# CHAPTER 6

# CONCLUSIONS & SUGGESTIONS

## 6.1. Conclusions

As the research finishes, then the conclusions can be drawn. These conclusions are the answers of the objectives which already stated in Chapter 1. The conclusions are:

1. Critical Resource

These points below are the conclusions inferred in answering the critical resource in the project.

a. The critical activities of the project are included in building chain which are as follow:
   - Landscape Surveying
   - Landscape Mapping
   - Digging
   - Column Locating
   - Building Casting
   - Concrete Casting
   - Building Structuring
   - Second Floor Casting
   - Second Floor Structuring
   - Brick Laying
   - Roof Building Structuring
   - Roof Working
   - Finishing
   - Inspection

b. The critical resource in the project is labor.

2. Optimal Solution

a. Project I can be accomplished on time normally without any compression,
b. Project II can be accomplished on time by doing simulation networks compression,

c. Project III cannot be accomplished on time after simulation networks compression and subject to penalty,
d. Sensitivity Analysis is conducted for Project III by comparing between penalty and temporary labor costs;
e. There are four solutions suggested to solve the lateness of Project III and the third solution has the lowest cost of Rp 16,560,000.00.

3. General Steps Involved

The general steps involved in optimizing labor allocation for multi-project management are divided into five broad steps as follow:

- Determining critical path
- Scheduling
- Doing simulation networks
- Doing compression of simulation networks
- Doing sensitivity Analysis

The general steps are modeled in Figure 5.10.

## 6.2. Suggestions

In the execution of the research, of course, the author experienced some obstacles. And due to the limitation of human resource, and time, then the author had to determine some assumptions in this research. These suggestions are addressed to improve the future research in this topic. It is important to:

a. Eliminate the assumption of uniformity of labors skills,

b. Differentiate the ability of temporary labors and permanent labors by determining the coefficient of their ability which affects the activity's duration,
c. Calculate the transportation cost which incurred due to the labors travel between projects,
d. Give alternative consideration of compression simulation networks not only by increasing number of labors but also offering overtime.

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