

ABSTRACT

PT XYZ is a construction contractor company focusing on building construction and is currently undertaking a project to build 24 shophouses in Block H, Jl. Rumah Sakit, Bandung City. The project covers an area of 1,320 m² (60 m x 22 m x 6 m) and is scheduled to last 21 weeks, from June 2024 to November 2024. The construction of these shophouses is divided into several main stages of work, including preparation work, structural work, installation work, plumbing installation, electrical installation, and wall painting. PT XYZ is facing several significant challenges. One of the issues is a workplace accident that occurred during the welding process of the shophouse doors. This incident indicates a weakness in the safety management of the project. Additionally, delays in the delivery of critical materials such as Ø8 rebar and Ø16 anchor bolts have disrupted the structural work schedule. Furthermore, internal conflicts between the foreman and subcontractor workers have worsened the situation on-site. Unfortunately, PT XYZ could not provide significant responses to these issues because the company does not yet have an effective risk assessment in place to anticipate and manage these risks.

Recognizing the importance of good risk management in construction projects, this research was conducted to design a risk assessment that can help PT XYZ manage risks during the implementation of the shophouse construction project. The primary goal of this research is to identify appropriate responses to various risks and calculate the sensitivity costs of each project activity. This research employs both qualitative and quantitative methods. The qualitative method is used to conduct a qualitative risk analysis, which includes the development of a probability impact matrix, a risk watchlist, and priority risk identification. The probability impact matrix is used to identify and prioritize risks based on the probability of occurrence and their impact on the project. Meanwhile, the risk watchlist and priority risk help categorize risks that require special attention. On the other hand, the quantitative method is used to perform a sensitivity analysis, which aims to calculate the cost of each identified risk, allowing PT XYZ to understand the potential financial losses from these risks.

The research results show that in this shophouse construction project, there are 191 negative risks and 5 positive risks. Of the total risks, 20 are categorized as insignificant, 62 as minor, 93 as moderate, 14 as major, and 2 as catastrophic. The largest risk in this project carries a potential cost of Rp851,529,000, highlighting the significant financial impact of the risk if not properly managed.

To assist PT XYZ in addressing these risks, contingency plan and checklist form designed and can be used to monitor and manage risks in each project activity. Additionally, procedures for material quality checks and risk reporting to the project manager developed, which are expected to enhance the effectiveness of risk management and minimize the negative impact on the project. With a better risk assessment in place, PT XYZ is expected to carry out the shophouse construction project more smoothly and reduce the likelihood of obstacles that could affect the overall success of the project.

Keywords: Project, Project Risk Management, Risk, Risk Assessment