

RISK MANAGEMENT ANALYSIS OF CONSTRUCTION PROJECT DELAY AT PT AMARTA KARYA (PERSERO)

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Abstract

This present study aims to determine the factors that cause delays in construction projects and identify risks in construction project delays. The results of this study are in the form of a hypothesized field observation finding 20 factors of construction projects delays at PT Amarta Karya (Persero); They are: 1) Land acquisition; 2) Owner's lateness in the installments payment; 3) Lack of coordination & communication with construction owner & management; 4) The occurrence of a contract addendum; 5) Material management delay; 6) Material mismanagement; 7) Late delivery of materials; 8) Improper implementation methods; 9) Lack of control over the quality of work; 10) Design changes by the owner; 11) Work monitoring and evaluation negligence; 12) Late payment to the foreman; 13) Lack of workforce expertise; 14) The occurrence of rework and repair work in the field; 15) Changes in specifications and material types; 16) Delays due to weather; 17) Lack of adequate equipment; 18) Project financial mismanagement; 19) Weekly action plan negligence; 20) Lack of coordination among staff in the field

Keywords: project delays, risk management, construction project

1. Introduction

The role of the construction sector as a key driver of the national economy can be seen from economic growth, although its contribution is still small and inconsistent. So far, the construction sector has always been one of the contributors to GDP in Indonesia. In a report by the Central Statistics Agency in the third quarter of 2020, it shows that in the midst of the Covid-19 pandemic, the construction sector still contributes positively 10.60% to GDP.

Arif (2014) views that the role of the construction sector is closely related to other sectors so that all the sectors will benefit each other. This is supported by utilizing the construction sector to support its activities. Thus, the construction sector is expected to become a growth driver for other sectors for the benefit of the national development. For instance construction is supporting agriculture to achieve food security.

A construction project is one of the high-risk jobs which consists of the planning, implementation, and operation stages of a building. The bigger the construction project, the more problems that will arise and the higher the risk level of failure of the construction project. (Gunawan. 2015). Risk analysis and management is an important part of the decision making process in the construction industry. The construction industry is closely associated with high

levels of risk because there is quite significant number of organizations that has bad reputation for dealing with risk so that a project cannot balance its cost, quality and time. Stakeholders such as project owners, contractors, communities and others have suffered the consequences of this high-risk project.

Construction project delay is an event that always occurs in a construction project. PT Amarta Karya (*Persero*) as a State Owned Enterprise (*BUMN*) which is engaged in manufacturing, construction and investment, has many projects that experience delays. Some of the projects that do not met the schedule are the Trans Sumatra Sigli - Banda Aceh Toll Bridge Construction Project (Overpass) and the Ambon Pattimura International Airport Expansion Project. The Trans Sumatra Sigli - Banda Aceh Toll Bridge Construction Project is one of the National Strategic Projects (*PSN*) established by the Central Government

According to Indra (2018), the party most affected by the loss of delays in construction projects is the contractor. If the contractor is late in carrying out a construction work, they will not only increase the cost of the work, but also lose their time and even experience incur losses.

Based on this description, the researchers are interested in knowing how to analyze and manage the risk of construction project delays at one of the SOE's construction, namely PT Amarta Karya (*Persero*), so the researchers decided the title as follows: "RISK MANAGEMENT ANALYSIS OF CONSTRUCTION PROJECT DELAY AT PT AMARTA KARYA (*PERSERO*) "

2. Method

This study used a qualitative approach to identify and analyze the risks construction projects delays and identify factors that cause project delays and strategies are used by PT Amarta Karya (*Persero*) to minimize delays in construction projects.

The approach used in this research was a qualitative approach using case studies.

According to Yin (2013: 18), case studies are a strategy used to investigate and find information in real life. Azwar (2015) suggests that the use of a more in-depth case study will strengthen the picture of a particular research subject.

The data Resources used in this study consists of the primary and secondary data. Primary data sources in this study were obtained directly through interviews with related parties such as the President Director, Head of Operations Division I, Head of Operation Division II, Head of Corporate Secretary Division, Head of Internal Control Unit, Head of Business Operations Control Division, Head of Finance Division, Head of QHSSE Division, Head of Human Capital & Business Development Division. Secondary data were obtained from studies related to project management, risk management, construction project delay factors, company management reports, project reports, and reports/documents related to this research problem.

According to Anggito & Setiawan (2018) data analysis techniques in a qualitative approach use data deduction. Data analysis can create a limit whether it is accepted or rejected by pre-existing theories.

3. Results

Based on literature studies and field observations, after analyzing several factors that cause delays in construction projects at PT Amarta Karya (*Persero*), the factors found are as follows:

- 1) Land acquisition
- 2) Owner's lateness in the installments payment
- 3) Lack of coordination & communication with construction owner & management
- 4) The occurrence of a contract addendum;
- 5) Approval material delay
- 6) Material mismanagement
- 7) Late delivery of materials
- 8) Improper implementation methods
- 9) Lack of control over the quality of work
- 10) Design changes by the owner
- 11) Work monitoring and evaluation negligence
- 12) Late payment to the foreman
- 13) Lack of workforce expertise
- 14) The occurrence of rework and repair work in the field
- 15) Changes in specifications and material types
- 16) Delays due to weather
- 17) Lack of adequate equipment
- 18) Project financial mismanagement
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Risk analysis identification

According to PMI (2017) risk analysis is a process of finding information related to identified risks, including quantification of risks in probability, causes of occurrence and linkages of risks. There is also a risk management process published by the COSO ERM (Enterprise Risk Management) framework consisting of 4 main targets, namely:

- 1) Strategic
- 2) Operations
- 3) Reporting
- 4) Compliance

In addition, in the COSO ERM framework, risk management consists of eight interrelated components, namely:

- 1) Internal environment
- 2) Goal setting
- 3) Identification of events

- 4) Risk assessment
- 5) Risk treatment
- 6) Control activities
- 7) Information and Communication
- 8) Monitoring

4. Discussion

To prove the factors causing construction projects delays at PT Amarta Karya (*Persero*), the researcher proposed 5 (five) hypotheses about the factors causing the construction project delay they are; First, the lack of careful preparation in project planning so when carrying out the work construction projects experienced many obstacles. Thus, these obstacles cause risks to emerge in the project. Second, difficulties in payment made by the owner or project owner will cause the progress of work to be hampered; Third, materials delivery lateness will result in greater costs because it will affect the progress of work; Fourth, late payment to the foreman has implications for work progress. As a result, when the work force strikes, work will be hampered; and Fifth, lack of coordination and communication with the construction owner and management as the supervisory consultant.

In this study, the researchers hoped that PT Amarta Karya (*Persero*) prepares the project maximally in order to prevent future project delays and makes plans using risk management in each project with the aim of identifying factors if the project is delayed so that the detrimental risks involved to the company can be anticipated.

In its implementation, this research has limitations, including limited data or information that is not optimal by the informants, project locations that are outside the city/island that made researchers to go directly to the field, and the confidentiality of data for each project which made the researchers have to dig deeper information. The limitations that have been described earlier make the research less optimal.

Acknowledgments

I really grateful because to complete my journal. This journal cannot be completed without the effort and co-operation from my lecture Ms. Fibria Indriati, Ph.D. Last but not least, I would like to express gratitude to my family and friends for the support.

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