

CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1. Conclusion

Based on data analysis and research that described in Chapter III, the results of this study concluded that:

1. Risk management is more widely adopted by most contractors in the planning phase.
2. Application of risk management a major impact on cost, quality, time, safety.
3. In general contractor companies to identify risks by collecting various data to be analyzed and linked between the data on one with other data and by comparing the project data with other project data that has been accomplished.
4. In general contractor companies to identify risks based on experience and intuition sensitivity of decision makers. The majority of companies use qualitative risk analysis.
5. In general contracting company has an obstacle to implementing risk management that is less familiar with the techniques of risk management and lack of support from primary and middle management.

5.2. Recommendation

1. For contractors, are expected to learn better about the application of risk management.

2. For future research, are expected to do research on the impact of the implementation of risk management that has been done by many of the company.



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APPENDICES

A. Questionnaire

Please tick (X) on the following answers!

I. Definition of Risk and Risk Management

1. What is your understanding of the risks?
 - a. Risk is something that can not be avoided from a work project and tenders.
 - b. Risk is something that must be faced by business.
 - c. Risk is a consequence that must be prepared to face in the business.
 - d. Risk is the uncertainty associated with the events and the influential impact on the outcome of the project cost, time, quality, and the various criteria that allow the implementation.
2. What is your understanding of risk management?
 - a. The risk management measures to deal with risks that have occurred\
 - b. Risk management is a systematic way to identify sources of risk and determine its impact and develop appropriate management responses and determine the best solution
 - c. The risk management measures to avoid obstacles and disadvantages of the project management company through employee and how to work
 - d. Risk management is how to manage the company and treat employees to complete the project constraints and corporate losses
3. What do you earn by using risk management?
 - a. can make decisions in handling the complex issues and make the right decisions
 - b. companies can earn more profits
 - c. rapid capital return
 - d. pressing the company expenses

4. What are the influences of risk management implementation?
 - a. Cost, quality, time, safety
 - b. employee behavior
 - c. Client's attitude
 - d. The way employees work
5. In the implementation of risk management, what phase is preferred?
 - a. Conceptual (development concept)
 - b. Planning
 - c. Scheduling
 - d. Estimating (prediction)

II. Definition of Identifying Risk and Risk Management

1. What techniques are you used in identifying the risks?
 - a. By collecting various data to be analyzed and the data associated with each other data.
 - b. By comparing the project data with other project data that has been accomplished.
 - c. both
 - d. do not use them
2. If you are using a technique a in question 1 above, how?
 - a. Based on the financial calculations, flow charts, check lists and questionnaire, scenario estimates, and the illustrations associated with the line that states a causal relationship.
 - b. Make a list of estimates and analyze the possibilities.
 - c. Both
 - d. do not use them
3. If you are using a technique b to question 1 above, how?
 - a. Seek information from previous projects that have similar conditions becomes reference and giving a certain percentage based on previous project experience.

- b. Seek information from previous projects that have similar conditions to be guideline.
- c. Comparing these data with all the company's existing project.
- d. Do not use all.

III. Data Collection

1. What techniques are you used in collecting the data of risk?
 - a. Collecting data from different experiments in random order
 - b. Based on intuition, experience and sensitivity of the decision maker
 - c. Based on existing risk
 - d. Based on information from various parties

IV. Risk Analysis

1. What techniques are you used in analyzing the risks?
 - a. Quantitative
 - b. Qualitative
 - c. Quantitative and qualitative
 - d. Do not know
2. If you are using qualitative techniques to analyze risk, what techniques are you use?
 - a. *Hazard Control Study Methods*
Risk assessment that includes identification, analysis, and respond the risks that affect the production, safety, health, and environment
 - b. Hazard and Operability Study – HAZOP
Separating the process into a logical key element for a detailed study and identified four main, namely:
 - 1) The purpose of this study
 - 2) Deviations from the goals that may occur
 - 3) The causes of possible deviations
 - 4) The consequences of deviations

c. Management techniques confidence

Evaluate the probability of where a project failed to achieve objectives because of the effects of combinations of risk in the project. Combined effects of these risks can be evaluated subjectively. The weight and value given to each risk and then brought into the calculation where the weights are given according to the subjective assessment of the manager.

d. Methods a, b, and c

3. If you are using quantitative techniques to analyze risk, what techniques are usually used?

a. Monte Carlo simulation

Numerical methods using artificial statistic experiment to estimate the unknown quantity.

b. Decision tree analysis

Make a decision tree consisting of node and edge describing the action alternatives with a probability analysis. Decisions are taken based on the quantum value obtained after the calculation.

c. Utility theory

d. Methods a, b, and c

4. What a computer program that is used by your company?

a. @ Risk

b. Monte Carlo

c. Caspar (Computer Aided Simulation for Project Appraisal)

d. Program a, b, and c

V. Response To Risk

1. What techniques are you used in responding to risk?

a. Risk transfer (transfer of risk from one party to the other party):

1) Contractual

2) Insurance

b. Risk control (transfer of risk from one party to the other party)

1) Reducing the risk

- 2) Risk Retention
- 3) Avoiding the risk
- c. Techniques a and b
- d. Not both

VI. Factors Inhibiting Implementation Risk Management

1. What factors are limiting the implementation of risk management?
 - a. Less familiar with the techniques of risk management
 - b. The level of complexity in these techniques are not a guarantee of project work
 - c. Time constraints and lack of information and knowledge
 - d. The lack of support from primary and middle management

B. Questionnaire Result

Table 6.1 Questionnaire Result

No.	a	b	c	d	Total
I.1	13 (43.3%)	4 (13.3%)	3 (10%)	10 (33.3%)	30 (100%)
I.2	5 (16.7%)	13 (43.3%)	12 (40%)	0 (0%)	30 (100%)
I.3	25 (83.3%)	2 (6.7%)	0 (0%)	3 (10%)	30 (100%)
I.4	26 (86.7%)	4 (13.3%)	0 (0%)	0 (0%)	30 (100%)
I.5	5 (16.7%)	21 (70%)	4 (13.3%)	0 (0%)	30 (100%)
II.1	11 (36.7%)	11 (36.7%)	7 (23.3%)	1 (3.3%)	30 (100%)
II.2	14 (46.7%)	12 (40%)	2 (6.7%)	2 (6.7%)	30 (100%)
II.3	8 (26.7%)	12 (40%)	2 (6.7%)	8 (26.7%)	30 (100%)
III.1	3 (10%)	20 (66.7%)	3 (10%)	4 (13.3%)	30 (100%)
IV.1	2 (6.7%)	22 (73.3%)	2 (6.7%)	4 (13.3%)	30 (100%)

Continue Table 6.1

No.	a	b	c	d	Total
IV.2	22 (73.3%)	0 (0%)	2 (6.7%)	6 (20%)	30 (100%)
IV.3	19 (63.3%)	5 (16.7%)	2 (6.7%)	4 (13.3%)	30 (100%)
IV.4	20 (66.7%)	3 (10%)	1 (3.3%)	6 (20%)	30 (100%)
V.1	9 (30%)	2 (6.7%)	19 (63.3%)	0 (0%)	30 (100%)
VI.1	11 (36.7%)	2 (6.7%)	6 (20%)	11 (36.7%)	30 (100%)

C. List of Respondent

- I. PT. Yasapola Remaja**
- II. PT. Calista Perkasa Mulia**
- III. PT. Wirujasa Persada**
- IV. CV. Inas Pradana**
- V. CV. Mandiri**