

Increasing Productivity in View of Skilled Labor Shortage

Research Report

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Research Summary

Limited skilled labor has been one of the greatest challenges facing the construction industry. The industry began experiencing this shortage in the 1980s and has continued with a repetitive cyclic trend over the last four decades. However, with the increase in the average age of the construction workers currently in the market and the decrease in the rate of young skilled construction labor joining the industry, the construction sector is currently experiencing a skilled labor shortage that is at its highest levels this decade. Therefore, an in-depth analysis is required to better understand the extent and impacts of skilled labor shortages within the construction industry.

This research focused on 10 key labor-intensive trades. Following, it outlined 26 project and organizational inefficiencies affecting the performance and productivity of skilled labor on site. These factors have been identified based on a systematic literature review of previous research studies addressing labor productivity in the construction industry. Consequently, a first survey has been developed and distributed to (1) determine the current degree of labor shortage for each labor trade as well as the impact of labor shortage on cost and impact on schedule performance of projects; and (2) quantify the degree of occurrence of the project and organizational inefficiencies and their impact of occurrence on labor productivity for each of the identified labor-intensive trades.

Based on the data collected from the distributed surveys, the research team developed a comprehensive tool that help project stakeholders: (1) assess skilled labor shortages for key labor-intensive trades and their impact on the cost and schedule performance of construction projects, (2) evaluate factors that impact skilled labor productivity on site for each of the identified trades. The tool was reviewed by industry experts and adjusted accordingly to provide the most beneficial experience for the tool user. Ultimately, this report aims to improve better decision-making in relation to skilled labor shortages.

If you are interested in more information about this research, you can contact Dr. Islam El-adaway by phone at 573-341-4030 and/or by e-mail at eladaway@mst.edu