ISSN: 2643-6876

Current Trends in Civil & Structural Engineering

DOI: 10.33552/CTCSE.2024.11.000758

Iris Publishers

Review Article

Evaluating the Impact of Reduced Working Hours on Construction Project Losses: A Case Study from South Korea

Kichang Jeong*

Korea institute of industry convergence, Republic of Korea

***Corresponding author:** Kichang Jeong, Korea institute of industry convergence, 501, 22, Guuigangbyeon-ro, Gwangjin-gu, Seoul, 05116, Republic of Korea

Received Date: June 21, 2024

Published Date: July 02, 2024

Abstract

This paper examines the impact of reduced working hours on construction project losses in South Korea, following legislative changes that limit the workweek to 52 hours. The study highlights the significant shift in the labor environment, driven by evolving recognition of workers' rights and the influence of the Fourth Industrial Revolution. Focusing on two large-scale EPC projects, the paper analyzes the challenges and implications of this transition, particularly the maintenance of daily wages despite reduced hours. The findings suggest that while shorter working hours benefit work-life balance, they also lead to decreased productivity and increased project costs, necessitating strategic planning to mitigate these effects.

Keywords: Reduced Working Hours; Construction Project Losses; Labor Laws; South Korea; Work-Life Balance; Productivity; EPC Projects; Legislative Changes; Construction Industry

Introduction

Globally, the labor environment is witnessing a pivotal shift. The evolving recognition of workers' rights, coupled with the formation of unions and a heightened awareness of labor laws, has initiated a profound reevaluation of the standards for a dignified life. This recalibration has been underpinned by a longstanding trend toward the reduction of working hours, a movement that predates the industrial revolution and continues to shape our modern society's quest for a balanced allocation of time between work and leisure. This trend not only underscores the global pursuit of equilibrium but also highlights the transformative impact of what is commonly referred to as the Fourth Industrial Revolution: the seamless integration of artificial intelligence and robotics. This technological evolution is pushing the boundaries of the industrial structure to potentially exclude human labor. As a result, there is a growing recognition that human labor hours need not directly correlate with the generation of added value. This realization is broadening the discourse on work-life balance, suggesting that the trend towards shorter working hours for the average worker is likely to gain further momentum.

This trend is not an exception in South Korea. Following the election of the Democratic Party, traditionally supported by the working class, the country revised its Labor Standards Act, which previously allowed for up to 68 hours of work per week, to now limit it to 52 hours. Based on the cost calculation reports from 37

construction sites, the analysis of the impact of reduced working hours revealed that the total construction costs could potentially increase by an average of 4.3%, with a maximum increase of 14.5%. Direct labor costs are estimated to increase by an average of 8.9% (up to a maximum of 25.7%), while indirect labor costs are projected to rise by an average of 12.3% (up to a maximum of 35.0%). The study suggested that the reduction in working hours is likely to have a more significant impact on indirect labor costs due to the need for additional management personnel [1].

This paper aims to introduce the changes observed in South Korea as a result of this legislative amendment and to discuss the patterns of losses occurring in construction projects, as well as briefly outline methodologies for evaluating such impacts. Although this topic is a case study specific to South Korea, the trend of reducing working hours is occurring globally, making it a valuable discussion as a meaningful case study.

Discussion

As an author specializing in claims research and dispute consulting in South Korea, I am currently consulting on two pioneering projects affected by the country's initial application of reduced working hours due to legislative changes. Both projects are substantial, each involving contracts for large-scale power plant EPC (Engineering, Procurement, and Construction) projects, with values ranging between $2.5 to $2.8 billion. This paper aims to delve into these two cases, offering insights into the implications and challenges posed by the reduction of working hours.

Previously, Korean labor laws allowed for a "normal working time" of 40 hours across business days (Monday to Friday), with 8 hours per day, supplemented by "overtime hours" of up to 12 hours per week, and "holiday working hours" which permitted up to 16 additional hours of work on weekends, totaling a maximum of 68 working hours per week. However, following the amendment, the law consolidated holiday and overtime hours into a capped total of 12 hours per week, thereby reducing the overall permissible working hours to 52 per week (40 hours of normal and 12 hours of overtime work).

A notable observation in the Korean construction industry post-amendment is the maintenance of wages despite reduced working hours. Unlike regular employees who receive a fixed monthly salary, construction workers in Korea are compensated daily, thus operating under a day-rate system. They earn a daily wage for days worked, with no compensation for days not worked, and receive a 50% premium for overtime, night, or holiday work, reflecting an additional cost recognition structure. Korea is recognized as one of the countries with strong labor unions. There exists a societal demand for a standard income that construction workers require to lead a satisfactory life. The amendment to the Labor Standards Act, which reduces working hours without proportionately decreasing wages, could lead to resistance from unions, resulting in workers leaving their jobs or engaging in strikes and slowdowns. A significant backdrop to these developments is the shortage of construction workers in Korea.

Following the legislative amendment, a distinctive feature emerged in South Korea: despite the reduction in daily working hours, the daily wages remained unchanged. In scenarios where project completion dates set prior to the amendment must be met, additional personnel need to be hired, leading to prominent disputes within the Korean society over the reasonable adjustment of construction periods and additional construction costs.

Conclusion

From a managerial perspective, this situation results in a very intuitive loss due to decreased productivity. Considering the time required for job preparation at the start and end of work, the proportion of time actually dedicated to work decreases even further. Moreover, as working hours are capped at 52 hours per week, the volume of construction work that can be accomplished weekly also diminishes. While project owners may argue that increasing manpower and equipment could easily achieve the desired work volume, adding more resources in a limited space than what was optimized in the scheduled construction plan inevitably leads to faster daily progress but at the expense of increased interference and complexity. This, in turn, decreases productivity per unit and naturally results in greater losses.

This dynamic underscore the complex implications of reduced working hours in the construction industry, necessitating a nuanced understanding and strategic planning to mitigate the unintended consequences of such legislative changes. The challenge lies in balancing the societal benefi`ts of reduced working hours with the operational realities of construction projects, where efficiency and timely completion are paramount.

Acknowledgement

None.

Conflict of Interest

No conflict of interest.

References

1. Choi EJ, Choi SY (2018) Construction Policy Tasks Following the Introduction of the 52-Hour Work Week. Korea Institute of Construction Industry pp. 18-22.