



CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology of the research. First the preliminary investigation and scope designation are explained. Then, the survey and data collection about the contractors' problems in Cambodia will be presented for analyzing by comparing them the neighboring country, Thailand in order to find their similarities and differences. The data collection was conducted with some responding construction contractors in Cambodia.

The research methodology contained the contractors' problems and causes of delay were identified through literature review and discussion with some parties involved in construction industry. The interviews in Cambodia were conducted in order to evaluate the frequency of occurrence, impact (severity) and important of the identified contractors' problems. Contractors' information was collected from the list of department of construction published by ministry of land, urban planning and construction in Cambodia.

Next, a questionnaire was developed to gather the data related to the contractors' problem in Thailand with interview with some contractors. A questionnaire and interview in Thailand was also the main data used for comparing the contractors' problems in Cambodia with them.

The overall framework of the whole research methodology is shown in below figure 3.1.

3.2 Preliminary Data Collection

Preliminary survey is an important step for the whole methodology of this study. It was the first data collection which was conducted in the real settings in Cambodia. This step was considered in order to capture the picture and interpret the

data so that it could lead to some ideas or strategies for the focus of this research. During the preliminary survey, information concerning construction industry and construction project of the contractors who established and work in Cambodia was revealed. The objective of the preliminary survey was to investigate and find the whole problems which could affect contractors. It had been done by interviewing the main responsible employees and experts in their construction firms, such as project managers, site managers, and site engineers. The contractors' problems for this survey were collected from both the main offices and on the construction sites.

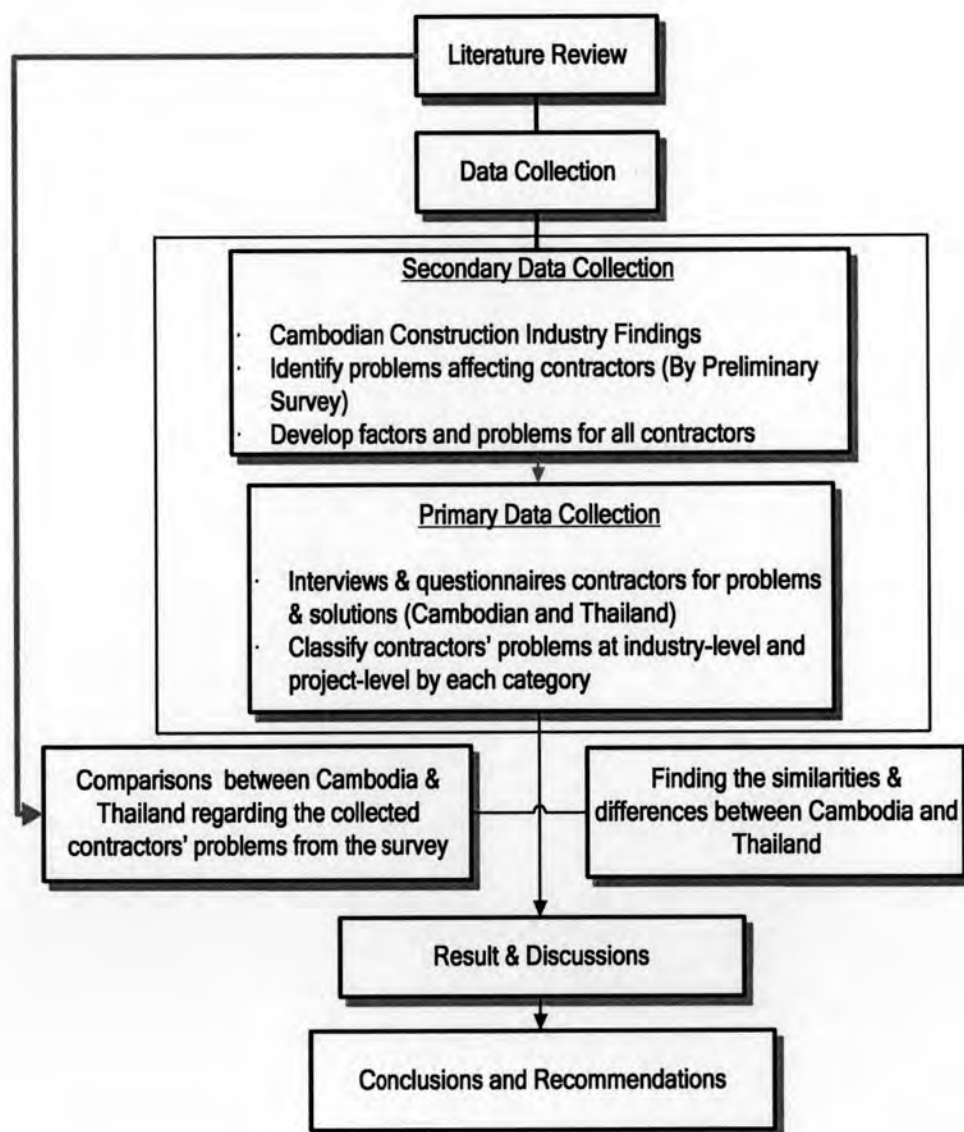


Figure 3-1 Overall Framework of the Research

Prior to being able to set the scope of the research, we first conducted a study to capture the real pictures and understanding of the country situation and environment. The main focus of this study is only in Cambodia. Therefore a trip to the capital city of Cambodia, Phnom Penh, and some big cities such as Siem Reap and Sihanoukville was the first step to conduct the preliminary survey and investigation (See figure 2-2 Map of Cambodia).

During the preliminary survey or first primary data collection, some public departments such as public work research center in the ministry of public works and transports and some private construction firms were the main point for the meeting and discussion about the real situation, real works in the nation and any problems that affected the construction firms who have been working in Cambodia.

3.3 Primary Data Collection

To a certain extent, for the preliminary study, we met selected domestic contractors. Three sizes of contractors were the goal to collect the problems related to their partnering. They ranged from the big, medium to small contractors. The main objective of the interview survey was to ask the project managers in the following contractors about the problems occurrences, causes, reasons and impacts of each problem to those contractors. The primary data were gathered through a survey, analyzed by using its frequency, severity, taking in view contractors.

Data is the most important input in the prioritization of the development process. The data used in this research are based on the contractors' problems which they face with their project partners and participations. In this study, interview survey is conducted to help drive problems finding at both industry level and project level.

The data to be gathered for this research has divided into two steps:

1. Data from Cambodia, interviews with contractors were conducted with some recommendation for problem solving advices. There were amount 15 contractors (5 big, 5 medium and 5 small contractors).
2. Data from Thailand, questionnaire was developed and offer to 11 contractors, including the interviews with 5 contractors for more contractors' problem details.

In this research, all data in Cambodia are collected by using unstructured interview survey. These interviews were to obtain the occurring and influent problems of the contractors on their last and recent projects. The interviews were conducted with the project managers and engineers of the construction firms in the three main cities of Cambodia. The total respondents who answer these questionnaires were 15, who are all the project managers of contractors. The list of respondents and name of contractors in Cambodia are listed in the Appendix A.

Whereas, for the data in Thailand we collected them, first by reviewing some published relevant papers about construction contractors' problems or delay problem which has occurred in Thailand. Second, we collected the contractors' problems by the questionnaires and interviews with some project managers to find their problems facing in their firm and construction industry. The questionnaire for Thai contractors is showed in the Appendix B and list of contractors for questionnaire and interview is showed in the Appendix D.

3.3.1 Construction Contractors to Survey

The private sector is the most important factor in construction industry and it plays a critical role in a developing country. First, the amount of the contractors and sub-contractors are indicators for the construction industry. However, the coming of international construction firms in the nation is significantly beneficial for the developing country. The booming of housing is also the credit of the private sector.

A construction contractor is an organization or individual that contracts with another organization or individual (the owner) for the construction of a building, road or other facilities. A general contractor is defined as such if it is the signatory as the builder of the prime construction contract for the project. A general contractor is responsible for the means and methods to be used in the construction of the project in accordance with the contract documents. Said contract documents usually include the contract agreement including budget, the general and special conditions and the plans and specification of the project that are prepared by a design professional.

A general contractor usually is responsible for the supplying of all materials, labor, equipment, (engineering vehicles and tools) and services necessary for the

construction of the project. To do this it is common for the general contractor to subcontract parts of the work to other persons and companies that specialize in these types of work. These are called subcontractors.

3.3.2 Construction Related-Participants to Identify Contractors' Problems

3.3.2.1 Owners

Owners are the ones who have the ownership of the construction projects. They are like clients and need the construction contractor to as the building management organization to build and control their project. Owners are the ones provided the capital for the whole projects.

Owner-contractor relationship: to provide variability within the independent variable, each candidate firm will be requested to identify four completed capital facility projects. Two of the capital facility project should have been developed and executed with owner firms that the candidate firm had no formal or informal owner-contractor relationship.

In the current highly competitive business environment, owner organizations developing capital projects have had to balance the demands for reduces costs and high profitability while delivering quality products and services.

3.3.2.2 Subcontractors

A subcontractor is an individual or in many cases a business that signs a contract to perform a part or all of the obligations of another's contract.

A subcontractor is hired by a general contractor (or prime contractor) to perform a specific task as part of the overall project. Whilst the most common concept of a subcontractor is in building works and civil engineering, the range of opportunities for subcontractor is much wider and it is possible that the greatest number now operate in the information technology and information sectors of business.

The incentive to hire subcontractors is either to reduce costs or to mitigate project risks. In this way the general contractor receives the same or better service than the general contractor could have provided by itself, at lower overall risk. Many subcontractors do work for the same companies rather than different ones. This allows subcontractors to further specialize their skills.

3.3.2.3 Labors

Construction workers are employed in the construction industry and work predominantly on construction sites and are typically engaged in aspects of the industry other than design or finance. The term includes general construction workers, also referred to as laborers and members of specialist trades such as electricians, carpenters and plumbers.

The skills of workers are also classified as skilled and unskilled workers in order to get the real number of workers. Besides, the real number obtained from this survey, a strategic plan to provide them appropriate training for their work is easier.

3.3.2.4 Material Suppliers

Suppliers are a stakeholder in construction industry. They supply construction materials like steel, cement and other special materials to contractors. The survey of the construction materials, equipment or tools is the important point to find the number of suppliers such main suppliers, shareholders. The country of origin of the supplier is also needed to disclose.

The construction material or tool manufacturer is a firm to support for the construction project. It is important that manufacturing plants of construction materials such as cement and steel be established in the nation so that manufacturers can provide materials with lower cost and more convenient transportation to the site. These domestic manufacturers help the local contractors of the nation to lower the cost of construction and enable them to be able to compete with other bidders in construction projects.

3.4 Questionnaire Design for Thai Contractors

Data is the most important input in the prioritization of the development process. The data used in this research are based on the contractors' problems which they face with their project partners and participations. In this study, interview survey is conducted to help drive problems finding at both industry level and project level. It leads to the comparisons between the contractors' problems in Cambodia and Thailand.

In this research, all data in Cambodia are collected by using unstructured interview survey. These interviews were to obtain the occurring and influent problems of the contractors on their last and recent projects. The interviews were conducted with the project managers and engineers of the construction firms in the three main cities of Cambodia. The total respondents who answer these questionnaires were 15, who are all the project managers of contractors. The list of respondents and name of contractor are listed in the Appendix D.

Whereas, for the data in Thailand we collected them, first by reviewing some published relevant papers about construction contractors' problems which has occurred in Thailand. Second, we collected the contractors' problems by the questionnaires and interviews with some project managers to find their problems facing in their firm and construction industry. The questionnaire for Thai contractors is showed in the Appendix B.

3.5 Data Analysis and Comparison

After data collection is completed in both Cambodia and Thailand, the comparison of contractors' problems of both countries will be conducted in order to find the differences and similarities of problems nature. Some problems could be occurred similarly but they could be different at other point. For example, the problem of labor skill could be found in both countries, Cambodia and Thailand, but in Cambodia the lack of labor skill is higher than Thailand, including the labor productivity.

Firstly, we classified the data of contractors' problems by its category in different levels, industry and project level. So that, we may define the similarities and

differences of all sub problems in each category. The table of comparison will be provided in term of its comparison. Next, the discussion will be come up with the detail description of its differences and similarities of each category. The comparison will define the problems encountered the contractors in Cambodia and Thailand. The purposes of this comparison is to find the causes or reasons of the problems whether there had been same or different. If it is similar, the discussion will clarify which points are similar. Yet, if it is different, it will also clarify the points which are different.

3.6 Summary

This chapter presents the methodology which is generally divided into two steps:

1. Methodology of research
2. The methods are used in analyzing the data to find the comparison of contractors' problems in Cambodia with Thailand. The comparison leads to find its similarities and differences that can provide the guideline of contractors' problems solving in construction industry for Cambodian administrative including contractors, governments, and other related organizations.