of respondents expressed appreciation for holiday bonuses, 63 percent reported a stronger preference for performance-based recognition that directly reflects individual effort. Open-ended survey responses supported this preference, with workers emphasizing the value of being recognized for their craftsmanship and contributions to daily progress. The qualitative themes of "pride in work" and "value of recognition" emerged frequently and align with prior studies that advocate for non-monetary motivational strategies. These findings suggest that employers may improve workforce satisfaction by implementing structured programs that regularly acknowledge employee contributions.

An additional area of interest identified in the results was the preference for flexible scheduling. When asked about interest in a four-day workweek consisting of ten-hour shifts, 68 percent of participants responded affirmatively. Workers cited improved work-life balance, reduced commuting time, and increased rest and family time as reasons for supporting this alternative. Although this scheduling model may require adjustments to trade coordination and project timelines, the level of interest suggests that it warrants further exploration. Employers who adopt or pilot flexible scheduling arrangements may gain a competitive advantage in recruitment and retention, particularly in regions with ongoing labor shortages.

Furthermore, the data demonstrated the importance of addressing multiple satisfaction factors simultaneously. Eighty-two percent of participants indicated that satisfaction in at least two of the following three areas—jobsite location, nature of the work, and interpersonal relationships—would significantly influence their decision to remain with a company. This response pattern highlights the need for comprehensive retention strategies that account for both practical and relational aspects of employment.

Despite the usefulness of these findings, several limitations must be considered. The research was conducted on a single construction site involving a relatively small sample size. In addition, prior familiarity between the researcher and participants may have influenced the openness of responses. These factors limit the generalizability of the results. However, the mixed-methods design, which combined quantitative measures with qualitative thematic analysis, allowed for a more nuanced understanding of worker experiences. The consistency between numeric trends and recurring qualitative themes strengthens the reliability of the conclusions drawn.

In summary, the study suggests that effective responses to the construction labor shortage require a multifaceted approach. Rather than relying exclusively on financial incentives, companies may benefit from investing in organizational practices that prioritize interpersonal communication, personalized recognition, and scheduling flexibility. These insights may serve as a foundation for future research and practical strategies aimed at enhancing workforce retention in the construction sector.

5. Conclusion

The findings of this study contribute to a deeper understanding of construction labor retention by examining the perspectives of trade workers on job satisfaction and workplace practices. The results highlight the importance of interpersonal relationships, meaningful performance-based incentives, and interest in alternative scheduling models such as a four-day workweek. These factors were consistently identified through both quantitative responses and qualitative themes, suggesting that worker retention is shaped not only by compensation but also by emotional, social, and logistical aspects of the jobsite environment.

Despite the clarity of these patterns, several limitations affect the scope of the conclusions. The study was based on responses from 28 participants at a single long-term residential construction site, and prior familiarity between the researcher and respondents may have influenced response behavior. These contextual factors limit the generalizability of the results. As such, the findings should be interpreted as exploratory and site-specific rather than representative of the broader construction industry.

Future research should expand upon this initial investigation by incorporating larger and more diverse samples across multiple regions, company types, and project scales. Longitudinal studies are particularly recommended to evaluate the sustained impact of workforce interventions, including performance-based recognition programs and scheduling adjustments. A comparative analysis of five-day and four-day workweeks could also provide clearer insight into the productivity and satisfaction tradeoffs associated with different schedule structures.

Additional areas of inquiry might include quantifying the cost and efficiency impacts of retaining experienced crews versus onboarding new personnel mid-project. Such analysis could help determine the financial value of workforce stability and inform the development of compensation models that better reflect this value.

Overall, these findings underscore the need for retention strategies that address both practical working conditions and human-centered motivators. Worker satisfaction, if approached holistically, may serve as a key lever for improving retention outcomes and mitigating the effects of the ongoing construction labor shortage. Continued research in this area remains essential for building a more resilient and sustainable construction workforce.

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