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BIDDING AND CONTRACTING PROCESS OF GOVERNMENT PUBLIC CONSTRUCTION:
CASE STUDIES FROM THREE ASEAN COUNTRIES



Miss Xoumaitri Panyanouvong

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

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งานวิจัยนี้เป็นการศึกษาเปรียบเทียบขั้นตอนของการประกวดราคาของโครงการก่อสร้าง โดยเฉพาะโครงการของภาครัฐที่เป็นสัญญาเงินกู้และเงินช่วยเหลือในสามประเทศ ได้แก่ ประเทศลาว ไทย และเวียดนาม ซึ่งงานวิจัยนี้ช่วยให้เห็นถึงการเปรียบเทียบระบบและขั้นตอนของการประมูล นโยบายของประเทศ องค์การที่รับผิดชอบ เอกสารต่างๆ ที่เกี่ยวข้อง รวมถึงขั้นตอนต่างๆในการประกวดราคา เริ่มตั้งแต่การเชิญเข้าร่วมประมูล การรับเอกสารประกวดราคา การยื่นซองประมูล การพิจารณาคุณสมบัติเบื้องต้น การประเมินคุณสมบัติของผู้เข้าร่วมการประมูลและ การทำสัญญาระหว่างฝ่ายผู้ว่าจ้างและฝ่ายผู้รับจ้าง

งานวิจัยของวิทยานิพนธ์ฉบับนี้ได้แบ่งการนำเสนอและการศึกษาเอกสารออกเป็นสองส่วนคือ การศึกษาจากเอกสาร และ จากการสัมภาษณ์บุคคลที่เกี่ยวข้อง เช่น ผู้จัดการ โครงการ ผู้มีอำนาจในการตัดสินใจ หรือนักธุรกิจที่มีหน้าที่รับผิดชอบการประมูลราคาของ โครงการก่อสร้าง และผู้ประสานงานของโครงการ ที่ปรึกษาโครงการ รวมถึงผู้เข้าร่วมการประกวดราคางานก่อสร้าง เป็นต้น เพื่อหาข้อดีและข้อเสียของขั้นตอนการประมูลงานที่ใช้ระบบสากลของโครงการเงินกู้และเงินช่วยเหลือ

ผลจากการวิเคราะห์ข้อมูลพบว่า มาตรฐานเอกสารสัญญาที่ทั้งสามประเทศใช้ในขั้นตอนการประมูล ได้แก่ 1) ใช้มาตรฐานสัญญา Fédération Internationale des Ingénieurs Conseils (FIDIC)ร่วมกับระเบียบการจัดซื้อจัดจ้าง 2) มาตรฐานตามแหล่งเงินกู้(Asian Development Bank/World Bank) และ3) มาตรฐานกฎกระทรวงเพียงอย่างเดียว นอกจากนี้ผลการศึกษาจากการให้คะแนนความสำคัญของปัจจัยที่ใช้พิจารณาในการประเมินคุณสมบัติของผู้รับเหมาพบว่า เจ้าของโครงการให้ความสำคัญกับปัจจัยด้านเทคนิคเป็นปัจจัยหลัก ในขณะที่ผลจากการศึกษาโดยวิธี Relative Index พบว่าฝ่ายผู้รับเหมาให้ความสำคัญเกี่ยวกับคุณสมบัติของตนเองในด้านต่างๆ ได้แก่ 1) เกณฑ์ในการประเมินราคา 2) เสถียรภาพทางการเงิน 3) คุณสมบัติด้านเทคนิค 4) ประสบการณ์การทำงาน รวมถึง 5) แรงงานและเครื่องจักร

ในการประมูลของโครงการก่อสร้างที่ใช้ระบบสากลนี้ สามารถช่วยกระตุ้นให้การแข่งขันของบรรดาผู้เข้าร่วมการประมูลมีมากขึ้น ซึ่งเป็นประโยชน์ต่อฝ่ายผู้ว่าจ้างในการคัดเลือกผู้รับเหมาที่มีประสิทธิภาพ รวมทั้งช่วยเพิ่มความโปร่งใสในการดำเนินงานของฝ่ายผู้ว่าจ้างและลดการสมยอมราคา (ฮั้วประมูล) ของผู้เข้าร่วมการประกวดราคาโครงการเงินกู้และเงินช่วยเหลือที่ใช้ระบบการประมูลงานแบบสากลสามารถสร้างความสนใจให้แก่บรรดาผู้รับเหมาของประเทศอื่นที่มีความสามารถรับเหมางานในเขตประเทศอาเซียนได้อีกด้วย

ภาควิชา.....วิศวกรรมโยธา..... ลายมือชื่อนิสิต.....
สาขาวิชา.....วิศวกรรมโยธา..... ลายมือชื่ออาจารย์ที่ปรึกษา.....
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This research focused on government construction projects especially loan projects in selected three ASEAN countries: Laos, Thailand and Vietnam. The objective is to analytically describe the process of competitive bidding as practised in the three countries, to identify problems that occur in the three countries. And propose recommendations that may alleviate the problems.

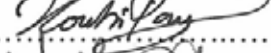

Based on findings from this study, the bidding process in these three countries consist of a number of stages such as government policy, organization, bid documents, and steps of bidding process starting from bid invitation, document preparation, pre-qualification, bid submission, bid opening, bid evaluation, as well as contract award.

This research was conducted in two stages. Firstly, to retrieve information about bidding from two main sources; they were literature review and case studies. For case studies, the individuals that were interviewed included project managers, decision makers, site managers, bidding responsible officials, consultants, as well as bidders in order to find as much as possible information about bidding particularly on loan projects.

The study showed that the standard bidding contract conditions that are being used in three countries are (1) government regulation and FIDIC mixed; (2) ADB/WB template; and (3) government regulation. In addition, process evaluation practices in three countries are scoring method, from which the project owners pay more attention on technical criteria. However, in contrast, from data that used relative index analysis, project contractors are concerned about (1) estimated price criteria (2) financial statements (3) technical qualification (4) experience proposal and (5) labors and equipment proposed.

The bidding process resulted in an increase in competition among bidders, thereby, providing owners with more benefits, including collusion reduction. Conclusively, international competitive bidding yields more advantage in terms of transparency, competitiveness, and high standards of work.

Department Civil Engineering
Field of Study Civil Engineering
Academic Year 2006

Student's Signature.....
Advisor's Signature.....
Co-advisor's Signature.....

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CHAPTER I

INTRODUCTION

1.1 Introduction

Bidding is one of the competitive methods employed in commercial economies. It is the main method used all over the world to assign construction works. In the construction industry, competitive bidding is traditional and prevalent. It is used to encourage efficiency and innovation by participating contractors, thereby providing the owner with a construction project of specified quality at the lowest price. This mode of contractor selection has served its purpose well but, like other contracting procedures, opponents criticize commentators that it does have its weaknesses. For instance, the bidding process places the prime contractor and the owner in an adversarial position, which can lead to undesirable side effects, such as excessive claims by the contractor against the owner, disputes and litigation between the two parties, bid shopping and other problems (Clough and Sears, 1986).

Developing countries, on the path of economic development and transition from centrally planned economies to market-oriented economies, are a growing market for construction activities. This is especially so for infrastructure development such as roads, bridges, railroads, airports, docks, ports, dams, water supplies, sewage disposal plants, irrigation schemes, and power supplies. In developing countries, construction contracts have grown important in the bidding process, improving collaboration and coordination between governments and international funders. Thus, such international construction bidding and project need expertise and a professional to handle there so that they achieve goals of the bidding and project and developing skills required to manage projects to meet their goals.

In International Competitive Bidding (ICB) where notification is released to other countries, the award of the contract follows standard conditions. A bidder may

be a domestic company or an international one. The bidding process may be applied to construction contracts for either international or local projects.

Since the last decade, the governments of Laos, Thailand and Vietnam have increasingly mobilized funds from international agencies for infrastructure development, especially for transportation. In 1986, the Vietnam government initiated the “reform and open-door” policy. Since then both internal and external funding has been poured into infrastructure construction in the country. From 1995 ICB has been applied in Vietnam and new construction project management techniques have been initiated (Bui, 2004).

In many developing countries, one can find some background in contract preparation processes, but bidding features are frequently unclear and often not fair. The invitation to bid must be clear and in English language for international purposes. The clarity in coordination of bidding documents depends on the policy of governments in those countries. Therefore, the bid preparation team must clearly understand what they are doing and try to reflect this understanding throughout the bidding process.

Bidding is important for the project owner who wants to select a qualified contractor. It is unlikely that the project owner will secure a contractor with acceptable standard of practice without going through the bidding process, even in a construction project. Therefore, in the construction process, competitive bidding is the first important step that helps the project owner find a good quality contractor and avoid fraudulent bid. Additionally, there is a very strong tradition that maximize construction project price can be gained by making contractors bid for work.

In previous studies, it has been shown that owners fully understand the benefit of high prequalification requirements, but it is recognized that these same high requirements often generate adverse effects, such as high price and delay of the project. High prequalification requirement contributes to the serious delay of many projects due to the direct hiring a contractor without bidding (Lo et al, 1999).

Therefore, the extra costs caused by high prequalification requirements could be categorized as (a) the price difference between the “high prequalification” bid and the “low prequalification” bid and (b) the costs management and transaction due to the delay and re-bidding of the project.

From the price differential issue mentioned above, it is to be expected that the number of bidders will increase if the prequalification requirements are relaxed, leading to an inverse relationship between the number of bidders and the price of the successful bid in a low-bid-win situation (Lo, 1999).

A lump-sum lowest bid method awards the contract to the bidder who submits the lowest bid price. One major shortcoming of this method is that the submission of offers that are unreasonably low, frequently causes delays and results in construction with poor quality. Most such cases end up in contractual disputes or litigation. Also, statistically, projects awarded to the lowest bids are more likely to experience over-cost growth than are projects awarded to more reasonable bids (Wang, 2006).

Furthermore, bid fraudulence has often been argued to exist because the lack of competition generated collusion bids that can be illegally appropriated. This general idea has often led people into thinking that increased competition reduces collusion; it also leads to lower corruption. Celentani (1996) maintained that “In general any reform that increases the competitiveness of the bidders helps reduce corrupt incentives”

The research is concerned with the bidding process by ICB for public construction projects in a developing country context. The research encompasses literature review, questionnaire development and other documentary reviews, followed by interviews in three countries, Thailand, Laos and Vietnam, where the operation of ICB may be observed, and a structured questionnaire completed.

This document reports a study of the bidding processes and contracting for Government projects in three ASEAN countries. The process consists of Advertisement and Notification, Preparation and Issuing of the Bidding Documents,

Bid Preparation and Submission, Bid Opening, Bid Evaluation, and Contract Award. In each stage, the study focuses on documentation, identifying advantages and disadvantages, the role of bidding teams and the need for local contractors to understand contract conditions.

The results illustrate some of the factors that need to be considered in bidding conditions during the bidding document stage.

The research case studies contained here might provide guidance for foreign construction companies in their international investment decisions, especially when they are faced with a general lack of information concerning both technical and administrative matters in the host country.

1.2 Objectives

The main objectives of this research are:

1. To understand the processes of competitive bidding as they are practiced in the three countries.
2. To identify any problems that might occur in the three countries, as a result of employing competitive bidding processes.
3. To suggest and recommend appropriate bidding processes that may better fit the circumstances of each developing country.

1.3 Scope of Research

The scope of the study encompasses the bidding processes (from the view point of the owner and contractor) within three ASEAN countries: Laos, Thailand and Vietnam. This research is aimed at a comparative study among those countries with a view to further the development of bidding processes in the future.

Data are collected for public works projects, which are mainly controlled by the ministry of construction in each country. The study focuses and is limited to

projects funded by international agencies either through loans or grants to the three countries.

- The research focuses on road construction projects within government, with a cost in excess of \$5,000,000.
- The research is based on the use international funding, either through loans or grants, such as those employed by the Government of Thailand, the Asian Development Bank (ADB), the World Bank (WB), the Swedish International Development Agency (SIDA) and the Japanese International Cooperation Agency (JICA), etc.
- The study especially focuses on government infrastructure projects, and on related to government regulations and economic policies.
- The research examines areas of the bidding processes and economic feasibility concerning of the government department in charge of bidding management (key sources of information) in each country.

1.4 Research Methodology

To achieve the goals of the research, this study uses case studies to compare, two or more existing situations. The study focuses on similarity and difference in the bidding process and their impacts on performance data is analyzed by comparing the data gathered from the research. (See Figure 1.1)

Cases were selected from projects managed at a government bureau in Vientiane, Bangkok and Hanoi. Since the research is from the point of view of the owners, only government projects are considered. The tool used to gather the data is a questionnaire and interviews. Questionnaires were distributed to both the government and construction companies.

The structured questionnaire was employed to survey the owners' idea concerning contract monitoring, general information in their organization and the obstacles they were facing. Many different variables were listed in order to facilitate the owners in providing the proper solutions.

The principle intention of this second questionnaire was to find out and test the contractor's perception and difficulties during the construction stage. Some questions were similar to the owners' questionnaire.

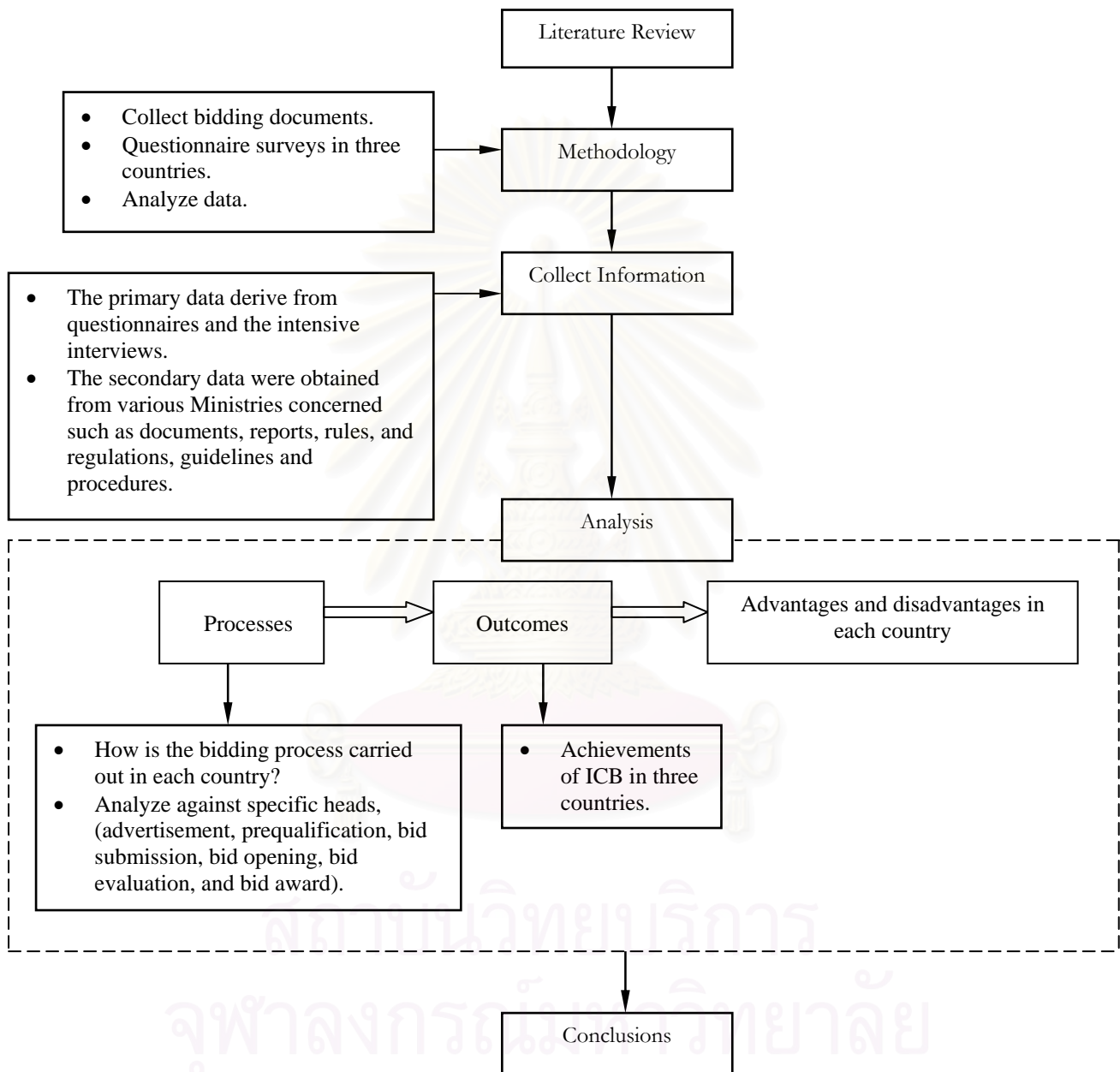


Figure 1.1 Flowchart of Research Methodology

With the thesis outline defined above, two types of data were collected: non-field data and field data. Non-field data comprised information from papers, journals, websites, books and other sources, concerning with economic growth and project funding under ICB or Local Competitive Bidding (LCB) in the three countries. Field

data consisted of the data collected from visiting and completing questionnaires with Project owners, Coordinators of ADB and WB, Consultants to Departments of Highway, and others who are involved in bidding processes at ministries and government departments.

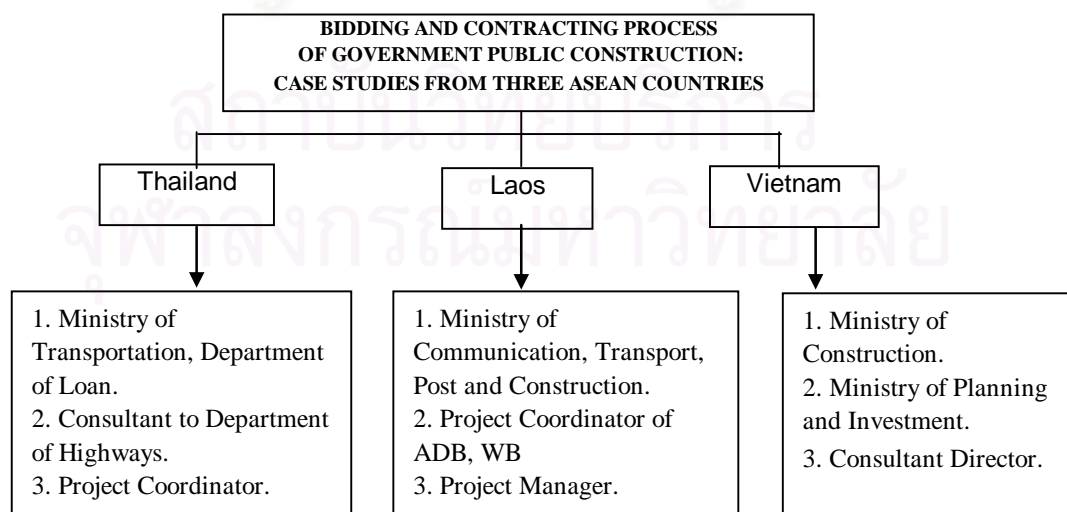
1.4.1 Data Collection

The primary data are collected from questionnaires and the intensive interviews conducted through the Ministries in each country (see Figure 1.2). The author interviewed the participants and filled out the questionnaires, based on responses given.

- Visit and interview project owners responsible for the bidding process (project owners, consultant directors, ADB/WB coordinators, and others);
- Complete questionnaires by interviewing project owners, project coordinators, and consultants of departments;

The secondary data was obtained from various Ministries concerned. The information consisted of documents, reports, rules and regulations, guidelines and procedures which are prepared by the government institutions and their consultants.

Figure 1.2 Overview of Data Collection



1.4.2 Development of Questionnaires

In order to achieve the objectives of the study, the questionnaires used for this study were designed to collect information from three groups: Project owners, Project coordinators, and consultants of the department. The questions are structured according to the purpose of the study. The patterns of questions are composed of open-ended questions and close-ended questions.

The questions are prepared on a multiple-choice basis with check-boxes for responders' answers. At the end of the questionnaire the responders are further asked to give a comment on the current practices for project implementation in their countries.

1.5 Data Analysis

In completing the questionnaires are asked to indicate perception about the relative importance of the topic on scales labeled at the end points, the scale has 5 points from 1 (strongly disagree) to 5 (strongly agree). The score depends on the perceptions of the respondents about the relative importance of each question subject.

This study identifies, analyzes, and categorizes various factors in each stage of bidding process of government projects. This is an empirical case study that includes a literature review, interviews and collection of documentation using a questionnaire; it identifies the perception of interviewees to each part of the bidding process. Data obtained from the questionnaire will be scaled and analyzed by plotting the data obtained using a percentage to identify advantages and disadvantages in the methods used in the three different countries. The results were recorded in tabular format for comparison among the three countries.

The contractors were measured by indicating the importance of opinion via a numeral scale of 5 “very important” to 1 “not important”. This measurement was defined as the relative index and expressed by the following formula:

$$\text{Relative Index} = \frac{\text{Totalscore}}{5(\text{Samplesize})}$$

The obtained number was used for comparison of the perceptions of contractors towards winning a bid.

1. 6 Expected Contribution

The investigation intends to describe the existing situation associated with the bidding processes for construction projects practiced in the developing countries. The results are expected to identify and demonstrate advantages and disadvantages in the bidding process in each country. The findings yield the solutions to disadvantages which in turn lead to recommendations for better performance of ICB in developing countries. The basis of any progress in this field is to have good quality bidding processes, which can underpin successful and large and small projects.



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CHAPTER II

LITERATURE REVIEW

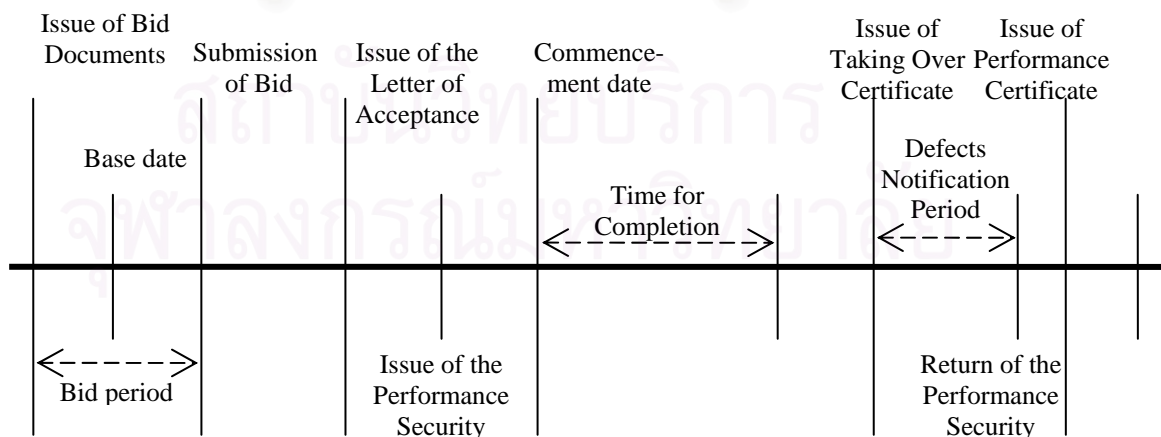
2.1 General

The objective of this chapter is to elucidate a bidding process, including its definition, practice methods, in different countries where different bidding methods and processes are used. Advantages and disadvantages of the bidding processes practices in the bidding process reported in previous works are studied.

2.2 Competitive Bidding Procedure

Bidding is the early part of managing construction project. This stage is of importance because this part determines which contractor will construct the project. As the contract is awarded to a responsible contractor, the project will run more smoothly than to an unqualified contractor. FIDIC (1999) illustrates bidding period as a short period in the beginning of principal events during construction contracts, as shown in the figure below.

Figure 2.1 Typical sequence of principal events during contracts for construction (FIDIC, 1999)



Typically, these steps can be found in conventional bidding method.

Invitation to Bid

At this stage, the owners are responsible for preparing invitations for bids and executing the bid solicitation process. A complete set of design documents are developed prior to the bid process. These documents include plans and specifications, newspaper. Advertisement for the bid and recommendations for a time and date for the bid opening.

Obtaining Bid Documents

Interested contractors or suppliers are required to obtain bid documents from the specified issuing office, usually owner's or consultant's office. Bid documents include an Invitation to Bid, General Conditions, Special Conditions (if any), Drawings and Specifications, Blank form of Bill of Quantities, and other sample forms required by the owner (if any). Normally, the potential bidders need to pay some amount of money in obtaining such documents.

Pre-bid Meeting and Site Visit

A pre-bid meeting is held to address unclear issues concerning to the projects and bid documents. At this meeting, all these problems are clarified so that bidders have same perspective as the owner requires. A site visit may be held in order to find external factors which can affect the price estimation of bidders about the way and method they will use.

Pre-qualification and Bid Submission

A bidder has to submit all of required documents on time to be considered joining the bidding processes. In conventional method, normally, technical documents are separated from price quotation. In the other method, technical documents are submitted prior to the submission of price quotation. A bidder must pass technical qualification before being able to quote his price. This process is commonly called as Pre-qualification stage. Other factors may also be considered in this stage, such as

company profile, financial capability of the company, previous experiences in the similar projects, and projects in hand. These factors are placed in the consideration rather than only lowest price in awarding a contract.

Method of Contractor Selection

At this stage, the owner or owner's agent evaluates the submitted documents of all bidders and awards determine one bidder as the winner for this project. There are some research studies on evaluation methods for contractor selection in construction contract. However, usually, weighted scale to criteria factors considered in the evaluation. The highest score is the winner.

Winner Awarding and Contract Signing

Once the winner has been found, the owner or its agent announces the winner and gives a Notice of Award to the winner. Letter of Acceptance then is issued and contract is signed.

2.3 Bidding Process in Other Countries

In bidding process, there are various methods and characteristics for each project. The variety of a bidding process has been developed in construction industry, which develops and increases competitiveness among constructors. Especially, the best price can be gained by making contractors bid for works, so that the lowest responsible and responsive bidder can get the job. However, there is also an increasing level of dissatisfaction with competition, because the winner is the one who offers the lowest bid price. This is not the same as the actual price that will be paid for the works once they are finished (Murdoch, 1996).

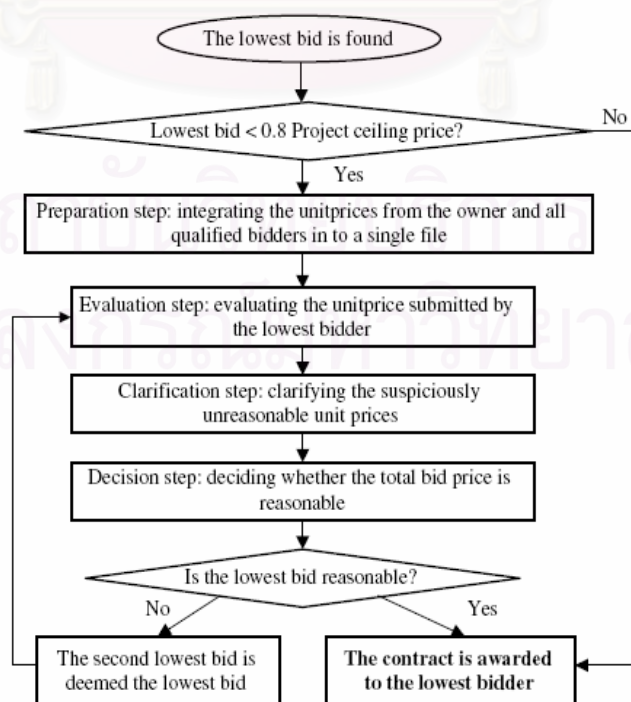
In Chinese construction industry before 1980s, the Chinese government was not only responsible for freely providing all of the finances for a construction work but also was responsible for assigning construction projects to contractors. But the contractors were not responsible for extensive delays in the planned schedule, cost

overruns, quality problems, and so on. There was no competition among contractors at all.

At the beginning of 1980s, the Chinese government had an “open-door” policy and it made the Chinese construction industry change. In particular, competitive bidding methods have been introduced into the industry to supplement and gradually replace the previous assignment system for the procurement of construction projects. The major objectives of applying competitive methods are to improve the effectiveness of construction investment and to move the Chinese construction market towards international competitive bidding practice (Lai, 2004).

Wang (2006) proposed that many public construction projects in Taiwan should use a unit price based on evaluating competitive bids. The main objectives are (1) unlimited contractors who want to attend the bidding (2) if the winner rejects the project, the committee can immediately select the second lowest price. These two objectives are similar to what these selected countries do. For information about bidding process the bid process of public construction projects in Taiwan.

Figure 2.2 the Bid Process of Public Construction Projects in Taiwan
(Wang, 2006).



After the lowest bid is found, the process is applied to determine whether the bid price is reasonable. First of all, if the lowest bid equals 80% of the project ceiling price, then this lowest bid is considered reasonable and the contract was awarded to the lowest bidder. Most of construction projects in Taiwan are provided 80% of total ceiling price; that is the average of past projects in Taiwan which is directly treated as reasonable.

Li (1997) suggested that bidding process in Shanghai be divided into 3 stages such as:

- (1) The bidding preparation stage;
- (2) The bidding organization stage and;
- (3) The bid opening, evaluation and contract award stage.

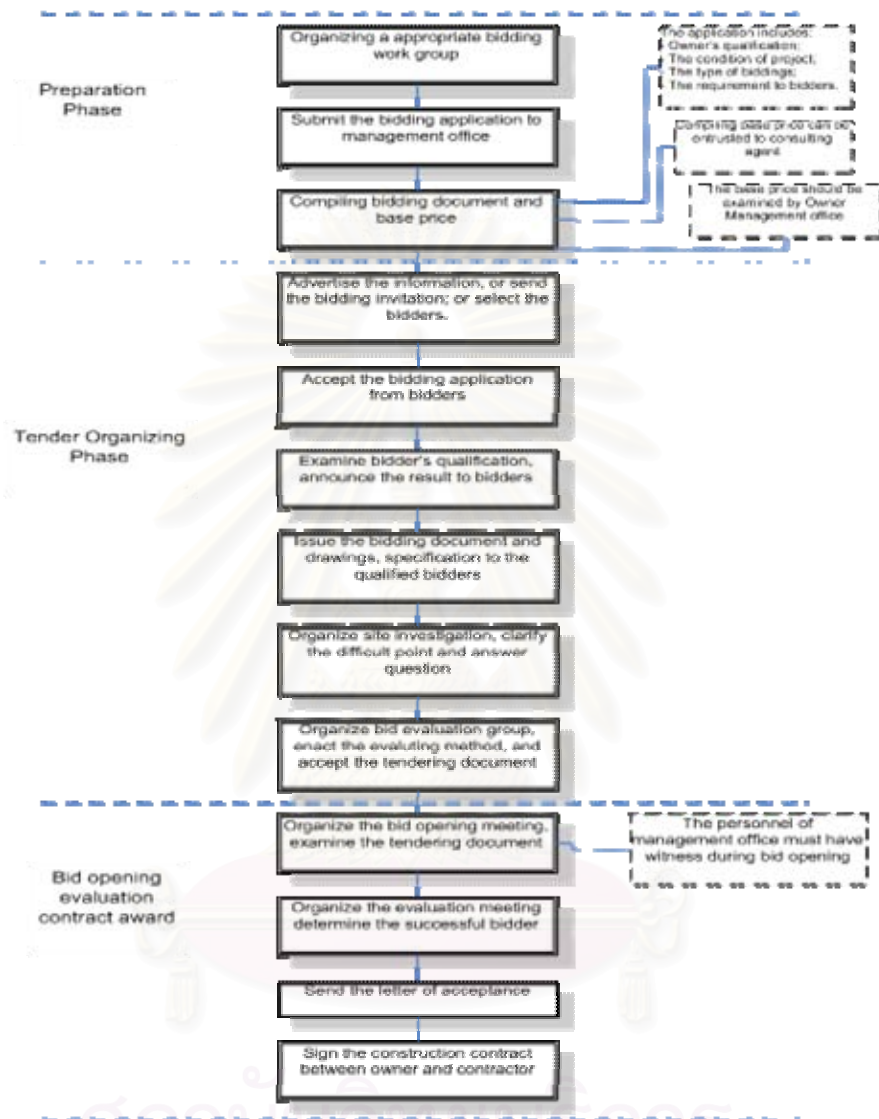
The bidding procedure for owner in Shanghai construction works is shown as Figure 3.3.

2.4 Problem and Constraint in Bidding Process.

This implies that owners can offer more competitive bids and they have more knowledge on broad bidding process experience. Fu et al, (2002) analyzed the bidding process of Hong Kong. They classified contractors into experienced contractors and inexperienced contractors in terms of (1) bidding experience and (2) construction experience. Construction experience acquired from previously completed projects of course forms the core of contractors' experience. Moreover, Fu et al consider contractors 'construction experience as a arranging of five components, which are:

- Managerial experience
- Technological experience (know-how of better construction methods)
- Costing experience
- Local experience (in respect of legal environment, etc.); and
- Institutional experience (knowledge on bidding process).

Figure 2.3 Bidding Procedures for Owner in Shanghai Construction Works
(Li, 1997).



Contractor's experience is important for any bidding process. To evaluate the contractor's experience is an important skill for the project's owner team to be consideration. Because each project needs each specific contractor's experience in order to be appropriate for each project. However, contractor evaluation usually base on two factors: (1) learning from past experience in the construction of similar projects, contractors get knowledge of some "short-cuts" in order to increase advantages for contractor and (2) Experienced contractors having better

understanding in the characteristics of a particular project type can identify and manage weak points of the project (Drew, 2003).

Fu and Drew, (2003) found that most of competitive bidding set up too high projects' cost which might be due to contractor's inexperience. Contractors set up high cost when they attend bidding because they are not sure about the real cost due to their inexperience. However, Fu et al, (2003) suggested that bidding should minimize contractor's bidding costs and owner have to consider that inexperienced contractors should not be selected at the first place when they submit the bidder document or owner should reject inexperienced bidders.

Wang (1999) stated that the bidding procedures are provided in three important procedure (1)open bidding, (2) selective bidding, and (3) limited bidding. Under open bidding procedure, a public notice is issued to invite all interested bidder submit their bids. In the meanwhile, to selective bidding procedure, a public notice is issued inviting all interested bidders to submit their qualification documents for prequalification and post qualification evaluated; the qualified bids are invited to bid. An entity can apply the limited bidding procedure based on complicated procurement situations. In the limited bidding procedure, two or more bidders are invited to compete for bidding, or alternatively only one bid is invited.

2.5 Success Factors of Bidding Process Administrator

The Chinese government industry's competitive bidding system has developed rapidly within a short period of time. By the end of the 1990s, implementation of the bidding process has become very popular over the whole country.

Before competitive bidding was introduced to China, the Chinese government had tried to protect corruption in the construction industry. Open bids are encouraged to avoid shady deals. Therefore the number of reported corruption cases involving the construction industry has begun to decline (Lai et al, 2004).

In addition to this the Chinese government application on construction competitive bidding is creating public, fair and competitive particularly open to create more loan projects such as World Bank loan projects and etc (Lai et al, 2004).

Drew and Skitmore (1997) mentioned that the construction industry and the competitive environment are related to each other. The construction industry environment which consists of general environmental factors (policy and law, economics, sociology and technology) as well as competitive environment factors (finance, plan, labor, management, suppliers, subcontractors, consultants).

Crowley (1995) advocated that the evaluated of competitive bids are a difficult process with little objective guidance provided to those who make the decisions to accept or reject bids.

Vikrey (1961) stated that different proposals are evaluated considering the proposed technical solution, duration and prices, each of which is usually in accordance with a set of weighted criteria. Then the contract is awarded to the organization which submits the best final offer in respect to the criteria set. The task of the Evaluation Committee is divided into two parts: routine and technical procedures, although it focuses more on governmental or routine procedures than technical ones.

Fu et al. (2002) confirmed that competitive bidding is still the most prevalent method of allocating construction work to contractors who continuously face high competitive pressure. Contractors that have poor bidding performance will eventually go out of business.

Hatash and Skitmore (1997) stated that it is necessary to collect and analyze information in order to quantify objectively the criteria for prequalification. Bid evaluation falls into five groups: general information, financial information, technical information, managerial information and safety information.

General Information

This concerns the administrative information relating to name of the contractor in the list for gathering data about each contractor for the prequalification process.

Financial Information

This involves financial statements and other information to check on the financial exposure of the company for both domestic and overseas contracts. Financial status is most often assessed by ratio analysis, examination of bank references, credit reference and turnover history.

Technical Information

This is concerns principally with the current commitment of the contractor's labor and plant resources, ability to handle the type of project, quality and size of work, and the ability to perform on site. 'Past Experience' which includes the type and size of projects completed.

Managerial Information

This is concerns managerial organization and expertise based on considered identifying the contractor's managerial approach to risk, contract strategy, claim and variations. Such as (1) management and organization of work; (2) resources; (3) coordination-control-response and (4) documentation.

Safety Information

This focuses on construction cost reduction by means of accident cost control through owner selection of safe contractors. However, owner generates the required information about the safety performance of the contractors.

CHAPTER III

ECONOMIC BACKGROUND AND ORGANIZATION

This chapter describes the economic background and organization of each country. Particularly it covers the similarity and differences of organizations in the three countries. The chapter will also discuss responsibilities in the bidding system.

3.1 Economic Background

Nowadays, many countries within ASEAN are in close contact on economic issues. The economic crisis in 1997 increased solidarity amongst member nations, who came together to strengthen each other's economic development. Communication and transportation are critical elements in economic development. Developing countries are open to help each other on such matters as the new information technology from developed countries.

In developing countries, where budgets are limited, owners face many financial constraints, shortages of materials and lack of skilled personnel to run projects, particularly for infrastructure developments. Large projects in the formal sector are usually funded through loans and grants from international agencies such as the WB, the ADB and the UN (Ogunlana, 2000).

The three countries selected as case studies are all developing countries. These three countries particularly economic and communication's cooperation. They are open to outside construction companies. For example, the Lao government has accepted outside companies to work on the major hydro-electrical scheme, Nam Thuen 2.

3.1.1 Lao PDR Economic Background

The survey conducted for the present work found that infrastructure in Lao PDR is limited due to inadequacy of its government. For instance Lao PDR has limited budgetary resources for road and bridge constructions and other infrastructural

works. Therefore, the Lao government relies mainly on ADB or WB for development resources, and this applies to the development of community as well as physical infrastructure.

Lao occupies a central position in the regional transport network of Indochina. Many road, bridge and dam construction projects have been implemented or are under construction. The construction industry is becoming more aware of the need for ICB to improve collaboration and coordination among local governments and the international agencies that provide funds as well as to improve competitive skills to operate projects to meet project goals. The largest funds are from (ADB), (WB), and the Japanese International Cooperation Agency (JICA). See Table 3.1 for details of the budgetary history of project implementation in transportation in Lao PDR.

Table 3.1 Budget History for Project Implementation in Transportation in Lao PDR

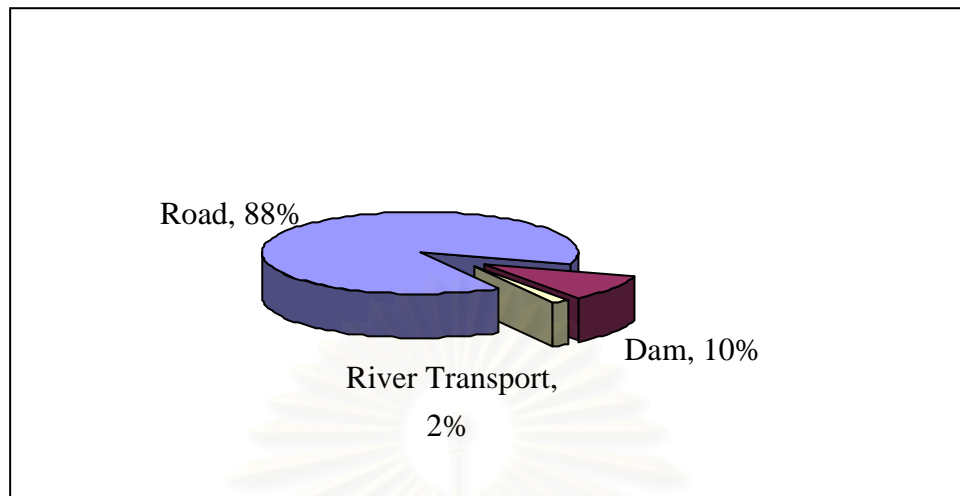
No.	Source of Fund	Amount (Million US\$)	
		Grants	Loans
I	Bilateral		
1.1	Australian Agency for International Development	11.88	
1.2	Government of Federal Rep. of Germany	11.14	
1.3	Government of Japan	138.29	
1.4	Government of Sweden	23.66	
II	Financial Institution		
2.1	Asian Development Bank	1.32	166.58
2.2	International Development Association (World Bank)		78.93
2.3	Nordic Development Fund		19.57
2.4	OPEC Fund for International Development		8
III	UN Agencies		
3.1	United Nations Development Program		1.66
	Total Amount	186.28	274.74

Note: Active Project during 01/10/2000-30/1/2004

Source: Office of International Cooperation, Ministry of Finance in Lao PDR, September 2004.

Within transportation, funds are further allocated into several sub-sectors. Road construction is the largest, the next is dam and the smallest is river transport. Figure 3.1 shows the program budget for transportation sector.

Figure 3.1 Program Budget for Transportation in Lao PDR, 2000-2004



Source: Public Investment of MCTPC, 2004

3.1.2 Vietnam Economic Background

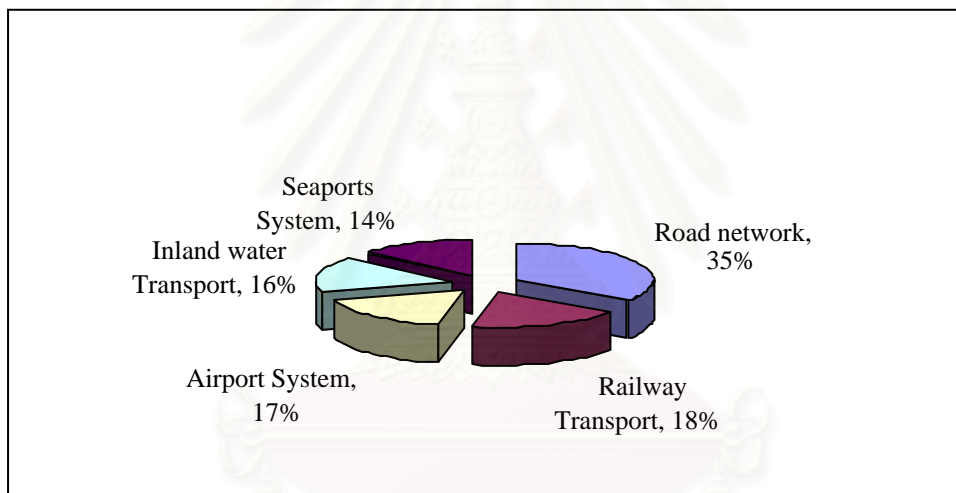
In the past, most large-scale infrastructure construction projects in Vietnam were financed by the national government or supported by the Soviet Union under the planned economy arrangements. The government was responsible for both allocation of designers and contractors to design and construct works and for providing necessary construction resources such as materials and even construction equipment to the contractors for execution of the projects. The designers and contractors, who were mainly state-owned companies, were therefore only the executors of the construction tasks and there was almost no competitive bidding process amongst contractors (Bui Van Thinh, 2004).

Since 1989, Vietnam has implemented an “Economic renovation and the open door” policy that started in 1986. Viet Nam is quickly moving from a centrally planned economy to a market one. Although the market economy is still managed by the state, but with the participation of all economic sectors, despite many financial, scientific, technological and other difficulties, Vietnam has achieved some successes. The rate of industry and construction increased from 22.6 per cent in 1990 to 29.1 per cent in 1995 and the foreign Trade has marked a landmark of in increase foreign investment increasing rapidly. (Country Report of Ministry of Construction, 2001)

In 1996, there were thousands of foreign investment projects with a total investment capital of more than US\$20 billion, Infrastructure, including transport infrastructure. Transport infra has been rehabilitated, improved, upgraded, expanded and developed. Overall, this has made a contribution to the economic renovation and composition in Vietnam (Country Report of Ministry of Construction, 2001)

Within transportation, the funds are further allocated into several sub-sectors. Road network is the largest and the next is railway transport, followed by the airport system and inland water transport. The smallest investment is in the seaport system. Figure 3.2 shows the program budget for transportation sector in Vietnam.

Figure 3.2 The Program Budget for Transportation Sector in Vietnam.



Source: The current status of the transport system and the related matters of Vietnam (November, 1997).

3.1.3 Thailand Economic Background

In Thailand, the construction industry has been growing since 1961, when the first National Economic and Social Development Plan was implemented new techniques have been introduced to construct infrastructure. The construction business grows side by side with the rapid development and expansion of the community (Sattayanon, 1984).

Thailand is a rapidly developing country in terms of industrialization especially compared to other countries in South East Asia, and it has its own budget for infrastructure development. Between 2000 and 2005, the Ministry of Transport has continued to use loan funding for developing countries, but, since 2005 changed its policy by reducing loan funding and increasing government funding to projects. At present, Thailand is considered a strong country in terms of finance for infrastructural development. The data in Table 3.2 exclude the on-going budget for continuing projects commenced prior to June 2005 .

Table 3.2. Sources of Funding in Thailand

Government Funds	2005	2006	2007	2008	2009	2005-2009	Proportion (%)
Total Budget	23.76	94.60	180.25	193.82	180.01	657.94	39%
Loan funded	15.52	-	-	-	-	-	9%
Domestically funded	8.24	75.37	112.48	119.33	79.09	410.03	24%
Otherwise funded	-	19.23	67.77	74.49	100.92	247.91	6%

Note: The Data Excludes the On-Going Budget Commenced Prior to 2005-2009 (Unit THB billion).

Source: The Web site of Ministry of Transport (www.mot.go.th).

3.2 The Bidding Organization in Three Countries.

Construction quality control is dependent upon the organization of the bidding system. However, to be able to have a good bidding process, each organizational system of each country is more important. Having the skills to understand each step of the bidding process is also critical. The present survey finds that many developing countries suffer from administrative and allocative inefficiencies. There is a lack of good frameworks and owner's responsibilities (Sukaserm, **interviewed**, 25 October 2005).

The bidding organization in the three countries is different and dependent on government regulations in each country. However, for the loan projects, each country has to consider having standard regulations and appropriate staff for each type of work in order to fit with the loaner's needs.

3.2.1 Responsible Authority in Lao PDR

In Lao PDR, the Ministry of Communication, Transport, Post and Construction (MCTPC) assigns duties and responsibility allocates duties to each government organization. The Department of Roads (DoR) is be responsible for all road construction throughout the country. This department is in charge of bids for each project as follows:

In considering the overall organization structure of the DoR, an outline of the functions of the Divisions has been formulated, the primary consideration has been to allocate clearly defined roles and avoid obvious cross-border duplication of functions (Khamanivong, **interviewed**, 24 November 2005).

The Divisions of the DoR are:

- (1) Operations;
- (2) Administration;
- (3) Finance/Budget;
- (4) Planning and Technical aspects
- (5) Road Administration;
- (6) Inland Waterways;

The functions of these Divisions are described below.

Operation office

It is responsible for funded construction and rehabilitation work. It is by project manager. This division is responsible for foreign loans or grant projects, where it acts as the project coordinator, with responsibility for each step from start-up, for example finances, feasibility study, design, tender documentation, construction period, taking over, etc. It acts as the coordinator for ADB, WB and SIDA projects. It establishes a schedule of project activities, project monitoring, review of prequalification and bid documents for civil works and also as a member of the bid evaluation committee, assisting in negotiations with bidders and in award of contract

for civil works. In addition the division looks over the financial activities of the loan budget as well.

Administration Division

The Administration Division is responsible for the entire DoR under MCTPC, especially staff training as well as administrative works, facsimile, memorandum, reports, instruction, etc.

Finance/Budget Division

The Finance/Budget Division reports to the deputy director of administration. The Division is to examine the report of all budgets for the ministry and its budget for construction's maintenance. Also this Division has oversight of all loan budgets for the country.

Planning and Technical Division

This Division is mainly responsible for road construction and also for project planning and evaluation of contract drawings, technique, experience equipment technical and financial resources of competitive bidders. It also ensures that donor-specified environmental criteria are applied to all road projects under MCTPC. This division must have competent staff to undertake a technical analysis of each contractor.

Road Administration Division;

This Division oversees project/road maintenance of locally funded or small projects, and seeks solutions to problems between the engineers and the consultants.

Inland Waterways Division

This comes within the DoR which is also responsible for all river communication, such as Mekong river transportation within Lao PDR. It also has responsibility for bank protection.

The responsibilities of these six Divisions are divided clearly (Sukaserm, **interviewed**, 25 October 2005) as shown on Figure 3.3 Department of Roads in Lao PDR Proposed Organization Chart below:

The bid evaluation committee is to separate from the main organization of the DoR. This division assigns work by all involved representatives of bidding as mentioned in procurement rule of government (January, 2004).

Bid Evaluation Committee

The Bid Evaluation Committee has responsibility for all of the details and quality control necessary for the selection of the contractor. Its members are appointed to:

- Monitor the Bidding procedures;
- Open the bids
- Evaluate the bids for consultancy services (feasibility study, engineering design and construction supervision)
- Review and ratify the Engineer's report and recommendations on the civil works bidders;
- Negotiate and sanction the award of contract

Bid Evaluation Committee Composition

In the case of public bidding and ICB, the Committee is composed of five to nine members. At the central level members are appointed by the Minister or his/her authorized representative, and at the provincial level by the Governor or his/her authorized representative.

At the level of a ministry or equivalent agency, the Bid Evaluation Committee includes between one and three representatives of the procuring entity or project owner, together with one representative from each of the following:

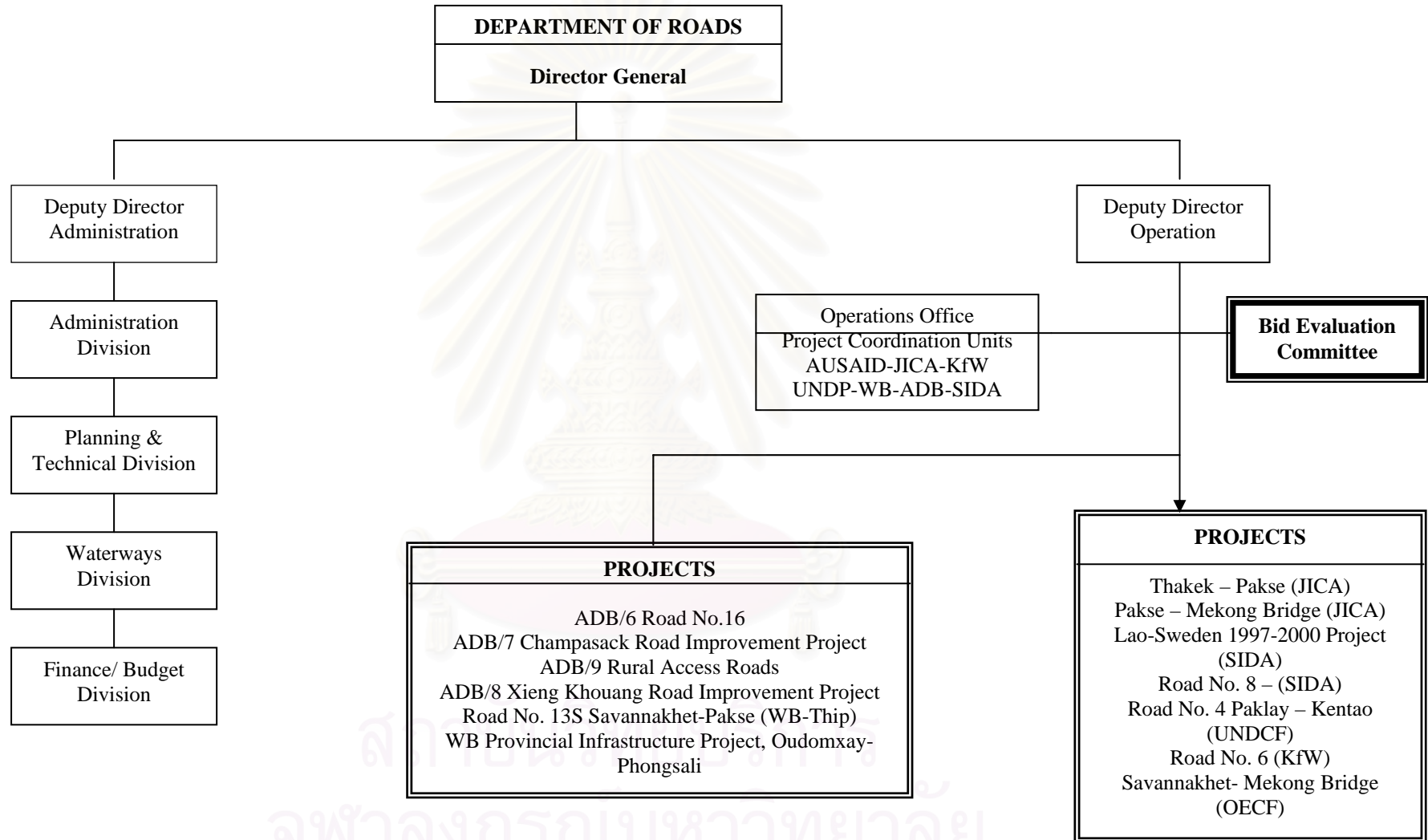


Figure 3.3 Department of Roads in Lao PDR Organization Chart
 Source: Management Information System in MCTPC (2002)

- The Ministry of Finance;
- the Committee for Planning and Cooperation;
- each relevant technical department and;
- The Ministry of Foreign Affairs (External Economic Cooperation Department) in the case of loan and grant funded procurement.

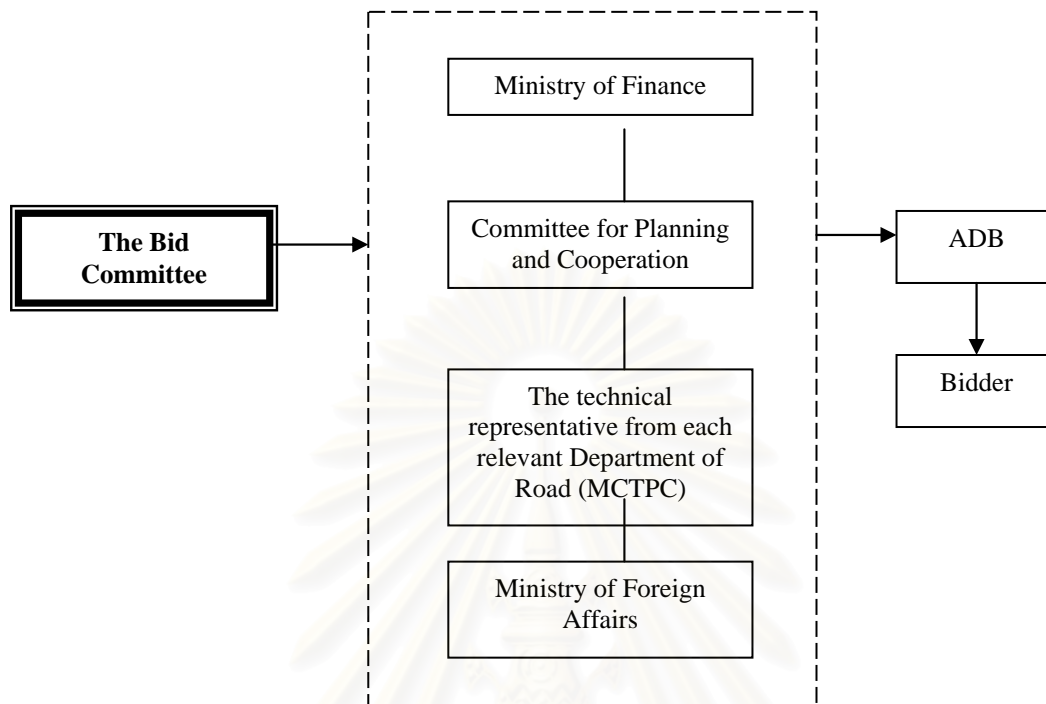
Bid Committee for Foreign Grants or Loans

In case of foreign grants, loans or credits, when a form of an agreement is entered into by the Lao government with the relevant donor, the appointment of the Bid Evaluation Committee and approval of the award decision is as agreed between the government and the donor. These matters came under the Implementing Rule and Regulations of January 2004.

Rights and Duties of the Bid Evaluation Committee

The Bid Evaluation Committee, at all levels, is responsible for preparing bid documents, carrying out the evaluation of bids, and submitting the award decision for approval. The Bid Evaluation Committee notify the unsuccessful bidders of the contract award decision and return bid securities within seven days of the approval of the award decision by the ministry or procuring entity and the signing of the contract by the successful bidder. The Bid Evaluation Committee maintains all records of procurement proceedings and documentation for respective cases in a procurement file. Such records are made available on request to the Ministry of Finance. The Bid Evaluation Committee shall, after the execution of the contract with the successful bidder, posts contract award information in the offices of the bidding entity or project owner for viewing by the public as shown in Figure 3.4, Bid Committee Process in Lao PDR.

Figure 3.4 Bid Committee Process in Lao PDR



Source: Implementing Rules and Regulations on January 2004.

3.3.2 Responsible Authority in Vietnam

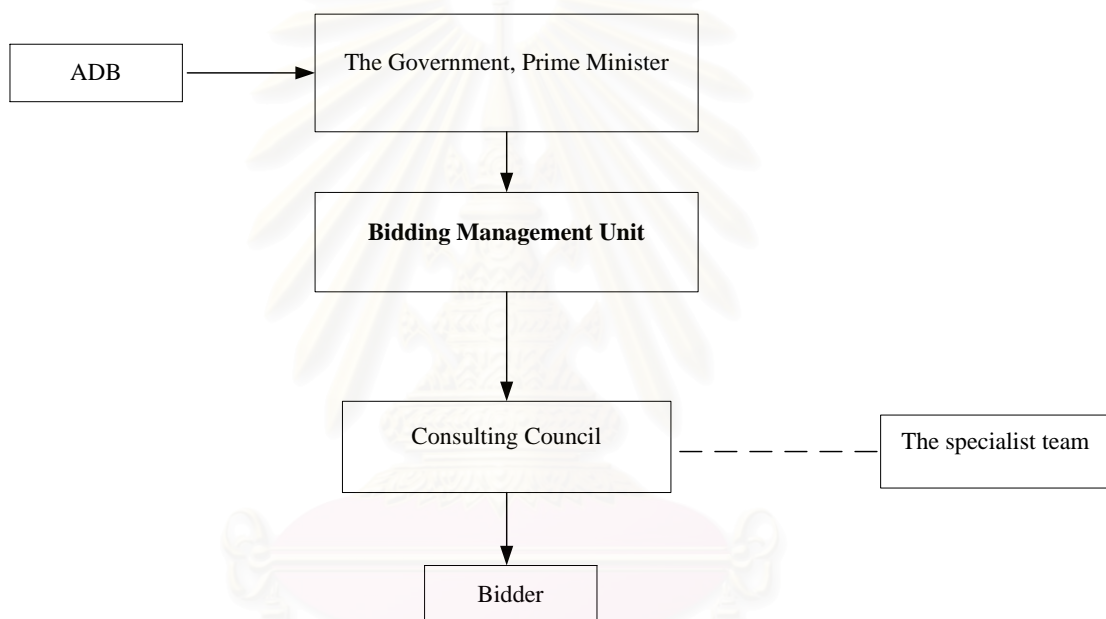
During the field survey, it was found that loan and non-loan projects are the responsibility of the Ministry of Transport. The Ministry is in charge of assigning a responsible person to each work plan as shown in figure 3.6: Organization chart of Ministry of Transport in Vietnam. For bidding purposes, the Ministry assigns the Ministry of Planning and Investment (MPI) to be in charge of selecting the contractor to complete the work (Nguyen Xuan Nhat, **interviewed**, 20 February 2006).

In addition the MPI is also in charge of the bidding process and other related bid documents. The MPI assigns this task to consultants to undertake, including the preparation of all documents related to it, leading to clearer work plan (Chi Van Huong, **interviewed**, 20 February 2006).

The MPI is very important for the government to consider when selecting contractor. Each task of MPI has to be very clear, i.e., everything has to be agreeable without any confusion as shown in Figure 3.7 Organization chart of MPI.

The MPI is in charge of the Bid Management. Unit which is directly related to bidding for construction as shown in the Figure 3.5 Bidding Structure Process in Vietnam.

Figure 3.5 Bidding Structure Process in Vietnam



Source: Guidelines of the National Assembly of the Socialist Republic of Vietnam on November, 2005.

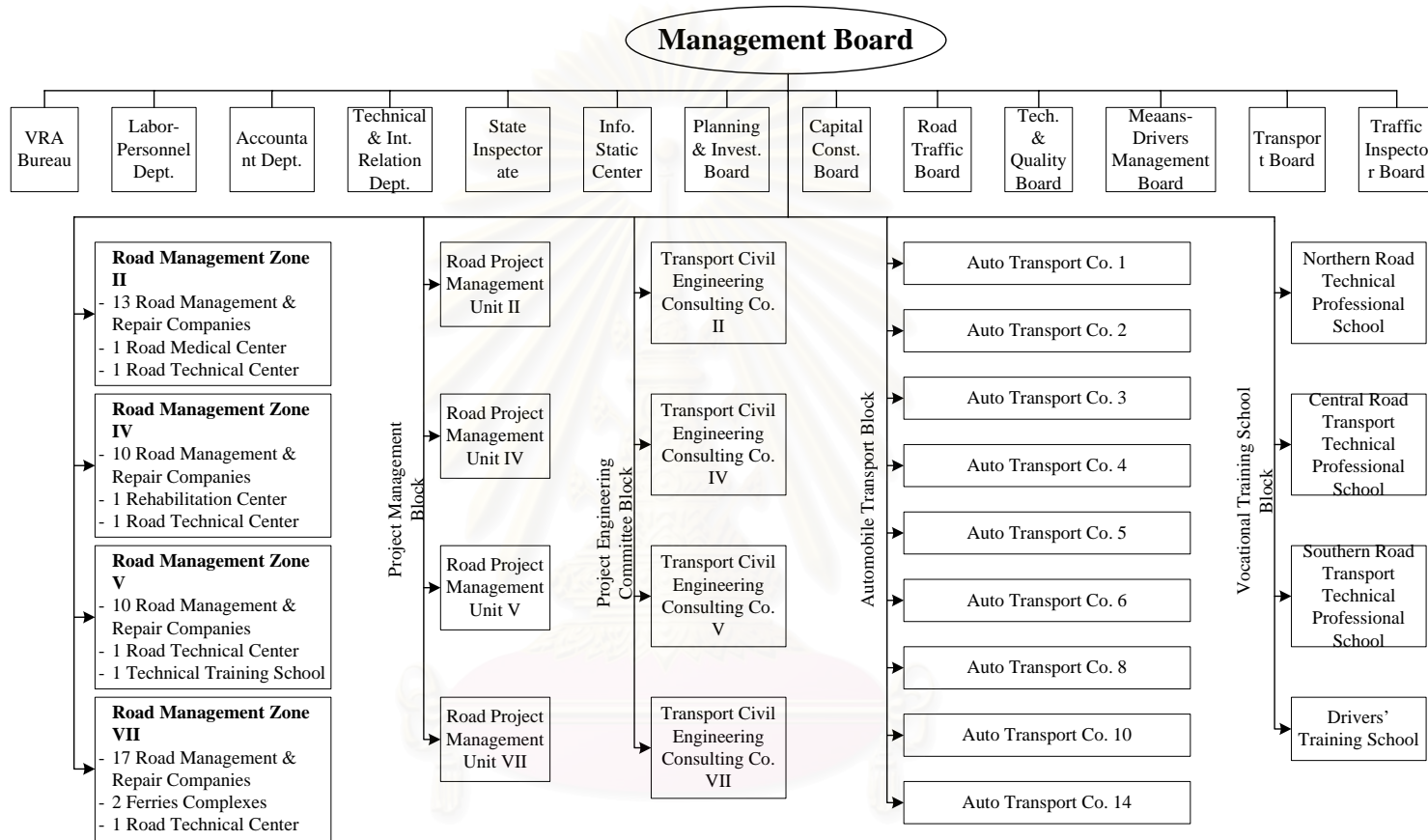
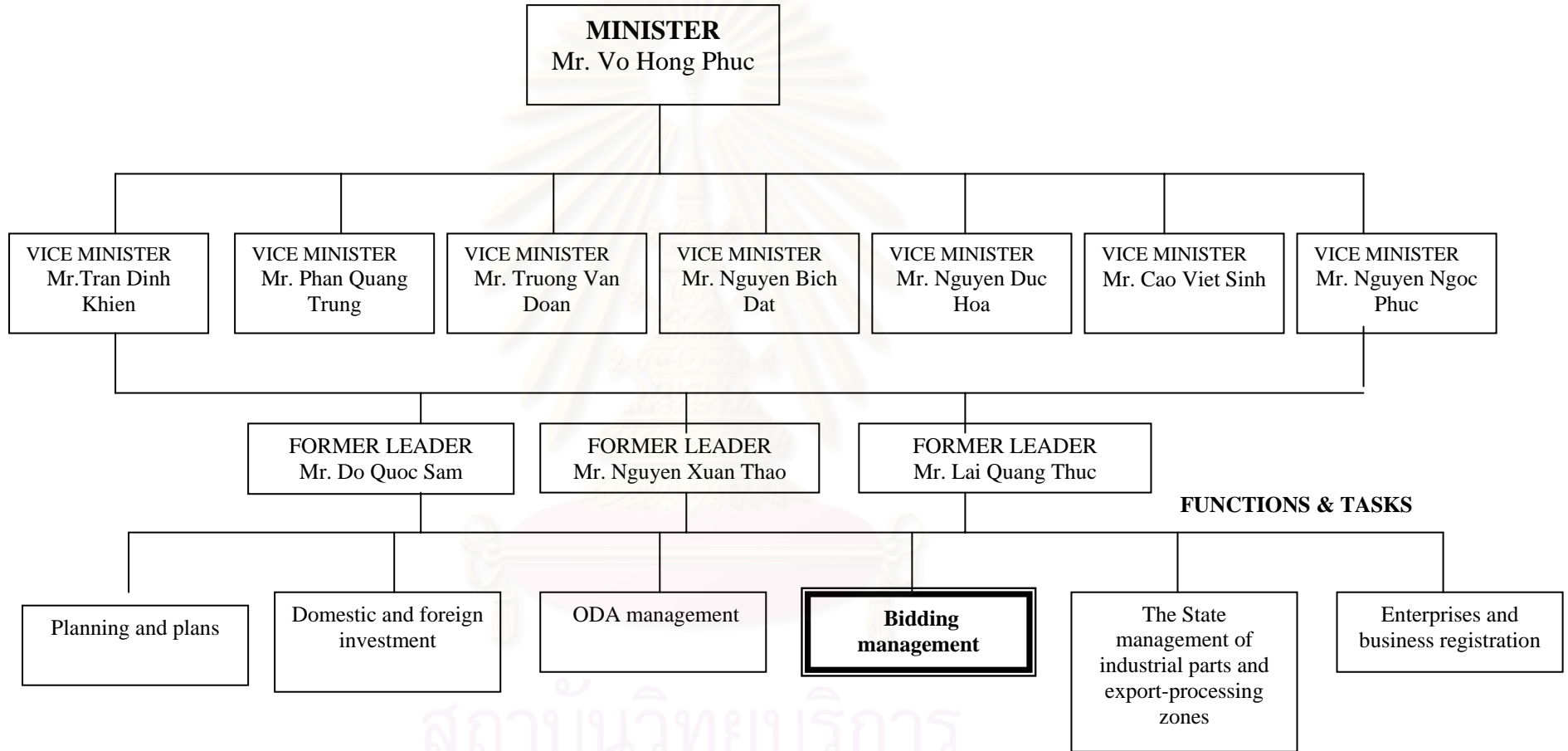


Figure 3.6 Organization Chart of Ministry of Transport in Vietnam

Source: Web site of Ministry of Transport (www.mt.gov.vn)



Note: ODA is Official Development Assistance

Figure 3.7 Organization Chart of Ministry of Planning and Investment
 Source: Website Ministry of Planning and Investment (www.mpi.gov.vn)

Rights and duties of the Bid Management Unit

The Bid Management Unit is consider individual's knowledge and ability as well as cooperation with related staff, such as the consultant who has responsibility for the bid documents and contract for the bidding process. The Bid Management Unit has the following rights and duties:

- Prepare the bidding, organize the bidding, and evaluate the bids in accordance with the government law.
- Summarize the bidder selection process and report to the investment owner on result of pre-qualification, bidder selection result.
- Seek clarification to bids from bidders during bid evaluation
- Finalize contracts on the basis of the approved outcomes of bidder selection.
- Prepare the contents of the contract to be decided and signed by the investment owner and bidder.
- Be honest, objective, and impartial in the bidding process.
- Compensate damaged parties in accordance with the law if the damage caused the owner or his agents. (Chi Van Huong, **Interviewed**, 20 February 2006)

Right and duties of the specialist team/Consultant

According to the data collected form, the field survey, in Vietnam, the owner relies on consultants because of the owner's lack of appropriate staff, especially in terms of language. Consultants are selected for their ability to better understand contract conditions, particularly on the loan projects. These circumstances tend to be dictated by loaner requirements. The specialist teams/consultants have the following rights and duties:

- Evaluate bids against the strict requirement of the bidding documents and the evaluation criteria stated therein;
- Keep confidential the relevant documents according to government regulations during the process of performing their duties;

- Reserve their own opinions;
- Be honest, objective, impartial in the process of bid evaluation and reporting evaluation result;
- Compensate damaged parties in accordance with law if the damage is caused by specialist team's/consultant's fault.
- Perform other statutory rights and duties. (Nguyen Viet Hung, **Interview**, 20 February 2006)

Rights and duties of the bidder

The bidders have the following rights and duties:

- Participate in bidding as an independent bidder or as a member of joint-venture;
- Seek clarification to bidding documents from the procuring entity;
- Fulfill the commitments according to the contract entered into with the investment owner and sub-contractors (if any);
- File complaints in process;
- Obey process legislation;
- Be honest and accurate in the process of bidding and in filing complaint;
- Compensate relevant parties in accordance with law if the damage is caused through fault of the bidder. (Nguyen Xuan Doan, **Interviewed**, 25 February 2006).

3.2.3 Responsible Authority in Thailand

In Thailand, a ministerial committee has responsibility for all projects. The Ministry of Transport and the Department of Highways are responsible for coordination with other organizations such as the Division of Loan if applicable. The main responsibility is checking documents related to bidding before sending the documents to the Ministerial Committee and the WB. The most important function of this department is to interpret the contract conditions and correct language that the loan owners and coordinator including the WB cover each interested. In addition to

this, the Department of Highways has a representative from the WB both to witness the procedures and to take direct responsibility for the prequalification processes. This representative will ensure quality control and sign as a witness on each contract agreement. (Sukhantararat, **Interviewed**, 4 November 2005 and Chudley, **Interviewed**, 10 November 2005). More details are shown in Figure 3.8 Organization Chart of the Department of Highways (Thailand).

3.2.3.1 Rights and duties of Division of Loan

According to the interviews, every individual staff is responsible for each work assigned. However, everyone has to cooperate but does not overlap each other's duties. Every loan project depends on the division of loan and in charge of document of the WB consultant as mentioned above (Sukhantararat, **interviewed**, 4 November 2005).

Division of Loan

In charge of evaluation and monitoring and report about loan to the Ministry of Transport as well as coordinating the loan and other local and international funds. However, this division needs support from other related organizations (Jirawat, **interviewed**, 30 June 2006)

Planning and Technical Engineering Office

This office is in charge of management and coordination with loaners and other financial sources, both local and international. In addition, this division is responsible for the road maintenance by loan and grant project according to contract conditions. (Wipasuramonton, **interviewed**, 4 August 2006).

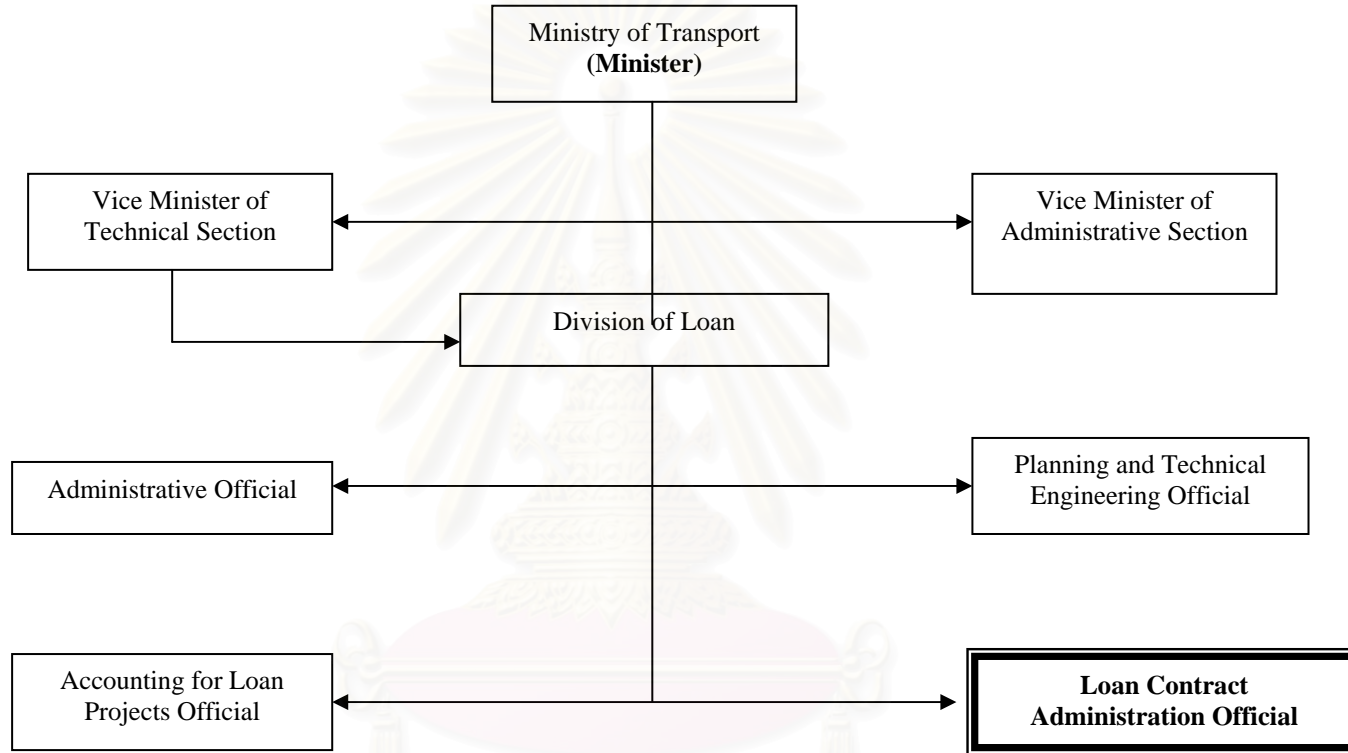


Figure 3.8 Organization Chart of Department of Highway (Thailand).

Source: Data of Department of Highway, Division of Loan (August, 2006)

Administrative Official

It is in charge of administration as well as finance and budget. In addition, this division also responsible for monitoring equipment staff and other related staff. (Tadsomboun, **interviewed**, 4 August 2006).

Accounting for Loan Projects Official

It is in charge of finances of projects. The division double checks all financial details of the projects and controls disbursements (Phongsuk, **interviewed**, 4 August 2006)

Loan Contract Administration Official

The loan contract administration official is responsible for all documents, monitoring and audit the contract for problems before reporting to the loaner and government. The division is mainly responsible for the loan contract, the grant contract, the construction contract. contract translation, meeting preparation and providing information to government regulation for loan and grant project (Sukhantararat, **interviewed**, 30 June 2006).

3.2.3.2 Bid Committee in Department of Highway

In the bidding process the Bid Committee is work in collaboration with other organization such as:

- *project director*: is the representative of the Prime Minister of the Department of Highway;
- *APD*: Assistance Project Director (Budget Bureau for Loan project) which is responsible for bidding cost especially budget analysis of PQ of all attendant bidders.

- *DoH Area Engineer*: is the representative of the Planning and Technical Engineering Official: they will evaluate on technical issues as well as the experience offered by bidders seeking to prequalify.
- *PM (Consultant)*: is the Project Manager or representative of the WB, ADB or JBIC. They are not just a representative but also the witness for the contract process when selected the bidder.
- *Area Engineer (C)*: responsible for project transparency and provide advantageous conditions between the loaner and government. The loaner might hire the area engineer of the consultant or the loaner in order to reduce problem and increase credit for the loaner.
- *DoH Resident Engineer*: after the bidding process is over, before starting the project, a resident engineer is appointed to the project site with responsibility to report to the owner and loaner, to complete the work on schedule and meet the quality requirements of the owner and loaner. This is shown in Figure 3.9 Bidding Committee structure in Ministry of Transport, Department of Highway (November, 2005)

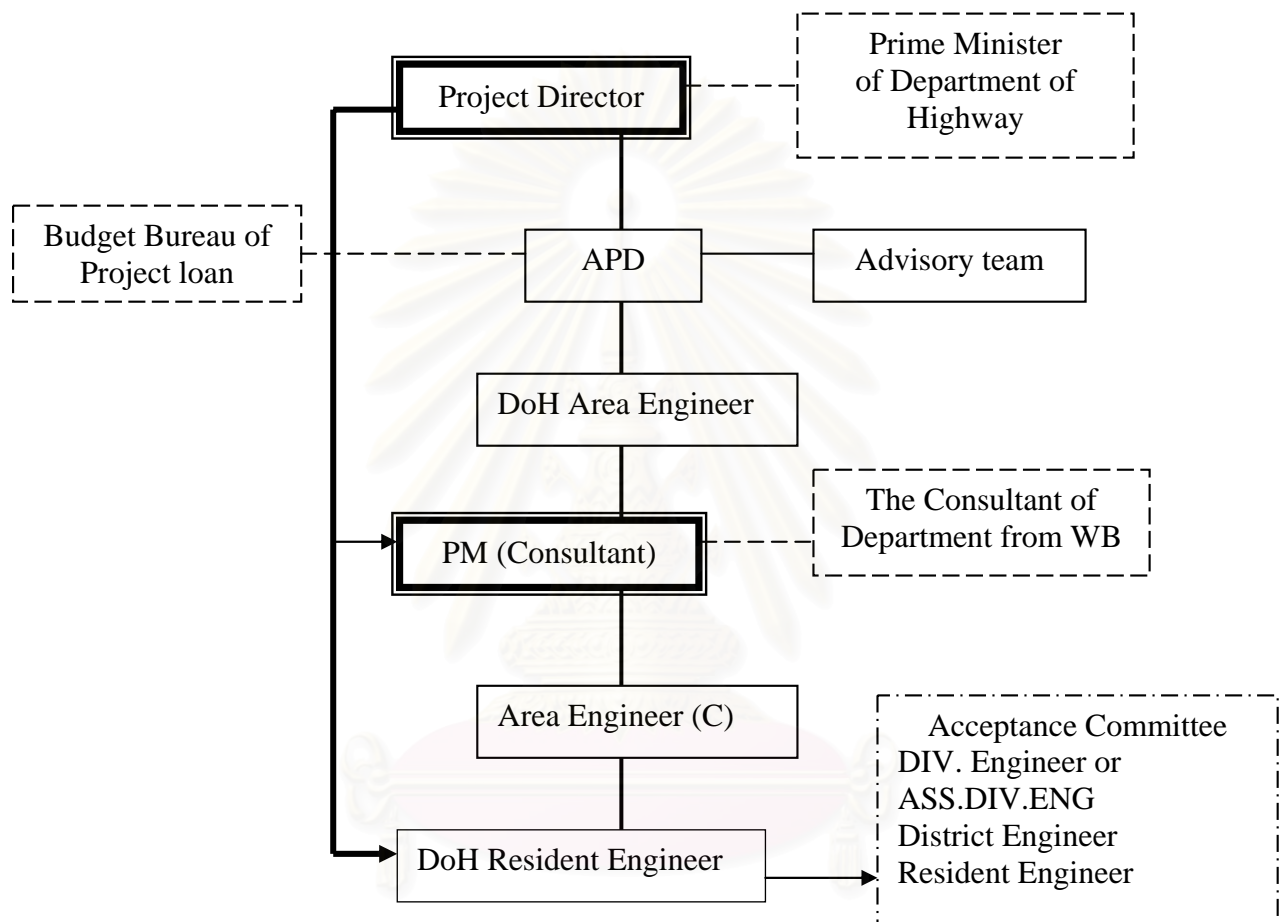
3.3 The Differences in Bid Organization

Through the interviews conducted, it was found that there are differences in organization between the three countries, for instance: responsibility of the bid committee represented from related ministries.

In Thailand, the government divides responsibilities and manages projects to avoid overlap among staff. The Ministry of Transport is responsible for infrastructure development for the whole country and each project shows quality of work. This shows the strong point of the Thai government in terms of selection of the contractors for both local and international loan projects, and ability to meet the timeline that the loaner requires. The bid committee does not need to have a representative from other ministries: only the Ministry of Transport and each loaner is involved in each step during the process. This process includes the consultant that the loaner requires to

give the loaner an advantage because it makes it easier for the loaner to monitor and evaluate the transparency of the project (Chudley, **interviewed**, 8 November 2005).

Figure 3.9 Bidding Committee Structure in Ministry of Transport, Department of Highway (Thailand)



Note: DoH – Department of Highway
 APD – Assistance Project Director (Budget Bureau for Loan project)
 PM – Project Manager
 (C) – Consultant from Loaner's side
 ——— Contract Authority
 ——— Contract administration and technical matters
 - - - - - Activity for acceptance committee

Source: Data of Ministry of transport, Department of Highway (November, 2005).

In Vietnam the bid committee depends on the owner or Pre-minister and bidder. Other stakeholders seem not necessary for Vietnam's bid committee. Each project owner will be the decision maker for each construction project in Vietnam. This is the standard method and does not receive big consideration and attention so

that it may sometimes appear less transparent than in Lao PDR or in Thailand. This point alone makes Vietnam bidding process in Vietnam different from that in Lao and Thailand.

3.4 Summary

Bidding in the three countries is well organized and follows the conditions of each principle. Each country pays high attention to appropriate human resources and meets with contract conditions, particularly Thailand. The Thai bidding process has quality control in each step, designed not only to meet Thai needs but also those of the WB/ADB as the loaners. According to interviewees, the loaners are satisfied and may consider providing further loans in the future.

The case study of Vietnam showed that quality control and decision-making by government are central. According to both interviews and secondary data from the literature, organizations involved should be trained or have enough experiences. Lao PDR and Vietnam can be set as example; adequacy of human resources and the standard of bidders are the main problems when attempting to meet the quality standards required by each loaner. This leads to limitations in selecting contractors that have enough capacity and high standard. In general, if the bid committee allows only contractors who have experiences to bid, it will be preferable and it will also satisfy loaner's requirements, leading to more advantages for the owner to have more standard projects.

The following chapter examines another important aspect of the bid process, namely the bid documents that are used in each country and the regulations that accompany them.

CHAPTER IV

BIDDING DOCUMENTS

In order to select responsible contractors for any construction projects, the prospective contractors will have successful bidding procedures, which are related to preparation of all documentations. Owners and contractors should have clear understanding of every detail of bidding documents such as: regulations, laws, and conditions that are required by owners and loan providers. This does not only apply to international requirements, but also to internal regulations that each country should follow. When all involved stakeholders are clear on these issues, then problems during implementation can be minimized and avoided.

4.1 Preparation of Bid Documents

In case of construction projects to be carried out with loan funding, country governments should follow the guideline of lending institutions such as ADB or WB and contracts for implementation must be based on international regulations. In these cases, each country has transparency and standard guidelines. Thus, those countries that meet loan providers' guidelines can develop national standards as international standards. Nowadays, the bid documents of many countries follow ADB regulations from the start to the end of the project. (Chaleunsouk, **interviewed**, 23 November 2005. Nguyen Xuan Nhat, **interviewed**, 20 February 2005. Sukhantararat, **interviewed**, 4 November 2005).

Bid documents should furnish all the information necessary for prospective bidders to prepare a complete tender for the goods and works to be provided. The details and complexity of these documents may vary with the sizes and natures of the proposed bid package and contract. Included in such details are: invitation to bid, instructions to bidders, form of bid, form of contract, conditions of contract (both general and specific), specifications, drawings, list of goods or bill of quantities, schedule of completion, and necessary appendices (such as bid securities and

addendum, etc). If a fee is charged for the bidding documents, it should be reasonable and reflect only the cost of printing and delivery to prospective bidders. The fee must not be so high as to discourage qualified bidders. (Ngonphachanh, **interviewed**, 24 November 2005).

4.1.1 Language of Bid Documents

The bid and all correspondence and documents, related to the bid exchanged between the bidders and the employer are in English. Due to reasons mentioned previously, this can create misunderstandings for any contractors or even, sometimes, owners.

The interviews show that language is a real problem for contractors. In Laos it causes a problem among contractors who may have difficulty understanding the contract in different languages, particularly with important documents. Some contractors get used to using lenient standards in preparing their documents, assuming that owners will not pay close attention. (Chanleuame, **interviewed**, 24 May 2006)

However, the government or owners pay very close attention, especially to language written in each document. The details of each document show the quality of the contractors as well as their good intentions. In comparison among three countries, Thailand pays closer attention to language written in document than Laos and Vietnam. The reason behind this is that Thailand has more experience working with construction's document. Potential responders in Laos and Thailand: (Siharath, **interviewed**, 22 November 2005. (Sukhantarath, **interviewed**, 4 November 2005) reported that all bidding documents are written in English only. There are times when the owners cannot understand all loan providers' conditions and this leads to the owners to hire consultants to take care of writing the documents. These consultants can also assist the owners finding and evaluating quality of contractors. But this still means that language can be a problem for contractors (especially local contractors) who have staff resources with low language skills, as it is discussed below.

4.1.2 Language of Bid in Contractors Side

Language is one of the contractors' problems since each contracting company has limited human resources with language capabilities (for example in Laos and Vietnam).

Contractors as well as owners are also facing the similar problem regarding language. An interview in Laos showed that language is a big problem for many Laos contractors. In fact, language is an existing problem for a long time which is still left unresolved nowadays. Due to insufficient human resources skills (especially language skills) on preparing documents, it can make contractors miss biddings for numerous times in the past. (Khamphon, **interviewed**, 23 May 2006).

In Vietnam, project owners have a language problem because every single document related to bidding (particularly loan projects) is in English. The owners will be in charge of translating English documents into Vietnamese language. The main reason for owners to do this is because it is easy to understand. However, once all documents are translated into Vietnamese accurately, it is difficult for foreign contractors/loan providers to understand the translated document clearly.

According to the interview with a Vietnamese government official who is in charge of the language barrier issues, if the project owners do not pay adequate attention to the issue then the owners will misunderstand every detail of the bidding document. However, if the project is a loan project, every document has to be written in English. In this case the owners also have to use all documents in English which lead Vietnamese owners or contractors to face some language problems. The distribution of language of contract in three countries is shown in Table 4.1 (Nguyen Xuan Nhat, **interviewed**, 25 February 2006)

Interviews with contractors in Thailand showed that language is not the main problem for Thai contractors. Many companies have experts on language and should understand all details that a loaner needs. Some Thai companies work abroad and they consider work quality, including language skills, as a very important tool in order to

avoid any language problems that might occur (Sueyanyongsiri, **interviewed**, 30 May 2006).

Table 4.1 Distribution of Language of Contract Documents in Three Countries

Countries Responses use	Laos	Thailand	Vietnam
Owners	English/Laos	English/Thai	Vietnamese
Contractors	English/Laos	English/Thai	Vietnamese

Source: The Regulation of Ministry of Communication, Transport, Post and Construction (March, 2004).
The Regulation of Ministry of Finance (the fourth editions, 1992)
The Regulation of Ministry of Planning and Investment (MPI) (December 2001).

Contractors in the three countries try to solve the language problem but language could still be a problem because they use FIDIC and sometimes they use ADB and WB guidelines. Consultants or experts have to understand every single detail of conditions mentioned in the contract in English to be able to satisfy the loaners (Keolasy, **interviewed**, 23 May 2006. Sueyanyongsiri, **interviewed**, 30 May 2006).

The difficulties raised above can lead to long-term impacts. As a result many contractors have not yet understood and learned about terms and conditions of the contracts carefully. Sometimes, contractors misinterpret contracts and execute works inaccurately. However, they charge owners for the works they did while the owners refuse to pay for the work not indicated in the contracts. Therefore, this can cause disputes between them.

4.2 Contract Type

In general, there are three types of bidding that are usually used:

- 1) The lump sum contract
- 2) The unit price contract and
- 3) The cost-plus-fee contract

The Lump Sum Contract

The lump sum contract is the most common type of contract usually used in general construction. The contractors agree to perform the specified work for a fixed

price and usually agree to have the work completed within a specified date. The contractors pay the fixed price required for them to complete the work. The difference between their costs and the amount they pay would be regarded as profit or loss (Sattayanon, 1984)

According to an interview, the projects that use a lump sum contract in these selected countries set up the entire budget for the maintenance projects and domestic projects. For instance, in Lao PDR the lump sum contract is used in a project that has a budget lower than 300 million kip (Sukaserm, **interviewed**, 25 October 2006).

The lump sum and unit price contracts can be awarded either by competitive bidding or negotiation. Since the cost and contract requires a great deal of trust between the contractor and the owner, it is seldom awarded by competitive bidding but rather by negotiation with a favoured and trusted contractor (Khamsana, **interviewed**, 24 May 2006).

Using lump sum contract would create a problem due to the lump-sum lowest bid method awards. It is the contract for construction project to the bidders who submit the lowest bid price. One major shortcoming of this method is that the submission of offers that are unreasonably low is not unusual. Awarding contracts to unreasonably low bidders frequently causes delays and results in poor quality construction. Most of these cases end up with contract disputes or litigation (Wang, 2006). Moreover, lump-sum contract is required for many public projects which are considered good for some friendly projects in contrast with unfriendly projects particularly in adversarial relationship over responsibility and payment for changes.

Lump sum contract used in loan projects are very rare because loan projects are usually complex projects and consists of many problems. For instance, delay and poor quality construction could arise. Due to such problems, it is difficult to use the lump sum contract in any loan project.

The Unit Price Contract

In the three selected countries, loan projects are not available; therefore, they mainly use unit price contract. Most of loan projects are construction projects so that it is difficult to apply a lump sum contract due to high loan cost. Moreover, the unit price contract provides advantages to both owners and loan provider in terms of monitoring and tracking their budget spenders. Any contractors that used unit price contract have to pay close attention to drawings and specifications. These important details must be available for bidding so that the contractors can estimate their construction cost as close to the real standard price as possible (Ngonphachanh, **interviewed**, 24 November 2005).

The unit price contract is not the best type to apply for all construction projects. There are some problems, such as unbalanced bids, that occur with using unit price contract. Sometimes owners couldn't find the point of unbalanced bids, when the contractors are using unit price. Bid rejection because of unbalancing price is rare because it is difficult to detect and to substantiate. Some unbalancing is a standard practice in most unit price contracts of bidding (Siharath, **interviewed**, 22 November 2005).

Unit price bidding is widely used in loan projects in many countries. Usually, it is based on a specified price per unit of works and used when the unit of output can be measured but cannot be estimated accurately at the time of work. For example, it may not be possible to estimate accurately how many cubic meters of earth are to be excavated when a road construction work has started. It is possible to measure these quantities as the work is being done. The owner estimates the quantities of work, and the bidders specify the unit cost. The contractors are not necessarily paid the total price specified in their bid, but they are paid by the unit that they worked. The actual payment is determined by the owner's unit that was completed. The actual payment is determined by the owner's engineer and would be according to the actual quantities of works.

The Cost-Plus-Fee Contract

In three countries, the cost-plus-fee bidding is used when the amount of work cannot be adequately defined in advance. It can be either a fixed fee or an incentive fee type. In the fixed fee type, the contractors get paid for whatever it costs them to do the work plus a predetermined fixed fee as their profit. In this situation, the owners take all of the risk such as overrunning the cost of the work. With the incentive fee contract, the contractors are paid their actual cost to do the work plus or minus some incentive fee which can be based on such things as cost to do the work or time for completion. With this type of contract, the contractors share some of the risk of the work with the owners such as in small construction building, construction house and domestic school etc, (Siharath, **interviewed**, 22 November 2005).

Owners that use cost plus fee contract have to be confident that contractors could pay even damages during the project implementation. Therefore, this type of contract is more appropriate with small projects or projects that use sub contractors. However, sometimes the cost plus fee contract give advantages to the owners as well. Examples of such advantages are as follows: maximum flexibility to the owner due to the lack of disputes over change orders, contractors get paid for any extra work required, minimal negotiation time, minimal fear of commitment by contractor, and the owner only have to pay actual costs (Osgood, 2004).

According to interviews from three case studies countries, loan projects prefer to use the unit price type. However, the contract type to be used in a project depends on agreement between the owner and the contractor.

4.3 Standard Bidding Contract Forms.

Construction contract is important due to problems that may occur during projects' implementations. Every single problem that occurs has to be referred to the contract as owners and contractors have already agreed on. There are different types of standard contract forms to be use for several types of projects. Owners and contractors have to select one that is appropriate for both parties.

Contracts used in construction consist of: 1) the Joint Contracts Tribunal (JCT) as the standard form of building contract; 2) the Institution of Civil Engineers (ICE) which is produced by the Association of Consulting Engineering and the Federation of Civil Engineering Contractors. 3) the International Federation of Consulting Engineers (FIDIC) which is produced by and is associated with the European International Federation of Construction (EIFC) based on the ICE form (modified to enable it to be used anywhere in the world) (Murdoch, 1996).

The main purpose of contracts is to promote cooperation between owners and contractors. It must meet the two sides' interests and bilateral decisions are made. Usually, contracts are also used with any private projects as well as public projects such as construction roads, railways, dams, bridges and tunnels. Contracts in FIDIC show that most conditions are for engineers and owners. Provisions usually cover nomination of sub- contractors, settlement of disputes, extensions of contract period, as well as liquidated damages and all the other complexities. These are usually met in the big construction and public construction projects. (Murdoch, 1996).

According to findings from the conducted surveys in the selected three countries, the owners were asked to identify the standard bidding contract conditions being used in their organizations. Table 4.2 confirms that the majority of respondents (61%) used both government regulation and FIDIC mixed. Because the majority of works are considered as international competitive bidding, the FIDIC form is the most widely used. However, some clauses need to be adapted and simplified in order to conform to the local circumstances.

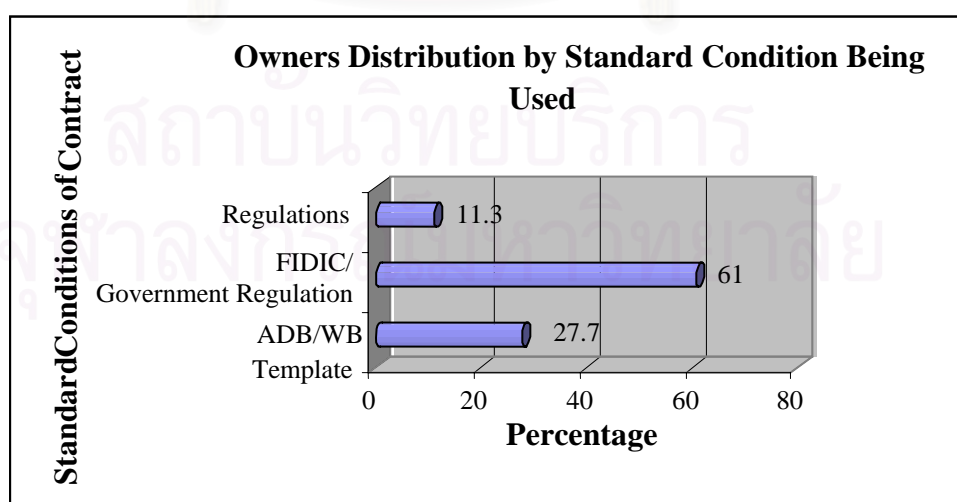
Further analysis indicates that the second group (27.7%) of owners in three countries used the ADB or WB template. This may be because most of construction projects in Laos and Vietnam are ADB loans. Therefore, majority of construction projects owners have strictly followed quality standards of the ADB. However, some projects have received loan, which are considered and classified as small construction projects. Therefore, the ADB contract condition may be used appropriately for the projects.

However, there are some projects that use the government regulation for the contract documents preparation (11.3%). In Laos, the standard forms are prepared in accordance with implementing Rules and Regulations on Decree of Government Procurement of Goods, Works, Maintenance and Services. However, in Thailand, the standard forms are prepared in accordance with Thailand Building Construction Code and Regulation. In addition, Vietnam uses the standard forms prepared in accordance with Procurement Law. Most projects, such as maintenance or domestic projects, have used government regulations as shown in table 4.2. The owners' distribution by standard condition of contract type being used was plotted in the graph (Figure 4.5)

Table 4.2 Owners Distribution by Standard Condition Being Used.

Standard Condition of contract	Number of Respondants			Percentage
	Laos	Thailand	Vietnam	
The ADB/WB Templates	1	2	2	27.7
FIDIC/Government standard contract (regulation)	6	3	2	61
Regulations	1	0	1	11.3
Total	18			100

Figure 4.1 Owners Distributions by Standard Condition Being Used



From case studies, it was found that the international form of contract has been commonly applied. “Conditions of Contract for Works of Civil Engineering

Construction”, Fourth Edition 1987 (Red Book), prepared by the Fédération Internationale des Ingénieurs Conseils (FIDIC) is the General Conditions of contract and it is expected to cover the majority of contracts used in the national and international projects in three countries based on the data collected. The interesting concept in FIDIC is that it can be separated into two parts: the general conditions and the particular clauses specified in each project. Moreover, it is more convenient for the three countries since changes could be implemented for any condition in order to make it more appropriate for each country.

Standard forms of many contract documents are widely used throughout the construction industries. However, some standard documents, such as the American Institute of Architects (AIA), are widely used on private building construction projects by private owners. In addition, the engineers’ Joint Contract Documents Committee (EJCDC) has prepared forms principally for use on engineering construction (Holpin and Woodhead, 1998).

4.4 Regulations of Bidding

In each projects, contracts used are very important particularly for loan projects. Owners have to pay very close attention to each detail in the contract in order to match with all the conditions in the projects as well as meet local regulations and laws.

According to several surveys, the loan projects used the guidelines as the main document for contracts. Some projects use government regulations as well especially for road construction where governments have to take into consideration local regulations (Sukhantarat, **interviewed**, 4 November 2005. Ngonphachanh, **interviewed**, 24 November 2006).

Projects implemented under loan arrangements have strong advantages since lending agencies require specific strict details on work plan and implementation. When developing countries implement projects, they follow the standards of the loaner.

Laos Government Regulation

More than 70-80% of Laos construction projects are loan projects. Therefore, conditions of project implementations have to be based on loan providers. However, government regulations are also important since the projects will be implemented in Laos. The main reasons for this are to avoid misunderstanding and conflicts between the Laos government law and the loan providers' conditions. Moreover, any loan projects concerning people have to be careful about working conditions for the contract because if there are any problems that would occur during the project implementation. This might lead to conflicts in terms of politics which are sometimes very sensitive. Said conflicts may cause the projects to be postponed or even worse the projects can be suspended (Sukaserm, **interviewed**, 25 October 2005).

In Laos, the government regulation was established in 2000 and has been used in construction since then. This regulation is usually used for the standard bidding document by the ADB. An official permission to use this regulation was done in January 2004 under the signature of Ministry of Communication, Transport, Post and Construction and Ministry of Finance. Details of this regulation have met all needs of the Lao government and are appropriate with Lao contexts. The regulation is for government benefits enhancing more cooperation among parties concerned (Sukaserm, **interviewed**, 25 October 2005). For example, name of the regulation is "Implementing rules and regulations on decree of government procurement of goods, works, maintenance and services. Based on the Decree 03/PM date 9 January, 2004".

The purpose of the Implementing Rules and Regulations of the Decree 03/PM dated 09 January 2004 on government procurement of goods, works, maintenance and services is to:

1. Ensure the transparency of public procurement through procedures set out in the Decree on government procurement of goods, works, maintenance and services and these Implementing Rules and Regulations;
2. Achieve regularity and uniformity of procurement procedures of government entities and state enterprises;

3. Achieve efficiency and economy in the government procurement of goods, works, maintenance and services;
4. Guarantee all economic sectors fair and equal treatment in competitive bidding for the supply of goods, works and services to government entities and state enterprises.

Vietnam Government Regulation

Similar to the Lao regulations, Vietnamese regulations are controlled by the government and deals with loans. In addition, the economic background of Lao PDR and Vietnam are similar; they do not have enough money form the government incomes to develop the countries in terms of construction. In general, donors of loan projects make a decision on project contract and working conditions. For instance, donors can decide if they want to follow local government regulations or not in order to understand the local working conditions (including having local government official being a part of the projects implementations in terms of decision making).

This regulation has been officially implemented since November 2005 and it was unofficially used in December 2001. Vietnamese government always pays close attention in terms of using this regulation and encourages contractors to follow it strictly. (Nguyen Viet Hung, **interviewed**, 20 February 2006).

Besides the mentioned above documents, there is one important document called the National Assembly Procurement Law which the government kept modifying until the officially use on the 1st April, 2006. Like Laos regulation, the objective of this procurement law was mainly for making each construction projects transparent. In addition, this regulation is made available to owners and contractors. Thus local regulations and laws are related to the construction of the country. The Vietnamese government with the donors achieve the highest benefits to the government because they make every stakeholder to be part with it. The Vietnamese government uses this regulation with every stakeholder to follow and achieve the highest benefit from this regulation as well as for loan providers.

According to the conducted survey, loan providers in Vietnam provide more opportunities for local government to follow the conditions of the guideline than in Laos. Vietnamese government has more open and wire policy than the Lao Government in terms of working with international organizations.

However, the government regulations sometimes do not cover every point of concerns in terms of rights and duties of all parties in procurement. Therefore, decision making is made by someone from the government only on important projects. This barrier does not match with the international working guideline of the interested loaners.

Thailand Government Regulation

Thailand also has its own government regulation like Laos and Vietnam because there are several problems occurring as mentioned above. In terms of implementation, the ADB or WB reported that Thailand is better as compared with Laos and Vietnam. However, there are some projects still creating some problems. Because of such, the Thai Ministry of Transportation developed a new government regulation in order to improve its regulation to be more practical and applicable when implemented.

The new regulation of Thai government is called Thailand Building Construction Code and Regulation. This regulation is currently used and is adapted from the 1982 version. Since 1982 the Thai government has already amended it four times. The forth one has been used since 1992. However, only some parts related to bidding process are used because the main objective is to improve the bidding process. It is trickier but more applicable since every stakeholder is following this regulation. The contractors have to understand the details of this regulation in order to avoid any problem that may occur before and during the implementation of their work and also to satisfy the donors (the WB).

The Thai government regulation has been used since 1982. However, the contents of the Thai regulations do not cover all important points. For example, this regulation does not mention clearly the cost of the construction. It specifies only that

the cost can be as low as the owners want. This regulation does not match with the donors' interests or the division of loan of Thailand which has come across many problems due to this regulation. For example, the division of loan is responsible for submitting the bidding to Thai government and donors. Sometimes, the donors agree with the awarded contractor but the government does not. Thus, there is a conflict between the government and the donors. The division of loan solves such problems by submitting the list of responsible bidders and price offered to the government first. After the government selects and awards the contractor, the division of loan submits it to the donors (Sukhantarat, **interviewed**, 4 November 2005).

4.5 Instructions to Bidders

The Instructions to Bidders present information that owners require the contractors to carry out. The main purpose is to ensure that the contractors are clear on what processes they must pursue during and following the bidding process. The instructions to bidders set out each specific requirement the owners have for the contractors. The contractors are free to reject certain conditions if they appear too demanding. Similarly, the owners can also reject any proposal made by contractors if it is not made on an official form and is not in accordance with the provision set forth in the ITB and the bid documents.

This section specified the procedure to be followed by bidders in the preparation and submission of their bids. The information of instruction to bidders is provided in the submission, opening and evaluation of bids and on the awarding of contract (Standard Bidding Document, Procurement of Works by ADB, 2005). Included is the important information as follows:

- General
- Contents of bidding document
- Preparation of bids
- Submission and opening of bids
- Evaluation and comparison of bids
- Award of contract

In general, the instruction to bidders is to present contractors the details so that problems can be avoided. Both owners and contractors can check each condition on the bidding. The cost of bidding documents should not be too expensive, and must be reasonable. If the cost is too high then it would not be fair for the contractors. If the owners set up too high cost then the contractors will not be interested in the projects and the owners will not get qualified contractors (Siharath, **interviewed**, 22 November 2005; Sukhantarath, **interviewed**, 4 November 2005 and Nguyen Xuan Nhat, **interviewed**, 20 February 2006). The main point of the ITB includes important information as follows:

- Scope of Bid
- Source of Funds
- Eligible Bidders
- Eligible Materials, Equipment and Services
- Qualifications of the Bidders
- Cost of Bidding
- Site Visit

According to potential responders, there are some different details in the instructions to bidders in different countries. However, those points may be considered as an advantage or a disadvantage for some country.

4.5.1 Eligible Bidders

On construction projects funded by loans, bidders are mostly international contractors because there is no specific requirement for local or international bidders to be involved. All bidders must pass the prequalification in order to be eligible for each item. However, from interviews in Laos and Thailand, it seems that loaners select contractors by themselves. As a result, local contractors are awarded construction projects. For example, if the loaner is a Thai institution then the contract will stipulate that the contractors are to be a Thai company, as well as any subcontractors or joint ventures. If the loaner is ADB, then it is possible for the contractors to be a joint venture between a Lao company and an international

company. For example the Lao company may hold a 51% share and this will be put in the contract (Ngonphachanh, **interviewed**, 24 November 2005)

The description of eligible bidders includes limitations on contractors who have been known to commit misdemeanours, such as collusion between contractors. If it has been discovered that contractors have colluded in the past to rig the bid, then those contractors are placed on the black list and are ineligible to bid.

According to several interviews in Vietnam, there are better chances for local bidders tendering for government contracts. The Vietnamese government supports local contractors and believes that it improves the competitiveness of the bidding if there are many bidders. (Pho, **interviewed**, 23 February 2006). In Vietnam, an eligible bidder is a company that meets the Ministry of Planning and Investment criteria and is a legal company. Each contractor that has independent financial ability, has never been bankrupt or insolvent, and that understands contracting law and policy, is eligible to bid.

The common problems for some foreign contractors, who are interested in working in different countries, are limited access and they still face with many problems such as inaccessibility of local technical experience and problems with local laws and government systems (Salam, 1985).

The Local Technical Experience

Some foreign contractors, who do not pay attention to local technical experience, may experience some difficulties during the construction process. For example, some contractors still stick to their previous experience from their own countries, which is not necessarily entirely appropriate to the host country. Many developing countries are lacking high technical experience and qualified human resource which would not be up to par with the expectations or requirement of foreign contractors.

The Problem with Local Laws

Local laws are another problem faced by foreign contractors. They should be aware that other countries have their own local laws relating to construction. In order to avoid problems in the host countries, foreign contractors should know and learn carefully about the local laws before starting construction.

The Problem with Government system

In the real situations the contractors should think of dealing with the government, specifically with related government departments. For instance, in some developing countries, there is still limited coordination between contractors and related government officials. This may create difficulties for construction process.

4.5.2 Eligible Materials, Equipment and Services

Loan projects have to use main contractors who would perform satisfactorily and contractors have to specify loaners, materials and equipment to be used in construction in order to fulfill the need of the loaners before the project is implemented.

According to interviews, loan projects usually utilize imported materials and equipment from the donors' countries. The reason is that the receiving countries are usually under-developed countries that lack necessary equipment. If they do have them, the equipment usually has low quality. For example, projects R3 used materials and equipment that are imported from Thailand. The contractors had to mention this import process on the contract because he wanted use this document for import tax process, which in addition to the cost of the equipment could be very expensive. Therefore, the company had estimated the double expenses on the bidding documents (Sueyanyongsiri, **interviewed**, 30 May 2006).

4.5.3 Site Visit

Three selected countries have different geographical aspects. Therefore, the site visit has to be planned in advance before implementing each project. Site visit is

considered to be very important for each contractor that wants to attend the bidding process as mentioned above. The site visit for the contractors and a unit price contract is critical for the estimation of the cost of the projects. (Khamanivong, **interviewed**, 24 November 2005).

Site visit usually happen before submission bid documents, therefore, to have someone as an expert who knows the location and the knowledge of the topography of the foundation of under ground environment is necessary. If unexpected problems occurred during the construction process, the contractor is eligible for a special clause defined in the contract such as an extension time. Bidders apparently overestimate the cost for construction projects when they do not go through with site visits (Keolasy, **interviewed**, 22 May 2006; Sueyanyongsiri, **interviewed**, 30 May 2006).

Some information about the site and its locality will be included with the Bid Documents. Clough (1986) suggested that architectural information that is necessary for the contract are: projects location, probable weather conditions, availability of electricity, water, telephone and other services, access to the site, local ordinances and regulations, subsurface soil, rock and water conditions, availability of local labour etc.. It is advantageous for contractors who have prior experiences of the site.

4.6 Bid Security

Clough (1986) suggested that bid bonds, which are provided by the contractor's surety for a small annual service charge, have the advantage of not immobilizing appreciable sums of the contractor's money. The minimum bid security required by the instruction to bidders may be stated as a given percentage of the maximum possible contract amount which is normally 5 or 10 percent of the maximum bid price. This is a common requirement, although larger percentages are also used.

Several potential respondents stated that, for both government projects and private projects, some forms of security or guarantee are required from all eligible bidders. Contractors generally use bid bonds, also called proposal bonds. Normally the owners require bid security in the amount of 10% of the total projects cost. Although

some owners require that each bidding contractors submit a certified check, and the opening committee will need to make sure that all such details are in order. The bid bond must be from a recognised bank (any legal local bank or legal international bank) or security house and made out in the name of the contractors. (Sukhantararat, **interviewed**, 30 June 2006).

If a contractors does not submit the bid bond as part of the bid documents, the owners has the right to reject the bid outright. The bid securities of unsuccessful bidders will be returned promptly, after the expiration of the period of bid validity. For a successful bidder, the bid security will be returned when the bidder has signed the contract and furnished the required performance security. (Wanlok, **interviewed**, 30 June 2006).

Bid Security in Case Study Countries

Each country has its own rules and conditions based on their government regulation as well as the ADB Standards. There are details that differ, particularly the percent of the bid security. In Laos, the lowest is not less than 2% while in Vietnam it is not less than 3% and in Thailand is not less than 10%. In all three countries, the upper level of the bid security is 10% of the estimated contract amount or as stipulated in the bid documents of whole construction budget.

Table 4.3 The Differences of Bid Security Percentage in Three Countries.

Bid security	Laos	Thailand	Vietnam
Percentage	>2%-10%	10%	>3%-10%

Source: The Regulation of Ministry of Communication, Transport, Post and Construction (March, 2004).

The Regulation of Ministry of Finance (the forth editions, 1992)

The Regulation of Ministry of Planning and Investment (MPI) (December 2001).

Another difference among the countries is the time taken by the owners to return the bid security after the announcement of the successful bidder. In Laos the unsuccessful bidders have their bid security returned within 7 days after expiration of

the bid security whichever is earlier; In Vietnam, within 30 days; and in Thailand not later than 28 days, starting from the date of announcement of bid selection result.

Based on interviews in Laos, where bid security is not a requirement of the bidding documents, and the successful bidder withdraws or modifies its bid during the period of validity or fails to sign the contract or to submit the performance security within the prescribed deadline, the bidder shall pay to the procuring entity within seven days a penalty of 2% of the bid price (Siharath, **interviewed**, 22 November 2005. Sukhantararat, **interviewed**, 30 June 2006. Chi Van Huong, **interviewed**, 20 February 2006).

However, issues of bid security create problems for the owners as well. According to the response of one interviewee, contractors do not pay enough attention to the language and do not correctly complete of the bid security form. Also, in the past, banks had not complied with the completion of the bid security form because they used inexperienced staff for the job. Often, the owners, through their Division of Loan, have carefully checked the form and found many mistakes so they require the contractors to redo it. (Sukhantararat, **interviewed**, 30 June 2006)

In Laos, as in Thailand, the bid security part of the procedure has been done incorrectly by contractors, particularly the cost of bid security so that different figures are given in writing. The Vietnamese owner or government provides translation of bid documents into Vietnamese which reduces this type of misunderstanding between the owners and the contractors, as well as introduce a greater degree of understanding between the owners and the loaner. However, translation may cause other types of misunderstanding between the loaner and the owners for international contractors and wants to use English documents may be preferred. (Nguyen Xuan Doan, **interviewed**, 25 February 2006).

Bid bonds are usually 5-10% of the bid amount, although they can be higher percentage. However, they were seldom more than 50% of the bid amount. This requirement is a result of the general opinion that the taxpayer deserved protection

from loss. Otherwise, it might occur that the contractors with the low bid fail to enter a contract with the government entity.

In contrast, errors from bid bond may cause the contractor's bid to be rejected or lead to expensive litigation. It is important that the contractor make certain that the date of the bid bond is either after or before the date of the bid. If the date of the bid bond is after the date of the bid, the owner might reject the bid because the bond was not in effect on the day of bid opening (Jeffrey S, 1999). Moreover, the minimum bid security required by the instruction to bidders may be stated as a given percentage of the maximum possible contract amount (normally is 5 or 10 percent of the maximum bid price it is a common requirement) although larger percentages are also used (Clough, 1986).

Most percentage bid security is about 10% of the total cost in the three countries. The bid security of the three countries is also 10% as well which is appropriate based on the international standard.

4.7 Performance Bond

After the bidding process and once the contract awarded, the contractors must arrange a performance bond through some creditable financial institution. Owners would need the successful bidder to warrant the construction projects to be problem free after projects completion. It is beneficial for the owners to protect any disadvantages after the projects ends. If the successful bidder is unable to arrange a performance bond within a certain time, the owners has the option to reject those contractors and negotiates with the second bidder to act. Then the rejected contractors pay for revision. (Chudley, **interviewed**, 8 November 2005 and Chaleunsouk, **interviewed**, 23 November 2005).

The ADB loan projects set up their performance security conditions clearly. When the successful bidder has received the letter of acceptance from the owners, contractors has 28 days in which to furnish the owners with a performance bond in the form stipulated in the bidding documents and the conditions of contract. Normally, the

owners issue the performance security within 28 days after the latest of the expiry dates of the defects notification periods (FIDIC 1999). The performance security is important for the owners due to the warranty period for the owners where the usual period of performance bond warranty takes one or two years. The percentage of the performance bond will be set out under these conditions and of two sides mentioned on the contract (Standard bidding document, procurement good by the ADB, June 2000)

Information from the potential respondents showed that Thailand and Laos used performance security at about 10 percent of the contract price, in accordance with the conditions of contract. If the successful bidder does not return the performance bond to the owners, the owners has to take the bid security to fine the bidder. All these matters are set out in the conditions of the contract. (Chaleunsouk, **interviewed**, 23 November 2005. Sukhantararat, **interviewed**, 30 June 2006).

In Vietnam, from owners' experience awarding Vietnamese or local contractors, they tend to be less responsible for correcting the defects of the construction project after completion. Thus, the performance bond is raised to 10 -30% of contract value as warranty for the performance security because there is a higher level of risk in terms of budget and contract execution when Vietnamese contractors are awarded. (Nguyen Xuan Doan, **interviewed**, 25 February 2006).

In fact, the Vietnamese government foresees this problem in advance and seeks a solution to minimize it. In cases where there is a need to prevent high risks, the amount of performance security is higher but does not exceed 30%. When owners need contractors to fix the defects, the contractors have to be responsible. They cannot deny this responsibility. If contractors deny being responsible for fixing the problem, then the owners can find other contractors and demand from the first contractor's performance security for not respecting the contract conditions that was set up with the owners at the beginning of the project. Sometimes, the performance bond is set up to be high which makes the bidder or contractors dissatisfied. As a result, the matter may be brought to court which would create problems and delays for the projects (Procurement Law by Ministry of Planning and Investment, December 2001).

Table 4.4 Performance Security Percentage in Three Countries.

Performance Security	Laos	Thailand	Vietnam
Percentage	10%	10%	10- 30%

Source: The Regulation of Ministry of Communication, Transport, Post and Construction (March, 2004).
 The Regulation of Ministry of Finance (the forth editions, 1992)
 The Regulation of Ministry of Planning and Investment (MPI) (December 2001).

Moreover, the period of time for the performance bond is usually 15 days after the bidder has received the notice that he has been awarded the contract. The contractors have to send a performance bond in a prescribed form issued by bank. The amount of bond is approximately 10% of the total in bid price. The performance bond remains in effect until the expiration of the period of maintenance specified in the contract (Sattayanon, 1984).

In most construction projects, owners require both a performance bond and a payment bond, each in amount equal to 100% of the contract price. A few owners require only a performance bond, but they usually includes certain labourers, material suppliers, and subcontractors in the performance bond in case of they would not be paid for their services. This performance combined the bond amount may be unfit to cover both the additional cost of performance and the unpaid bills in the outcome of the contractor failure, claim and short-changed (Russell, 1999).

Case studies shown that the amount of performance bond is 10% of the total bid price and the certain time that suit with loan project is 28 days after the latest of the expiry dates of the defects notification periods.

4.8 Environmental Security

Road construction creates some negative environment impact which contractors shall foresee the execution and completion of the works. They should pay attention with general problems that occur more often. Taken in consideration for the environment are: noise, air quality, vibration, surface water hydrology, water quality, geology, forest, land use, transportation, health and safety etc.

In fact it is impossible to avoid noise when construction occurs as well as the air pollution from transportation of construction materials and equipment. Construction activities may cause an increase in dust and toxic gas. Contractors have to pay attention to construction transportation, and activities may increase the level of vibration which causes the trouble to people in the vicinity. In order to avoid these problems, contractors have to avoid problems on the design, health and safety that contractors must look into in order to protect construction workers. If construction workers get sick, it leads negative impact on the work quality. Unsafe conditions may cause injuries to the workers.

A form of security information mentioned above is still having security form. It is mentioned in the contract or mentioned in the Environmental Security. Based on interviews in Laos, Thailand, and Vietnam, interviewees do mention the contract's conditions, i.e., in every detail of the contract based on its government's regulations particularly negative environmental impact. The ADB and WB pay high attention to this point because there are several problems experienced in the past. To mention the environmental Security in the contracts gives advantages to owners as well as to the projects. Therefore, project owners in the three countries have to pay attention all kinds of risks in environmental negative impact. Also the owners should mention the contract condition of 10% of total construction budget (Sukaserm, **interviewed**, 25 October 2005)

4.9 Conditions of Contract

The conditions of contract contain all the clauses relating to the respective rights and obligations of the parties to the contract. These are mostly administrative provisions which are distinct from technical requirements. Technical matters are confined to specifications and drawings which, preferably, should not contain administrative requirements. Generally, the conditions of contract are composed of two parts (Clough, 1986).

Part I General Conditions (with Annexure)

Part II Supplementary Conditions

The General Conditions: The various general conditions have more or less a common structure. Although the provisions dealt with may vary, they cover much the same ground. Indeed, it is not unusual to find clauses with almost identical wording in different general conditions, even those from different countries. There are many standard forms of conditions of contract such as Institute of Civil Engineers (ICE), American Institute of Architects (AIA), Engineers' Joint Contract Documents Committee (EJCDC), the Joint Contract Tribunal (JCT), etc. The general condition will typically includes the following items as shown in table 4.4 for the general conditions (FIDIC, 1987).

The conditions of contract for overseas work mainly of Civil Engineering Construction have been prepared by Association of Consulting Engineers and the International condition of contract (FIDIC) and conditions of contract prepared by the ADB (Sysavath, 2000).

Supplementary Conditions: The supplementary conditions of contract serve the following purposes (Clough, 1986):

- To delete any appropriate clauses in the general conditions
- To substitute an alternative clause in place of one deleted from the general conditions.
- Add a new clause which supplement a clause in the general conditions
- To add a new clause to cover matters not dealt with in the general conditions.

However, the most significant contract clauses that should be carefully considered are: changes, differing site conditions, scheduling, time extensions, disputes, liquidated damages, termination (Sysavath, 2000).

Table 4.5 The General Condition (FIDIC, 1987).

General Conditions	
1	Definitions and Interpretation
2	Engineer and Engineer's Representative
3	Assignment and Subcontracting
4	Contract Documents
5	General Obligations
6	Labour
7	Materials, Plant and Workmanship
8	Suspension
9	Commencement and Delays
10	Defects Liability
11	Alterations, Additions and Omissions
12	Procedure for Claims
13	Contractor's Equipment, Temporary Works and Materials
14	Measurement
15	Provisional Sums
16	Nominated Subcontractors
17	Certificates and Payment
18	Remedies
19	Special Risks
20	Release from Performance
21	Settlement of Disputes
22	Notices
23	Default of Employer
24	Changes in Cost and Legislation
25	Currency and Rates of Exchange

Interviews in the three countries show that all of them use standard contract documents based on FIDIC. It is a matter of agreement between the loaner and the owners as to which standard contract documents will be used for any project. Generally, the three countries are similar because standard documents are used in each country including Contract Conditions for civil engineering construction works. These are FIDIC standard documents, although some details or conditions might be altered to conform to conditions in specific country.

The standard of FIDIC contract is considered more appropriate for international projects and could be suitable for use on domestic contracts as well. Sometimes in Laos and Vietnam, translation of the contract from English to local languages would be required so that it is easier for all parties involved to understand in terms of all working conditions. The English version of the conditions is considered by FIDIC as the official and authentic text for the purpose of translation.

4.10 Drawings

Drawings and site visit are two things that need clear information. Because better drawings based on a better site visit of contractors makes it clear at the beginning of the real situation. Many problems that occur in drawings are initiative calculating before bid submission. In fact, the initial calculation is not clear and not reliable. In order to have reliable information particularly in projects cost, it needs to be based on the estimation on the real project site construction. For instance, the issues of foundation soil and underground problems are difficult to avoid. If any financial problem would occur, it will be contractor's responsibility since the owners will consider it as the contractor's fault in estimation. (Chaleunsouk, **interviewed**, 23 November 2005).

This problem occurs in Laos more than in Thailand and Vietnam because some contractors pay less attention to site visit and also pay less attention to the importance of using latest techniques to design the projects. Sometimes, inexperienced foreign contractors that Laos government hires also causes problems on project site. This inexperience leads to lower standard specifications in drawing a plan (Chanleuame, **interviewed**, 24 May 2006. Sueyanyongsiri, **interviewed**, 30 May 2006).

4.11 Summary

In general, documentation related to bidding contracts has been properly practised in bid formality in the selected three countries. As a result the document formality has been practiced according to the international contracts. It was found out that contract conditions used for bidding are "Conditions of Contract for Works of Civil Engineering Construction", Fourth Edition 1987 (Red Book), prepared by the Fédération Internationale des Ingénieurs Conseils (FIDIC).

In addition, the uses of documentation related to the contracts have followed the formality and practice properly, especially, for the contract loan projects. Contractor should pay more attention to the procedures and formality. It is also found that the contacts on unit price have been used in project loan, which are mostly related

to road construction contracts in three countries. Therefore, the loan contracts on unit price are more appropriately used than contracts on lump sum or other contract types.

It is also discovered that the majority of projects loan contracts have been attached to contract guideline. This assists the projects owners to follow the procedures. In general, in international projects loans, there is also a standard guideline attached such as the ADB Standard Bidding Document, Procurement of Goods. June 2000). However, the guideline should be appropriately followed according to the government condition contracts of the host country. This will help to avoid problems and misunderstandings between loan owners or providers and host country.

Language is a problem specified in the condition of contract particularly in Laos and Vietnam for both owners and contractors. Therefore, for each project contract, it needs to translate all written documents in English into local languages in order to get a clear understanding for every stakeholder involved in project implementation.



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CHAPTER V

BIDDING PROCESSES

This chapter concerns details of the bidding processes in Laos, Thailand and Vietnam. This includes advantages and disadvantages in bidding process in each country.

5.1 Advertisement and Notification

According to many projects in three selected countries, International Competitive Bidding (ICB) is practically applied and implemented. Owners normally set criteria for contractors from all over the world and project owners invite contractor worldwide. Then, the national project contractors who win bids will be invited to negotiate and involved in limited bidding process. (Siharath, **interviewed**, 22 November 2005)

Based on the study of the advertisement in the three countries, it was found that they follow similar standard of advertising process. For instance, project owners should inform all details and all steps at the bidding process. In all bidding documents the dates, signatures, closed envelop, venue and period of applying for the bidding should be clearly indicated. In addition, in the documents the project costs and loaner's name should be mentioned. Then, the contractors should have to comply with such details. These are very important information details to be provided, in case of the international standard loan. In some projects, the owners might ask for the bid security as well (if it is required).

In any ADB projects, the documents of bid advertisement are submitted to the ADB for approval and for publication in the ADB business opportunities in accordance with the provisions of the loan agreement. For large projects, ADB may additionally require that the invitation for bids is advertised in well-known technical magazines or trade publications, or in newspapers of wide international circulation, in

sufficient time to enable prospective bidders to show their interests and prepare to submit bids.

5.1.1 Advertisement in Laos

According to potential respondents in Laos, the domestic public bidding is advertised in all local newspapers and on notice boards of local organizations at national and provincial levels. However, international public bidding is published in both Lao and English versions, which are advertised not only in local newspapers, but also in overseas newspapers. For some large-scale and more important international projects, the public advertisements are posted in international organization media hypes such as UN publication Development Business (the online version) or professional magazines according to the characteristics of the project and notices are sent to foreign diplomatic missions in Lao PDR.

For the limited bidding, invitations to bid are sent to suppliers or contractors selected by the project owners and all invitations are sent at the same time by registered mail.

In case of the direct contracting owners, they may negotiate directly with contractors. In this case, owners will already have their own contractors. There are cases of some domestic projects that have limited budget or sometimes depend on each project. Period from advertisement to submission are below:

Table 5.1 The Minimum Time Limits in Advertisement in Lao PDR.

From date of notification/advertisement	Domestic Public bidding	Limited bidding	International Public Bidding	Direct contracting
Normal procedure	45 days	30 days	30days	20days
Accelerated Procedure*	20 days	15 days	20days	10days**

*this is justified on a case by case basis

**or by mutual agreement in cases falling within owners and contractors

Sources: The regulation of Ministry of Communication, Transport, Post and Construction (March, 2004).

5.1.2 Advertisement in Thailand

According to potential respondents in Thailand, advertisement is posted at selected government offices first, and then it is advertised on radio and in Thai newspapers. Radio is the main channel for government advertisement. In addition, the government web site from the Ministry of Finance (www.gprocurement.go.th) is another main channel for invitation process. However, this process is not longer than 30 days for each domestic project. Meanwhile the international project or loan project might not take more than 60 days for advertisement. For any short domestic project, it is not later than 7 days and it is not more than 10 days for any short international project.

In the advertisement process, every detail is advertised in order to avoid problems such as postponement of project by owners.

Table 5.2 The Minimum Time Limits in Advertisement in Thailand.

From date of notification/advertisement	Domestic Public Bidding	International Public Bidding
Normal procedure	30 days	60 days
Accelerated Procedure	7 days	10 days

Sources: the regulation of Ministry of Finance (the forth editions, 1992).

5.1.3 Advertisement in Vietnam

According to the potential respondents in Vietnam, the advertisement is similar to Thailand (in terms of announcing the advertisements on local newspapers and on the internet websites) because the information is spread across very quickly and the internet connections are more reliable to response online. According to the interview with a Vietnamese government official, the advertisement gives more opportunity to local language than English language. There is a government web site (www.mpi.gov.vn) from the Ministry of Planning and Investment (MPI) which is directly responsible for government bidding for both domestic and international projects. The minimum time of international projects advertising invitation for bid is about 10 days before issuance of bidding documents.

Table 5.3 The Minimum Time Limits in Advertisement in Vietnam.

From date of notification/advertisement	Domestic Public Bidding	International Public Bidding
Normal procedure	15 days	30 days

Sources: The regulation of Ministry of Planning and Investment (MPI) (December 2001).

5.1.4 Analysis of Advertisement in Three Countries

In the three countries, the periods of advertisement shows differences among the country's rule and regulation as well as project's implementation plan and details of each document set. However, period of bidding advertisement is important for contractors and owners because if this is delayed then it may give negative impact on many involved and concerned parties. Therefore, whoever prepares to apply for bidding has to strictly follow the period of the project that owners have already prepared. The following table is an example of time limitation in each country.

Table 5.4 The Differences of Minimum Time Limits in Advertisement in Laos, Thailand and Vietnam.

From date of notification/advertisement	Domestic Public Bidding	International Public Bidding
Laos	45 days	30days
Thailand	30 days	60 days
Vietnam	15 days	30 days

Source: The Regulation of Ministry of Communication, Transport, Post and Construction (March, 2004).

The Regulation of Ministry of Finance (the forth editions, 1992)

The Regulation of Ministry of Planning and Investment (MPI) (December 2001).

According to the table, Vietnamese government does not mention the period of time on advertisement for domestic projects because it prefers local contractors to international contractors. The owners can select the local contractors quickly and save their time to complete all the process. In Laos, owners give time to domestic projects if such projects are under the government. Limited budget is a big concern for any government projects; therefore the contractors who want to apply for the bidding can

be very confident that they can cover the project's budget. Also, it depends on how much the contractors can negotiate. If they do not have adequate budget or limited bidding process then the limited bidding will be a long process. An example can be seen on table 5.4.

From table 5.4, the durations of advertisement in the selected countries are different, especially for international projects. In Thailand, the duration of advertisement is longer than in Laos and in Vietnam. There are advantages and disadvantages of advertisement durations. For example, the longer time of advertisement is the better opportunity for contractors to have enough time to prepare themselves properly to complete related documents.

The notice to bidders contains with the general type and size of the project. Included are: site drawing plans and specification (for review), time, place and date of the bid opening (Halpin and Woodhead, 1998). Normally, the owners required to give notice by placing advertisement for bids in newspapers, magazine, trade publications, or other media that related with construction projects. The durations of notice advertisement is not more than four weeks (Clough, 1986).

Advertisement to bid provides owners to be able to select an appropriate contractor for the project. It is also a starting point for any qualifying contractors as they would be able to complete the projects with satisfaction for owners. Laos and Vietnam implements advertising period of not more than 30 days which is based on international standards.

5.2 Prequalification

The suggestions mentioned above seem to be appropriate to be applied in the three selected countries. According to the interview, it was found that prequalification is important particularly for the owners and contractors. The purpose of prequalification is to eliminate incompetent, overextended, underfinanced, and inexperienced contractors. The prequalification steps are mainly required for road or highway constructions. Contractors should follow the owners' requirements in order to guarantee companies and contractors responsible for each project. Contractors also

should submit detailed information of their technical experiences and financial evidence (Sukaserm, **interviewed**, 25 October 2005).

Normally, there are five general prequalification criteria of contractors such as the contractor's organization, financial considerations, management resource, past experience, and past performance (Holt et al, 2000). Moreover, there are five levels of prequalification criteria: 1) references, reputation and past performance; 2) financial stability; 3) status of current work programs; 4) technical expertise; and 5) project-specific criteria (Russell and Skibniewski, 1994).

In general, to set up any standard for contractors depends on many factors and project's formats. For example, it is important to set up standards for financial status, the nature size of project as related to company experience, as well as equipment, labor condition, supply and the completion date. Therefore, certainly any contractors have to be well prepared for this in advance before they apply for any bidding. In addition, it was suggested that contractors who are interested in bidding have to provide and submit many things in advance such as detailed information concerning their equipments, experience references, finances, and current jobs in progress, references from concerned parties, and personnel (Clough, 1986).

Every contractor, who is interested in bidding, should fulfill owners' criteria and all conditions set out in the prequalification documents, then they will be invited to submit bids.

There are three criteria of the prequalification to be considered as follows:

- Financial
- Technical
- Experiences

In road constructions, prequalification questionnaires at specified intervals and rated score as to their maximum contract capacity are usually required (Clough, 1986).

According to conducted interview in some loan projects in Laos, prequalification is used as questionnaires for assessment and survey. Each question in the questionnaire is very important for bidders, who can not miss even a single question. Therefore, bidders have to understand the meaning of each question clearly in order to provide correct answers. The details of all questionnaires in the prequalification survey (Ngonphachanh, **interviewed**, 22 May 2006) are shown on the table 5.5 as following:

Table 5.5 the Prequalification Questionnaire Contents Forms

Form I	Letter of Application
Form II	General Information
Form III	Annual Turnover Data
Form IV	Summary of Current Civil Engineering Construction Contract Commitments/Works in Progress
Form V	Financial Data
Form VI	Joint Venture Data
Form VII	Experience in Contracts with Similar Works
Form VIII	Experience in Contracts with Similar Site Conditions
Form IX	Personnel/Staff Proposed for the Contract
Form X	Experience Summary of Key Personnel for the Contract
Form XI	Equipment Proposed for the Contract
Form XII	Proposed Site Organization
Form XIII	Proposed Subcontractors
Form XIV	Additional Information

Source: Prequalification Documents for Civil Work of Northern Economic Corridor Project R3
(February, 2003)

Furthermore, the prequalification is another tool that the owner can assess to the capabilities of contractors to complete a contract satisfactorily. This is a decision-making process that involves a wide range of criteria for which information is often qualitative and subjective.

5.2.1 The Criteria Methodology

Giving Score Method

The project owners used giving score method for evaluation to analyze and study bidders' characteristics and behaviours accordingly to set criteria. This method assists owners to analyse and know the differences of how much work is done by each bidder, who effectively works and reaches the goal set by the owners. The giving

score method adopted is related to characteristics that are essential to ensure satisfactory execution of the contract which is stated as unambiguous terms (Sukaserm, **interviewed**, 25 October 2005).

Documents for loan projects have to mention the prequalification in the bid documents for all details. In addition to this, it is usual to use scores to count because loan project is usually a big project. Using scores to count is considered as more convenient for owners to check on bidder's qualification. Each criteria capacity will be written down in the form of questionnaires that each contractors has to answer correctly and based on their working experience (as shown in table 5.5) (Standard bidding document, Procurement of Goods by ADB, June 2000).

According to survey in three countries, the steps of prequalification of bidding used similar method as it is widely used in construction work. For example, in Laos, Thailand and Vietnam the scoring method for quality control are used in steps for prequalification of bidders. Each factors group criteria of the quality control to measure are financial capacity, technical capability (inclusive of equipment and staff to be made available for the contract(s) and experience of Applicant Company or joint venture. These points will get scores based on the experience of the contractors. Table 5.6 below shows the score of each criterion for each country. (Nguyen Xuan Doan, **interviewed**, 25 February 2006. Douangprachanh, **interviewed**, 25 November 2005).

Table 5.6 The Giving Score Method Use in Three Countries.

Selection criteria	Laos	Thailand	Vietnam
Technical criteria	40 score	80 score	80 score
Financial criteria	30 score	20 score	20 score
Experience Criteria	30 score	-	-

Source: The Regulation of Ministry of Communication, Transport, Post and Construction (March, 2004).

The Regulation of Ministry of Finance (the forth editions, 1992)

The Regulation of Ministry of Planning and Investment (MPI) (December 2001).

Each factor group will be considered in turn and applicants that do not meet the minimum criteria for any factor group as a whole will not be considered for the examination of the subsequent factor(s).

For prequalification an applicant must attain at least the minimum score for each factor group as a whole as well as a minimum overall score, as show in table 5.7 Overall minimum score requirements will be:

Table 5.7 Overall Minimum Score Requirements of Prequalification

Maximum Overall Score Possible	Minimum Overall Score Requirement
100	70

Besides the criteria shown on table 5.6, owners will also look at the details as well. For example: Letter of Applicant, General Information, Financial Statement, Working Experience, Current Litigation, Contractor's Equipment proposed, Staff proposed, Site Organization, and Joint Venture. All these points mentions each detail in the bidding documents because all these things are important for the owners for evaluating all contractors. To meet the standards, contractors will be listed based on their experience, ranging from 1 to 10, will be selected to attend the bidding process (Sukaserm, **interviewed**, 25 October 2005).

However, giving score sometimes creates problems as well due to lacking people to evaluate or estimate. Sometimes there are contracts in ideas of each person which would create an impact in decision making for selecting contractors to match with each project due to score given to each contractors. Sometimes, given scores creates confusions to technical process and affects other important processes. Sometimes to give out any score, technical consultant has to be very accurately because at the end of report all scores have to be converted into percentages. Therefore, if the technical consultants give out too much detail on each point, this might create difficulties when they convert scores into percentages.

According to interview results in two countries: Thailand and Vietnam pay attention closely to technical consultant in terms of giving out scores aside from other important points that technical consultant has to pay attention to (Ngonphachanh, **interviewed**, 24 November 2005. Wanlop, **interviewed**, 30 June 2006).

5.2.2 Contractor's Views on Factor Importance

From the estimation of the contractors who have been previously prequalified, they can estimate by reference to previous prequalification records. The criteria for prequalification and bid evaluation falls into five groups: 1) general information, 2) financial information, 3) technical information, 4) managerial information and 5) safety information. It depends on the owners to decide which is required in relation with each project (Hatush and Skitmore, 1997).

The levels of difficulties are for contractors in developing countries. The first level of difficulty is the access to complete knowledge about the cost conditions of the contractors itself for all contracts that it intends to bid for. The second level of difficulty is the estimation of the exchange rate cost. The third level of difficulty is the estimation of the probability of winning. The fourth level of difficulty is the expectation of the time it will take to complete the contract at the offer stage (Kortanek et al, 1973).

According to contractors' potential respondents in Laos and Thailand, it is found that the main factors for contractors to consider on the owners' requirement are prequalification. All contractors have to pay close attention to each point. They should know where to work on more and where to work on less based on each question that they are going to develop for the questionnaire survey.

For example, the ideas of contractors on how important they perceive various factors would be focused in bidding. Thus, the contractors were invited to rate each factor on a scale of 5-1. Relative index (RI) has been well tested in ranking such data and therefore, it is applied here. The aggregate response for each factor is converted to a level of relative influence and correlative range.

Among the respondents as a whole, "Estimate price" is a very important factor which contractors believe to influence the winning bid (1.00). This maybe because the contractors have to prepare all implementation cost as low as they could. This can be the key factor for bidding process in order to be the winner or to pass consideration process from owners.

Financial statement is the second important factor (0.88) for bidders. In fact, this factor is also important for the working experience and technical capacity of the contractors. However, most of loan bidding attendees are usually foreigners, so that financial budget is the main factor that they have to be well prepared since the contractors has to responsible for the bond as well.

The third important point is “Technical qualification and Experience Proposal” (0.68). This factor could be the third because the above mentioned factors are more important, particularly for contractors who have more working experience. However, this factor usually reflected on the working information background of the contractors in the bid document.

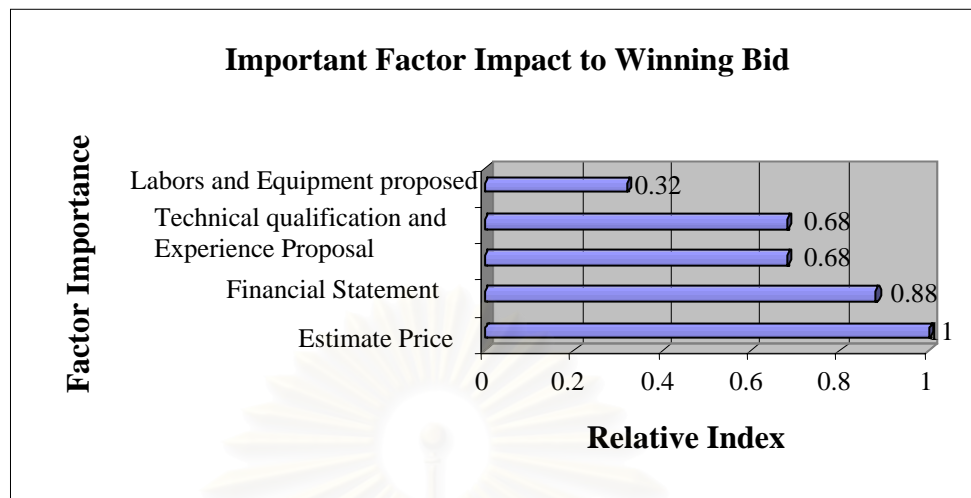
The last important factor is the “Labors and Equipment proposed” (0.32). This factor is weighted to be not important; perhaps it could be found in local countries because it is about local workers. Usually workers are mainly found in the local country (sub-contractors responsible for such duty) in order to save cost. In addition, this factor is countless for the bidding process. However, for the equipment perhaps the contracting company has prepared in advance and could be used at any time. Table 5.8 shows the perceived level of importance factors by contractors and the relative index is plotted in the graph (Figure 5.9)

Table 5.8 Perceived Level of Factor Importance by Contractors.

Factors	Number of responses, Scale 5 to 1					Relative Index	Rank
	5	4	3	2	1		
Estimate Price	5	0	0	0	0	1.00	1
Financial statement	1	2	3	0	0	0.88	2
Technical qualification	0	3	1	1	0	0.68	3
Experience Proposal	0	3	1	1	0	0.68	3
Labor and Equipment proposed	0	0	0	3	2	0.32	5

Note: (5= very important; 4= important; 3=some; 2=minor importance; 1= not-Important)

Figure 5.1 Perceived Level of Factor Importance by Contractors.



Importance of contractors is based on each criteria set up by owners. These criteria are important for contractors as well as if they want to be the winners. In the selected three countries, contractors pay most attention to the estimated project cost. However, in loan projects, there are several factors that contractors have to pay attention to (particularly foreign contractors). For instance, the host country's politics and policies, as well as documents especially local country's regulations which defer from country to country must be taken into account.

5.3 Bid Submission

According to the interviews from three countries, it is found that they have steps of the bid submission. For the international bidding, the transparency of the project is very important and the bid submission is mentioned at the bid documents as mentioned beforehand. Location of bidding is in any public place and the committee will receive and open the bidding in front of every body. The submission of bids are done personally by the contractors, particularly the chairman of each company. The owners have to take note for date of submission of each contractor and the owners will not accept any late submission. (Sukhantararat, **interviewed**, 30 June 2006. Ngonphachanh, **interviewed**, 24 November 2005).

5.3.1 Late Bids

Steps of bid submission in three countries are similarly applied and follow the submission guideline. For example, if any bidder or contractors submit their bid late they will be canceled and will not be allowed to do more resubmission for a particular project. Owners in three countries pay very close attention to this process because they want to reduce any confusions and as well as to increase more transparency in the bidding process.

5.3.2 Bids Collusion

Many developing countries still experience bid collusion. Due to collusive practices among bidders, lead collusion bidder design began to establish artificial bid prices and notices in advance between some of the bidders and the concerned organizers.

To fine bidders, collusion depends on project owners who could stop hiring the contractors immediately when they find out the collusion and make an announcement at a public place. On the other hand, the project owners could keep the collusion contractors on their black list for the next round of bidding, which could be either indefinitely or for a state period of time to be awarded of any projects. (ADB Standard Bidding Document, Procurement of Goods, June 2006)

According to survey conducted in the selected three countries, it is found that bid collusion happens in some domestic projects or some small projects only. However, for international projects this kind of problem has hardly or never happened. In any loan project, each details of Prequalification or any documents are strictly evaluated and approved by owners and loaners initially. Therefore, the collusion rarely happens in loan projects (Siharath, **interviewed**, 22 November 2005. Sukhantarath, **interviewed**, 4 November 2005. Nguyen Xuan Nhat, **interviewed**, 20 February 2006).

5.4 Bid Opening

In the three selected countries, after opening the bidding, the bid opening committee (or the owners) will consider which part to look first, for example, between the technical proposal and the price proposal.

According to interview results in Laos, it is found that for the loan project the owners will firstly look into the technical proposal then look into the prequalification. Secondly, the owners will look into the price proposal that bidders can propose any discounts and alternative offers for the owners to consider. Later, one of the owners will read out and record every information during the opening of price proposal. Finally, the owners evaluate the technical proposal based on proposed cost from bidders if it is possible to accept it or not (Sukaserm, **interviewed**, 25 October 2005).

Whereas, in Thailand and Vietnam, the bids are opened firstly to find out who propose the lowest cost. Secondly, the technical proposal is considered after looking at number of bidders. Even though a bidder get number 1 but the owners will evaluate on the technical qualification as the next important point to judge. (Sukhantararat, **interviewed**, 30 June 2006. Nguyen Viet Hung, **interviewed**, 20 February 2006).

According to interview results, the bid opening process is practiced in a similar manner in three countries. For example, after bid submission is approved, the bid opening will be conducted at a public place. During this time, all concerned parties are invited to attend the bid at the same time. In general, the bidding document will be done immediately after an approval of the bidding documents. The owners will declare the list of lowest price from 1 to 10. The list from 1 to 10 does not mean that the range is from the first to the last but there are list of 10 possible contractors who will be considered to be the contractors for the project. Later on, the committee of the bidding will consider the bid evaluation. Any bid price or discount which is not read out and recorded at bid opening will not be taken into account in bid evaluation. The declaration will cover: name of the contractors, bid prices, and the names of persons in attendance or the organizations they represent. (Sukhantararat, **interviewed**, 30 June 2006).

Duties of Bid Opening Committee

Bid is usually formally opened in the presence of at least three people:

- The project manager or his nominated representative
- The Contracts engineers
- The employer's/Owner's representative.

Bidding opening committee has to check all bidders who could attend the bidding that even the team has to check all of the participants. This is to confirm that every participant never had reputation on collusion before (Horgan, 1984)

According to the interview done in the three selected countries, there are three main parts of the bid opening committee:

- The Loaner's representative
- The Owner's/Employer's representative
- The Contract Engineers

The bid opening committee in three countries will consider: the decision of the bids, the bid opening committee and they will take the following action: for example

1. Bid envelopes are opened in front of the bidders.
2. Committees will check the bidder's qualification, the forms and details of the proposed documents and bills to ensure correctness.
3. Bid price will be considered in conjunction with the proposed construction time, method and schedule of work and some other details which benefit the project. In other projects in most cases the total bid price is normally used for the bid decision. The reasonable lowest price proposed is usually awarded the contract.
4. Negotiation and price adjustments are often carried out if the lowest bid price is much lower or higher than the engineer's estimated price.
5. The successful bidder will be notified by the bid committee official for preparation of all contract documents within a specified time, if not, the bidder reserves the right to withdraw his bid without penalty.

6. Loaner's representative will be the receiver for bids opening finished in order for the clear collusion (Sukhantararat, **interviewed**, 4 November 2005. Khamanivong, **interviewed**, 24 November 2005).

5.5 Bid Evaluation

The main objective of the bid evaluation is to select the contractors that have low cost and meet conditions of all details to evaluate. Therefore, the committee should have experience and high skills which are needed for any committee. However, steps to evaluate need to be accurate and no mistakes must be done in order to meet all conditions of committee and be accepted by bidders in all details.

5.5.1 Stage of Bid Evaluation

The stage of bid evaluation under competitive bidding is an evaluation based on appropriateness of project to decide which step needs to be evaluated. Loan projects of ADB usually set up contract type for owners, and owners will select which one is appropriate and the best for local uses and also based on the condition of each contract that they selected as well (Sukaserm, **interviewed**, 25 October 2005; Nguyen Viet Hung, **interviewed**, 20 February 2006 and Chudley, **interviewed**, 8 November 2005).

Based on conducted interview, it is found that ADB loan project has evaluated stage as following:

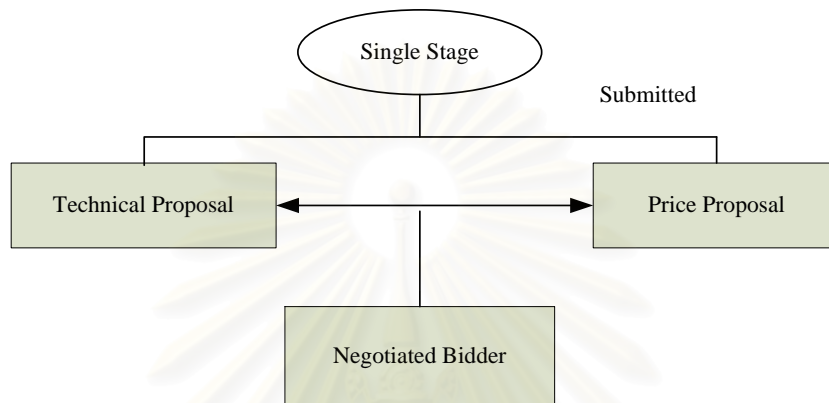
- Single Stage Bid Evaluation
- Two envelop (Single Stage) Bid Evaluation
- Two Envelope (Two Stage) Bid Evaluation and
- Two Stage Bid Evaluation

Single Stage Bid Evaluation

In the single stage in bidding evaluated, the bidders submit bids in one envelope containing both the price proposal and technical proposal which is opened in public at the same time. The bids are evaluated on the technical and price together

where they are usually used for small projects or for projects that open bid document and call bidders for negotiations afterward. Fig 5.2 shows the Organization Chart of Single Stage Bid Evaluation.

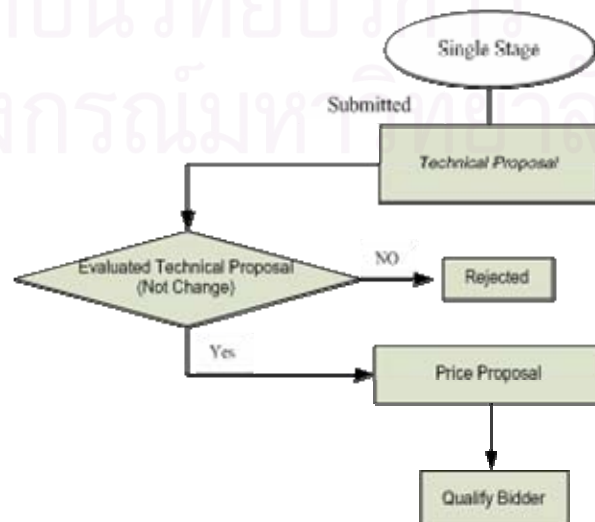
Figure 5.2 Organization Chart of Single Stage Bid Evaluation



Two Envelopes (Single Stage) Bid Evaluation

In the two envelopes (single stage), two envelopes are submitted at the same time. One contains the technical proposal and the other contains the price proposal; only the technical proposals are opened under consideration. The price proposal is not opened yet at this step. For technical evaluation, the owners will not allow any changes after bidder submitted to owners. Evaluation in two envelopes (single stage) is usually used with domestic projects and it depends also on the loan project.

Figure 5.3 Organization Charts of Two Envelopes (Single Stage) Bid Evaluation

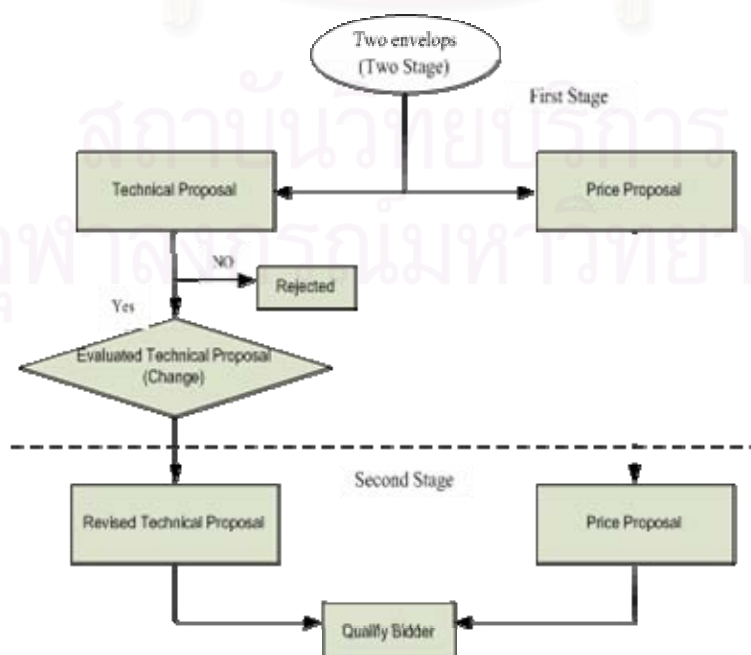


Two Envelopes (Two Stages) Bid Evaluation

In the two envelopes (Two Stage) bidders submit two envelopes, one contains the technical proposal and the other contains the price proposal. Only the technical proposals are opened and evaluated first. The price proposal is not allowed to be opened for evaluation yet. The technical proposals are evaluated if the owners require more or if asked to change some details on the technical proposal. Owners will invite bidders for negotiations before any changes. Then the owners will give permission to bidders to submit supplementary price proposals based on the revised technical proposals. The contractors who are unable or are not prepared to amend their technical bids as to conform to the technical standard required by the owners may be rejected, as shown in Fig. 5.4 Organization Chart of Two Envelopes (Two Stage).

According to potential respondents, it is found that in evaluation process the two envelopes method have been used for almost every construction projects in Laos and Vietnam. The main advantage is that the owners are able to recheck their technical envelope carefully in order to select the most appropriate contractors (Sukaserm, **interviewed**, 25 October 2006. Nguyen Viet Hung, **interviewed**, 20 February 2006).

Figure 5.4 Organization Chart of Two Envelopes (Two Stage) Bid Evaluation



Two Stage Bid Evaluation

In the two stages in bid evaluation bidder, first all of bidders submit their technical proposals in accordance with the specifications but without price. The technical proposals are opened and evaluated by the owners and discussed with the bidders. Any difference, extraneous provisions, and unsatisfactory technical features are pointed out to the bidders whose comments are carefully evaluated. The bidders will have to accept all conditions that the owners ask for in order to improve the technical proposal to meet the requirements of the owners.

The main objective for this evaluation is to make sure that all technical proposals follow the technical standard and meet the owner's requirements of the prequalification, as shown in figure Fig. 5.5 Organization chart of two stages.

The second stage is to invite bidders to submit revised technical proposals and to submit price proposals based on the revised and agreed upon technical proposal. Then, the two proposals are evaluated at the same time and an appropriate time is set up for the bidder that prepares price proposals based on changes required in the technical proposals. Usually, this evaluation is used for big projects and complex contracts. Mostly, owners want to guarantee the project by asking for performance security requirement.

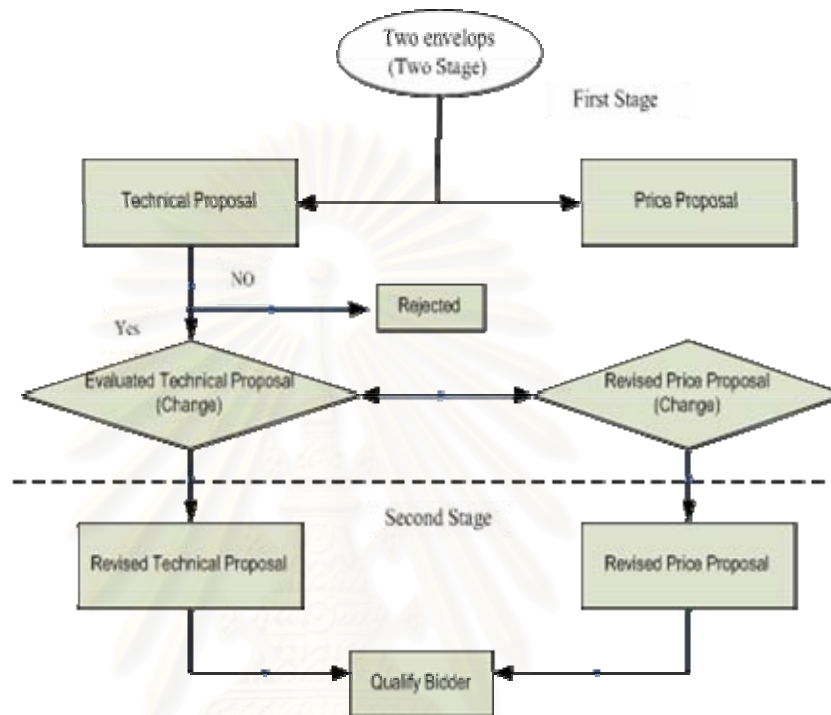
According to potential respondents, it is found that in evaluation process the two stage methods are used for almost every loan project contract's conditions in Thailand. The advantage is that the owners are able to carefully double check in order to select the most appropriate contractors (Sukhantararat, **interviewed**, 4 November 2005)

5.5.2 Bid Evaluation Period

The evaluation process is similar in Laos and Vietnam but is different in Thailand. According to the study for instance, in Thailand, there is nothing mentioned in the regulations. It depends on the appropriateness of the project. If there are many contractors interested in any project then the owners will select the best period of time

to consider contractors. Also, the owners will select the best contractors for each project as soon as possible since there are many choices for the owners.

Figure 5.5 Organization Chart of Two Stages Bid Evaluation



For each owner, the evaluate process is very important and must be clear. Owners have to spend time to consider finding the best contractors based on all conditions that the owners have set up. Bid evaluation period is shown in the table below:

Table 5.9 The Differences of Bid Evaluation Period in Three Countries.

Bid evaluation period	Laos	Vietnam	Thailand
Domestic projects	15 days	40 days	N/A
International projects	Depend on bid committee required	60 days	Depend on bid committee required

Note: the date start from submission day

Source: The Regulation of Ministry of Communication, Transport, Post and Construction (March, 2004).

The Regulation of Ministry of Finance (the forth editions, 1992)

The Regulation of Ministry of Planning and Investment (MPI) (December 2001).

In Laos the declaration of the contractors is slow since the contractor's interview is also slow. So, it delays the next step after the declaration such as the signing ceremony which would also cause the delay of the implementation process as well. Another problem is that the owners try to add some more work excluded in bid documents in advance. Therefore, these two problems in Laos are to be seriously considered (Bounthan, **interviewed**, 24 May 2006. Chanleuame, **interviewed**, 24 May 2006).

5.5.3 Selection Criteria

According to respondents from three countries, the bidders have to meet the set up criteria that set by owners. There are many factors that bidders can pay attention to in each step particularly in the evaluation criteria as mentioned in PQ used in the evaluation of bidders. Owners are careful for the financial, experience and technical criteria because these points are important in assisting to select the bidders based on the owners' requirements (Sukaserm, **interviewed**, 25 October 2005; Sukhantararat, **interviewed**, 4 November 2005 and Nguyen Viet Hung, **interviewed**, 20 February 2006).

The evaluation process in public construction mentioned for selection criteria is evaluated by standard of 4 criteria, namely: past performance, financial status, current workload and technical expertise (Lo, 1998). Moreover, Ng and Skitmore, (2001) identified five related main criteria: financial situation, technical abilities, management capabilities, safety performance and reputation.

Other selection criteria of the bid evaluation in a survey of Chinese construction is based on six important criteria, namely: (1) Degree of response to the bid documents; (2) Construction organization design; (3) Firm's honor and competence; (4) Bid prices and the amounts used of materials ; (5) Range of reducing cost; and (6) Comprehensive evaluation and examination. All bidders are evaluated by all the commissioners based on the above criteria (Wang, 2004).

The criteria of contractor's selection for evaluation into five groups: general information for administrative purposes, financial information, technical information,

managerial information and safety information. Managerial information criteria consider the management and organization of works, resources, coordination-control-response and documentations. Also, the safety information is focused on construction cost situation by protection of accident cost control through owner selection of safe contractors (Skitmore, 1997).

This has found that owners in three countries have used the same type of the evaluation criteria where the most meaningful point would be based on the project information provided to the contractors. The good points of mentioned criteria are that it is an easy method for the owners to identify the previous capacity of the contractors. Therefore, owners find it easier to evaluate the contractors both in prequalification and in bid evaluation.

5.5.3.1 Experience Capacity

Experience has an effect on construction contract bidding. By presenting empirical findings, it shows that contractors who have bidding and construction experience are, on average, more competitive in their bids than inexperienced contractors (Fu et al, 2002).

In general, contractors' experiences are very important factors for construction project requirement. Especially, experienced contractors are required to manage and complete their construction projects on schedule and with quality standard of the ADB guideline. The guideline has been implemented and used effectively in the ADB construction projects in the selected three countries. The selected experiences from the three countries are very important factors for evaluating the contractors' experiences, which are fit in the following criteria: (1) main contractors or lead partner; (2) similar work; (3) similar site conditions; and (4) past performance (ADB Standard Bidding Document, Procurement of Goods, June 2006)

Approved construction project documents are very important to each contractor in order to guarantee at least three previous construction works, which had been completed. However, the completed construction work has to be fit and similar

to the current bidding construction projects. Therefore the guaranteed construction documents should consist of five core facts as following:

- A description of the project should consist of sufficient details and should be clearly indicated consistency with the applicant's submitted forms.
- A clear statement regarding the performance of the project management, site management, sub-contractors, programme and documentation.
- The technical quality of the works and specifically the number of defects.
- Number of claims during the project.
- If completed on schedule.

Experience capacity is one of the three main capacities which the owners consider to be important. The experience of each bidder tells the working skills of each company. If any contractors has any experience problems on the bankruptcy, this shows the disadvantage of that company, which may be considered as a weak company (Ngonphachanh, **interviewed**, 24 November 2005).

In addition to this the owners have to look closely at the experience of the contractors to make sure that they have adequate experiences, which are matched with the project requirements. Even though some companies might have good financial status but less experience, this means they will not be accepted by the owners. For example, for a project in the mountainous area (in the northern part) of Laos, there are many companies, which have experience in low land areas, who are carefully studied and considered by the owners as to whether they can do the project. Because the owners will look at all the technical capacities and experiences that the companies have in order to make sure before making decision to accept any companies. (Khamanivong, **interviewed**, 24 November 2005).

5.5.3.2 Financial Capacity

From three countries' interview results; it is found that financial capacity is one of the standards that owners may require. Sometimes, it is the first thing that the owners might look into when they open the bid. After opening the bid, the owners will take note immediately which company has the lowest and which one has the

highest budget proposed. The financial capacity is an important point to negotiate between the owners and the contractors. The owners will require the bidders to furnish rating evidences of their financial capacity to fulfill the requirements of the contract (Nguyen Viet Hung, **interviewed**, 22 February 2006. Siharath, **interviewed**, 22 November 2005. Sukhantarath, **interviewed**, 4 November 2005). Details of financial capacity for the bidder that put on document are as described below:

1. Certified statement from bankers including, if necessary, details of available line of credits;
2. Financial status of the contractors for the last three years
3. The references of overall turnover and the turnover in respect with last previous three years projects

Moreover, the bidder's proposed financial capacity is judged on the basis of turnover/incomes from contracting, net worth, and the value of unfinished portion of current contracts. If contractors notice their financial capacity is insufficient, they will fill in an application and a letter of guarantee to submit and the first class bank, who will then issue the supplement according to the application. The letter of guarantee is addressed to the employer and is guaranteed in the case when the contract is awarded to the applicant, who will be provided a revolving line of credit for an amount specified in the letter of guarantee. Such revolving line of credit is maintained until the work is taken over by the employer (Ngonphachanh, **interviewed**, 24 November 2005).

Financial status mostly is often estimated and analyzed by looking at comparison, examination of bank references, credit reference and financial stability. Some owners may pay more attention at the contractors' experience claim, financial data in bid documents, liabilities and also the contractors' income statements etc. (Hatush and Skitmore, 2001).

If any bidders over estimate bid price based on owners' set up, the owners will reject them. Sometimes contractors set up high costs because they mean not to get the project. Or when the owners can not negotiate the project's cost, the bidder will

withdraw his bid without forfeiture of their bid security (Chaleunsouk, **interviewed**, 23 November 2005).

5.5.3.3 Technical Capacity

Technical capability are based on the basis of experience, site management proposals, the qualifications and experience of the proposed project manager and other key technical personnel, the plant and equipment to be made available for the contract (Ngonphachanh, **interviewed**, 24 November 2005).

These criteria are concerned with the current situation of the contractors' capacity such as labor and plant resources, ability to handle the type of projects, quality and size of works, and the ability to perform on site. Past experiences with domestic and overseas projects included the type and size of projects completed is also to be examined (Hatus and Skitmore, 1997).

According to the conducted interview, it is found that the technical capacity is an important point for the owners who are confident that they follow and have standard guideline and time schedule. This directly affects the technique in the construction. Therefore, according to the study done in Vietnam and Thailand, they pay more attention to this point in order to scope with their countries and also to improve the standard of the contractors as owners' requirements. (Sukaserm, **interviewed**, 25 October 2005).

In the bidding evaluation, the bidding committee who has the authority to select the contractors is mainly from concerned Ministries such as Ministry of Finance, Committee for Investment and Cooperation, and Head of Department of Road. The evaluation is on the basis of guidelines and procedures which are prepared by the consultant. Financial capacity, experience on the relevant work and technical qualification are the main factors to be evaluated. Nevertheless, the contractors just provide only the technical issues but the final decision for awarding the contract depending on the committees which come form high ranking people in the several Ministries concerned.

5.6 Award of Contract

According to interview it is found that in general after selecting the lowest evaluated bid price, the owners will declare the winner and confirm by registered letter that its bid has been accepted. This letter in the Conditions of Contract called the "Letter of Acceptance". The contractors are ready for the performance security and environment security (if required in bid documents). If the selected contractors do not submit the document, the contractors will not be proven to be the contractors or bid the bidding. If the contractors do not submit the document, the owners can select the second lowest contractors. (Ngonphachanh, **interviewed**, 24 November 2005).

In addition to this, the owners will submit the form of contract agreement provided in the Bidding Documents, incorporating all agreements between the parties. The contractors would sign the form of agreement and prepare the performance security that is needed to be submitted to the owners as mentioned in the period of time in the condition of contract. In addition, if the winners can not conduct the implementation based on period of time even it is mentioned in the annulment of the award and forfeiture of the bid security. (Ngonphachanh, **interviewed**, 24 November 2005).

5.6.1 Contract Agreement period

According to the results of the interview, the period of time of the contractors to return the contract agreement back, which is mentioned on the contract condition of three countries, are similar. For instance, Laos and Thailand have the same period of time; however, Vietnam has slightly different period as shown in the following table:

Table 5.10 The Return Period of Contract Agreement in Three Countries

Signing of Contract Agreement	Laos	Thailand	Vietnam
Period return time	28 days	28 days	30 days

Source: The Regulation of Ministry of Communication, Transport, Post and Construction (March, 2004).

The Regulation of Ministry of Finance (the forth editions, 1992)

The Regulation of Ministry of Planning and Investment (MPI) (December 2001).

5.6.2 Collusion or Fraudulent Practices

According to the survey conducted in three countries, contractors have clearly followed the regulation mentioned in the procurement law. For example, if any bidders refuse to follow the regulation mentioned, they are not allowed to get into the bidding process even the government officials are involved in this process of fraudulent bidder (Nguyen Viet Hung, **interviewed**, 20 February 2006). They also intent to break the regulation as mentioned below:

- Act of gift, offer, receipt, or request for any valuable object by individuals and organization involved in the process of bidder selection and contract implementation, which results in dishonest and non-impartial behavior in making decision about the bid winner, in signing and implementing the contract;
- Use of personal influence to impact or intervene, thus distort, thus not clear of the result of bidding, signing and implementing the contract.
- Collusion among the bidders, between the procuring entity and the bidder, between the regulatory agency and the procuring entity and the bidder, to alter bidding document, collusion with appraisal organization, inspectorate thus affecting the collective interest, and the national interest..
- Organization or individual participate in evaluation of bids and appraisal of bidder selection result of the same package.
- Imposition of specific brand names or origins of supplies in bidding document for goods, civil works.
- Participating as a bidder in a package that he himself is procuring entity
- Leakage of procurement details and information of the following

As mentioned above, the penalty to any contractors should be practised seriously to decrease the collusion or fraudulent practices in bidding process. Even though the winning bid is already declared, if the contractors change the cost of construction as well as change the budget of construction then they are considered breaking rules. If there are the cases like this, the owners would definitely reject the fault winners (Ngonphachanh, **interviewed**, 24 November 2005).

Collusion has often been argued to exist because the lack of bid competition generates rents that can be illegally appropriated. This general idea has often led owners into think that increasing the competitiveness of bidding helps reduce collusion incentive (Celentani, 2002).

Study results from three countries shows that there will be an increase of contractors' competitions. This could be more beneficial for the projects because it would decrease bid collusion. Moreover, this survey found that there is no collusion from any loan projects in the three selected countries so far. The main reason is that owners pay close attention to each step when they implement the projects in order to show transparency.

5.7 Summary

The procedure and formality of bidding are quite complex, especially the bidding process which creates high competitions among project bidders. The higher competitive advantages are the more transparent procedure. This encourages project owners to have many choices and alternatives to look for appropriate and high-quality contractors who would work effectively.

As mentioned above, the contract procedure and formality of bidding have been properly practiced and followed strictly in the three countries. For instance, the constructions on project loan have required more formality and document procedure, which is concerned more about the quality standard of documentation. These are advantageous for project loan owners to have trust and approve budget loan for construction development in three countries.

In three countries, pre-qualification consists of three main criteria, concerning on technical, financial and experience factors. From results, these factors are necessary for selection of the right contractors involving in projects. In addition, the evaluation process practices in three countries have used scoring method, from which the project owners pay more attention on technical criteria. In contrast, project contractors are more concerned about estimated price criteria, because they believe that the lower bid price is made, the bigger the chance to win the bids. However, from

owners' perspective, the lowest price made on bids do not always to get project. In addition, foreign contractors should pay attention on other factors and conditions, which are relating to geography, country climate, economy, politics, culture etc.,

Additionally, the penalty of bid collusion should be strictly applied in the practice such as being placed in the black list record and not allowing to attend any construction project competitive bidding again. This practice can support and reduce the risks and problems between owners and contractors. As a result, applying the strick penalty has reduced numbers of bid collusion during the project loans in the three countries.



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CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

This thesis has discussed the bidding processes in three ASEAN countries: Laos, Thailand and Vietnam. The discussion is mainly on bidding's backgrounds, organizations, documents, and processes in current status, also the similarities and differences between Laos, Thailand and Vietnam's bidding processes are made. This chapter will summarize the finding in previous chapters and provides some suggestions.

6.1 Summary and Conclusion

There is an increase of globalization in ASEAN countries, this leads to fast growths of economic and trading cooperate relations among countries. From the study, the road construction projects, which are under the project loan, have been cooperated with construction development and foreign investors working on construction projects. This shows an increase of countries' openness to development. As results, there are advantages for economic growths as policies of the three selected countries. Therefore, it is summarized as following:

1. Tight cooperation and high responsibilities of working teams are necessary and important for construction loan projects. As a result, the selected three countries have practised to delegate responsibilities to working team in good manner. It is also found that bid committees of three countries are quite different from the country to country, for instance, the Lao bid committee consists of representatives from ministries, responsible for relating tasks and works, which followed the government conditions for the loan projects. However, the Thai bid committee consists of three parties such as representatives from project owner, loaner consultant and bidder. Furthermore, the Vietnamese committee consist of only representatives from owner and bidders.

It is also found that personnel, who are responsible for the all the bidding procedure and formality, should be qualified and skillful. However, in developing countries there are still unskillful personnel working on bidding procedure, this leads to problems and ambiguities among bidders.

2. Construction contracts have been used and practised by following the FIDIC as guideline and conditions of contracts for loan projects and domestic projects. In addition, government regulation should be considered and studied carefully in order to suit with political conditions of the host country.

This research attempts to identify a standard of bidding contract conditions from those who are responsible for and participate in bidding documents. From data percentage analysis the standard bidding contract conditions were used in their organizations presented. For example: (1) Government regulation and FIDIC mixed (2) ADB/WB Template (3) government regulation. Those standard bidding contract conditions in each country were slightly different because of their condition, and appropriately for the projects.

3. In three countries, pre-qualification consists of three main criteria, concerning technical, financial and experience factors. As a result these factors are necessary for selection of the right contractors in projects. In addition, the evaluation process practised in three countries use by scoring method, from which the project owners pay more attention on technical criterion. In contrast, from relative index analysis project contractors are more concerned about, for example: (1) estimated price criteria, (2) financial statements, (3) technical qualification, (4) experience proposal and (5) labors and equipment proposed. Furthermore, foreign contractors should pay attention on other factors and conditions, which are relating to geography, country climate, economy, politics, culture, etc..

6.2 Recommendations

To be successful in bidding process, formality and quality standards are highly required during the process. Therefore, project owners should do the study of previous lessons in order to prevent unforeseen problems occurring in the future.

1. There should be a mutual agreement of the contract before bidding and implementing construction work, this can prevent and avoid unforeseen problems. Especially, foreign contractors should prepare and do documentation properly, for instance, contract conditions have to be unambiguous. The relating documents and contracts are considered as master references, which help contractors to follow as guideline mentioned by owners.

2. A stage of bid evaluation is also crucial, because owners should operate in proper ways accordingly to their projects. Different projects have their own specifications, therefore owners should learn about limitations of each stage in order to evaluate bidder appropriately.

3. Working on bid collusion is considered as importance and strictness; this creates transparency and fairness to concerning organizations during bidding process.

4. It is important to know that before proceeding construction project in foreign countries, international contractors should learn and know not only quality of construction companies. Moreover, they should learn more about country conditions such as geography and country climate, economic condition and political conditions.

5. Language barrier is one of many problems that Thailand, Vietnam and Laos governments are facing with. Therefore, owners and contractors should pay more attention to build their own staff's skills and knowledge to understand all concerning bidding documents. Language barrier might also lead to misunderstandings between loaners and owners especially in terms and conditions in project agreements. Project owners in these three countries should upgrade their staff's knowledge and skills in order to avoid communicate problems which lead to low quality project's implementation.

6. Based on interviews in the three countries it is found that bidding processes are well implemented based on the international regulations. In addition, each country also follows international standards in terms of documentations, for instance, FIDIC, EJCDC and JBIC. However, each country implement their projects based on loaner's interests as well as appropriateness of each project requirements. Moreover, each

country also pay close attention to contract's details before they implement the project in order to avoid any problem which might occur during the implement process.

However, there are some problems that the three countries have to pay more attention to, for instance, government policies in each country which is different from one another. Therefore, foreign contractors have to be aware of this information before they decide to attend the bidding competition. Otherwise, foreign contractors might end up with working with many problems before they complete the projects.

On the other hand, owners also have to follow their own bidding regulations. Owners have to be able to discuss and share every problem in the evaluation's committee in order to be clear in each document before their open their projects for bidders.

Recommendations for Further Research

1. The focused points for further study are: bid organizations, bid documents and bid processes. Further research should try to concentrate in more details on each of bidding process. Based on this survey, it shows that the three focused points mentioned above provide negative impacts to the three countries.

2. These three countries are ASEAN members, therefore, there should have more collaboration to share and exchange their lessons learnt in order to improve projects' implementation standards.

3. This survey provides direct benefits to interested contractors, who would like to work in ASEAN countries. The interested parties could use information from this survey to guide them for better performance and proper preparation before attending the bidding process.

4. Increasing and encouraging more foreign contractors to work in host countries should be more considered in order to meet with the need of country's development. In addition, foreign contractors should follow international guidelines for construction contracts, which provide advantages for owners and contractors. The main and direct benefits are to contract with foreign contractors rather than local

contractors, which can reduce bidding's collusion and increases transparency among concerned parties.



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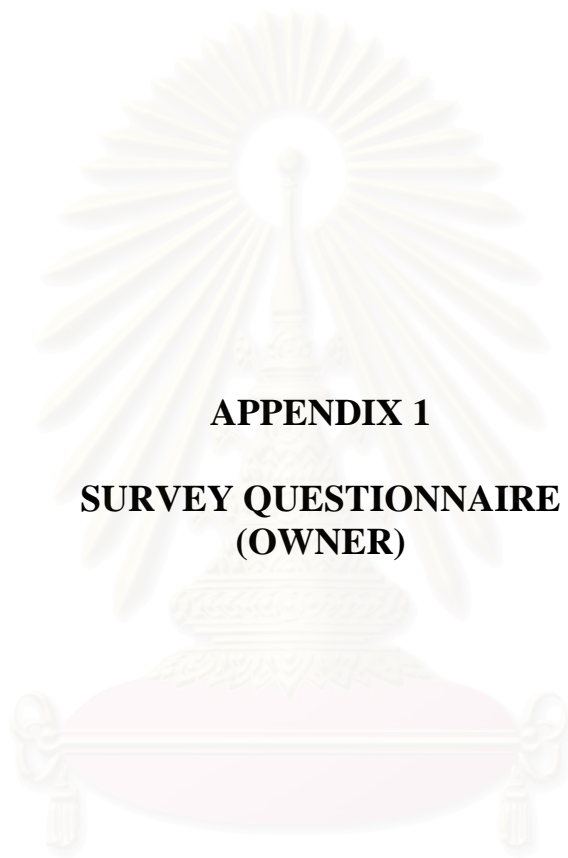
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APPENDICES

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APPENDIX 1

**SURVEY QUESTIONNAIRE
(OWNER)**

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SURVEY QUESTIONNAIRE

The Thesis Title:

Bidding Process and Contracting of Government Public Construction Roads in Three
ASEAN Countries (Laos, Thailand and Vietnam)

Dear Sir,

My name is Ms. Xoumaitri Panyanouvong. I am a graduate student from National University of Laos studying at the Department of Civil Engineering; Chulalongkorn University.

The objective of the study is to identify problem and constraints in the Southeast Asian Countries associated with the construction contracting processes, i.e. Bidding Processes, Organization and Bidding Process. The research will provide the exchange of knowledge among Laos, Thailand, and Vietnam.

To do this, of course, means going to someone such as yourself who knows. Your help with the few questions on the attached pages will take only a few minutes and will make a real contribution to the accuracy and success of this study.

Your answers will be treated in strict confidence and will be used only as parts of my thesis study for analysis. Any publication will be only statistical totals for groups of companies.

Your assistance will be greatly appreciated. Thank you so much for your cooperation.

Sincerely,

Ms. Xoumaitri Panyanouvong

Name of Respondent:.....

Position:.....

Your experience relating of contract management:.....

Date:.....

Please indicate the important of opinion via numeral scaling. Like a scale of 1 to 5 was used where 5 represented “Strongly agree” and 1 represented “Strongly disagree”

• ***Advertisement and Prequalification***

Your opinion within these statements during the process of advertisement and prequalification.	(5)	(4)	(3)	(2)	(1)
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Should owner be indicating the scheduled date for availability of prequalification?					
2. Should owner be specific procurement notices in newspaper?					
3. The standard bidding document is always issue by consultant.					
4. The experience and past performance of contractors are important for the owner.					
5. The equipments, material, labor attached along with proposal are always adequate.					
6. The financial position of contractor is first important point.					
7. The contractors always submit the prequalification in period of time.					
8. The donor standard condition could be make problem for borrower country.					
9. Te regulation law is important for the owner					
10. The contractors are risk of responsible of bidding documents.					
11. Other opinion related, please specify: _____ _____					

• ***Bid Submission and Bid Opening***

Your opinion within these statements during the process of Submission and Bid Opening	(5)	(4)	(3)	(2)	(1)
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
12. The lowest price is always getting the project?					
13. The full detail reports of bidding submitted by the contractors are always well-organized with a standard format					
14. the using language is always making a problem for bidder?					
15. The full details of bid are always submitted within time limit requirement					
16. the committee of bid opening security is very strictly					
17. The owner is always notice as soon as possible concerning their reject bidder.					
18. Overdue process in retrieving the documents back					
19. The owner may require unsuccessful bidder to sign a declaration accepting, if they withdraw or modify the winning bidder					
20. The bidder shall be required lump sum price of construction					
21. The contractor are lack of checking submit documentation					
22. Other problems, please specify: _____					

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- ***Bid Evaluation and award of contract***

• Your opinion within these statements during the process of Bid Evaluation and award of contract	(5)	(4)	(3)	(2)	(1)
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
23. The owner is first evaluating of the lowest price					
24. The technical proposal have correct by Employer requirement					
25. The examination of join venture is more specific					
26. The employer had exam in other specific such as, experience, or other information					
27. The specific of drawing is always got problem to owner					
28. The rules and conditions are from owner. is it always get problem for bidder to follow.					
29. if the bidding corruption happen, the owner have to right to reject all bidders.					
30. the owner shall notify of the successful bidder in writing					
31. The winning bidder should direct of signing of contract agreement					
32. Other problems, please specify: _____					

Open-end Question for investigating, and practice in bidding process in construction.

1. Why do you think that the bidding is important in each project?

2. Normally, who are responsible for identifying the problems during the bidding process in construction work?

3. The feasibility of bidding system and strategy in recent construction industry in your country.

4. The fund of project are combining, how many percent of government fund? And how many load banks are paying?

5. Which is more important point for owner to modify the contractors? (Financial or Experience).

6. What do you think about the award bid join venture? And what is a good and bad point of them? (Please modify).

Goodpoint

Badpoint:

7. Who can join in bid opening event? (Owner, contractor, and whom?) Please modify.

a). _____

b). _____

d). _____

e). _____

f). _____

8. How many ministries are responsible in the government condition? That they use in competitive bidding. (What ministry? Please modify).

9. If award bid withdrawal, what should the owner do?

10. Based on the question number 9. Will the owner return to competitive bid again or choose the second lowest price?

11. Base on the question number 10. Why the owners choose this way?

12. When signing the contract who attended the event? (Owner, award bid, and whom?) please modify.

a) _____

b) _____

c) _____

d) _____

e) _____

13. Based on your experience which part of bidding process is always made a problems? Why? Please give some reasons.

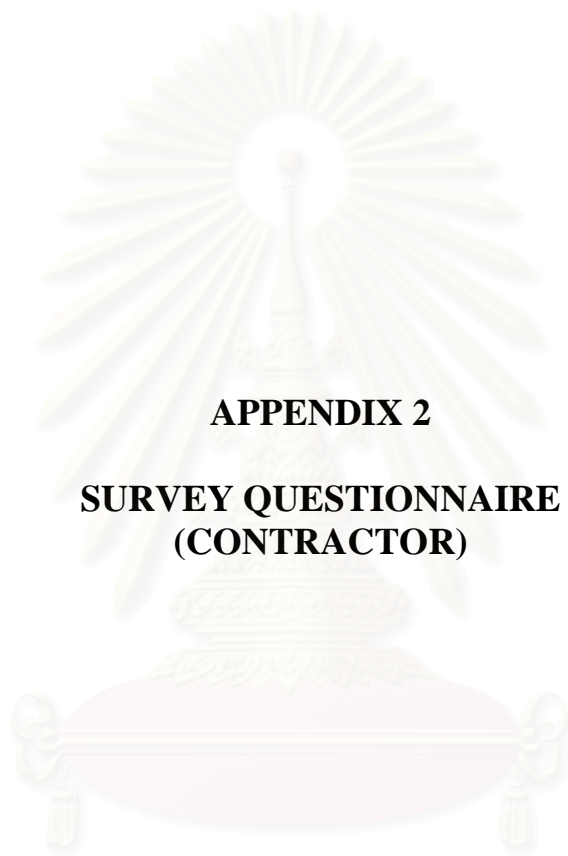
- Advertisement
- Prequalification
- Submission
- Opening
- Evaluation
- Award
- Other please specify _____

Please give some reasons why?

THANK YOU VERY MUCH FOR YOUR KIND COOPERATION

Note: All the information collected through the questionnaire will be used for academic purposes only

จุฬาลงกรณ์มหาวิทยาลัย



APPENDIX 2

**SURVEY QUESTIONNAIRE
(CONTRACTOR)**

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

**SURVEY
QUESTIONNAIRES
(CONTRACTOR)**

Dear Respondent:

The data from of this survey will be used strictly for academic purposed. Your data are extremely important for the outcome of this research study.

Thank you for your kind co-operation.

Please answer all following questions.

Name of Respondent:.....
 Position:.....
 Working experience.....
 Years in current position.....
 Name of project engaged.....
 Type and nature of this project.....
 Date:.....

1. Name of company:.....

Project Value:.....US\$

Select 1 project more than.....US\$

Project location:.....

Project duration.....

Project start (d/m/y).....

Project finish(d/m/y).....

2. Nature of work

- Road
- School
- Hospital
- Irrigation
- Other (specify).....

3. Bidding Structure

- International standard conditions (ADB/WB standard guideline).
- Government regulations
- Condition of Particular Application, if applicable in case ICB)
- Other (specify).....

4. Bidding committee involved in the project

- Contractor/Bidder
- Ministry of Communication, Transportation, Post and Construction
- Ministry of Finance
- Ministry of Planning and Investment
- Other (specify).....

5. Your company was entitled to proceed with this project by:

- Winning a bid
- Nominated by owner
- Specify.....

6. The contract documents were written in:

- English
- Local language
- Both
- Other Language (specify).....

7. How many way that owner choose to advertisement?

- Local newspapers
- English language newspaper
- Internet
- Trade publication
- Other (specify).....

8. What are the most important criteria points for prequalification prepare? (Please tick more then 3 main)

- Technical qualification
- Financial statement
- Working experience
- Current litigation
- Contractor's equipment proposed
- Staff proposed
- Site organization

- Joint venture
- Project duration
- Drawing
- Other (specify).....

9. Bid submission prepare process

- Time strictly
- Use standard clock
- In public place
- Depend on owner rule
- Other (specify).....

10. Bid opening prepares process

- Bid opened transparent
- Bid opened unclear
- Strict security
- Other specify.....

11. Please check and rank the most 5 important factors that you think may impact on winning bid:

(5=very important; 4=important; 3=some; 2=minor importance; 1=not-important)

- _____ Estimate price
- _____ Technical qualification
- _____ Experience proposal
- _____ Financial statement
- _____ Labors and Equipment proposed

12. The process of contract award is fair? Yes No

If no, please identify the most 3 serious causes of unfair:

- Owner is not follow by contract condition
- Owner delay award
- Place not public
- No outside committee
- Award is not necessarily made to lowest contractor
- Owner not sign the contract agreement within time at required
- Owner add more condition before sign contract
- Other (specify).....

13. This project was implemented under contract payment as:

- Lump-sum
- Unit prices

- Bill of quantity
- Cost-plus
- Guarantee maximum price
- Other (specify).....

14. At present, is bidding process by owner on the standard of ICB?

- Yes No

If no, identify the most 5 serious part in bid process by your opinion and experience please specify:

- Bid committee

- Advertisement

- Prequalification

- Bid Submission

- Bid Opening

- Bid Evaluation

- Award of Contracts

Other (specify)

14. Please describe in general terms, the difficulties you faced in bidding process.
What do you need to meet the owner's satisfaction and the benefit of company?

1.)

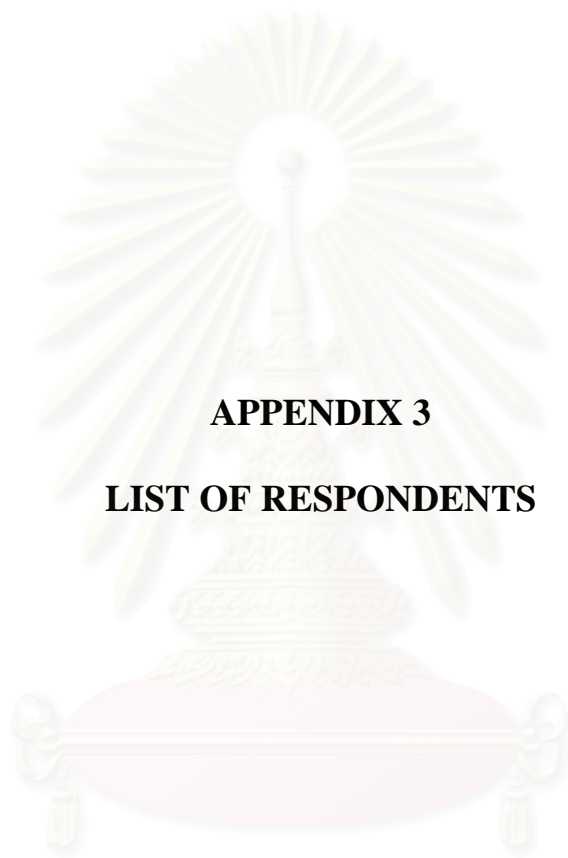
2.)

3.)

THANK YOU VERY MUCH FOR YOUR KIND COOPERATION

Note: All the information collected through the questionnaire will be used for academic purposes only

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APPENDIX 3

LIST OF RESPONDENTS

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LIST OF RESPONDENTS

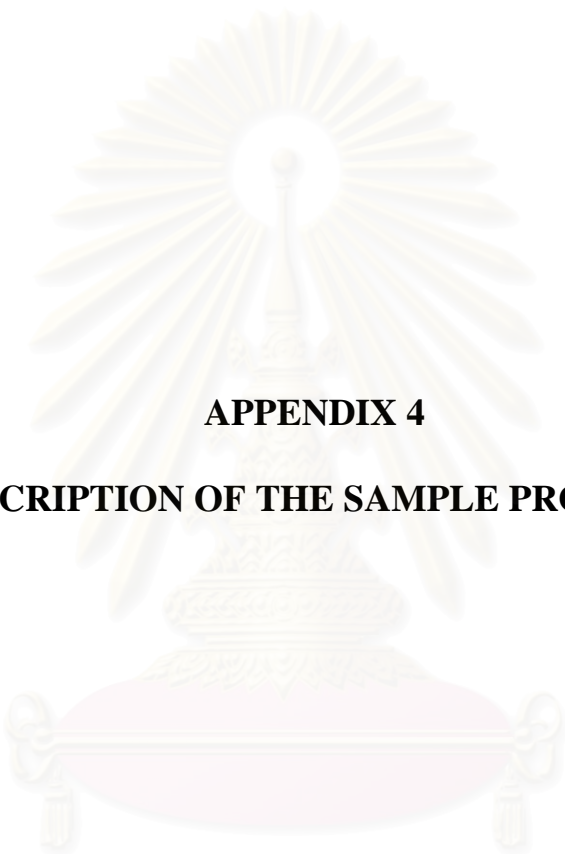
No.	Name of Owner	Position	Organization	Included interview
1.	Pothong NGONPHACHANH	Deputy Director General & Project Coordinator for NEC Road No.3 Project	MCTPC	yes
2.	Daochinda SIHARATH	Deputy Director of Project Monitoring Division & (ABB) Project Coordinator	MCTPC	yes
3.	Phasongsinh CHALEUNSOUK	Project Manager Rehabilitation of National Road 8 Project	MCTPC	yes
4.	Phouthasen KHAMANIVONG	Deputy Director of Road Maintenance Division	MCTPC	yes
5.	Bansak THEDDAVANH	Project Manager of Project Monitoring Division	MCTPC	no
6.	Aloun KHOUNNAVONG	Technical Advisor of Bridge Management Unit	MCTPC	no
7.	Alan. J. CHUDLEY	Consultant to Department of Highways	MT	yes
8.	Arunee SUKHANTARAT	Deputy of Foreign Relations Official	MT	yes
9.	Phongchai WIPASURAMONTON	Senior Civil Engineer 8 (Area Engineer) of Planning and Technical Engineering Official	MT	yes
10	Wanlop	Senior Civil Engineer 8 (Area Engineer) of Planning and Technical Engineering Official	MT	yes
11	Vichai TRAKARNVANICH	Senior Civil Engineer 8 (Area Engineer) of Planning and	MT	no

		Technical Engineering Official		
12.	Nguyen Viet Hung	Deputy Director of Planning and Investment	MPI	yes
13.	Chi Van Huong	Assistance of Planning and Investment	MPI	yes
14.	Nguyen Xuan Nhat	Deputy Director of Legal Department	MC	yes
15.	Nguyen Xuan Doan	Managing Director Institutional and Environment Expert	SECO	yes

No.	Name of Contractors	Specialize	Included interview
1.	Nawarat Patanakarn Public Company Limited of Thailand	Highway, Bridge, Building, Water pile and repair	yes
2.	Road No. 8 Construction Enterprise Co., Ltd of Vientiane	Urban Infrastructure and Services Project and repair	yes
3.	Road and Bridge Co., Ltd of Vientiane	Road & Bridge Construction and repair	yes

Note:

MCTPC	Ministry of Communication Transport Post and Construction (Laos)
MT	Ministry of Transport (Thailand)
MPI	Ministry of Planning and Investment (Vietnam)
MC	Ministry of Construction (Vietnam)
SECO	Social and Environmental Development (Vietnam)



APPENDIX 4
DESCRIPTION OF THE SAMPLE PROJECTS

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Description of the Sample of Projects

Project 1:

Project name: Rural Access Roads Project (ADB/9) Loan No. 1795-
LAO (SF)

Employer: Ministry of Communication, Transport, Post and
Construction Lao PDR

Lending agency: Asian Development Bank and OPEC

Consultant: Meritec Limited
In association with
Lao Consulting Group and Kampsax A/S

Bid Process

Invitation to bid issued: September 24, 2001

Closing date of bid: December 24, 2001

Contracts signed: July 2, 2002

Contract Name	<i>Package A</i> (Attapeu-Senamnoy ; Attapeu Province)	<i>Package B</i> Na sack-Koc Khao Do (Vientiane Province)	<i>Package C</i> Thoung Khoun- Longsan (Xaisoboun)	<i>Package D</i> Huay Hund-Xam Tai (Houaphan Province)
Project Finance	ADB	ADB	ADB	ADB
Contractor	China Gezhouba Construction Group Corporation for Water Resources and Hydropower (China Company)	ECC – RNC – SFCC Joint venture	China Henan International Cooperation Group CO. Ltd.	Lao Development Construction Co. – Namtha Road and Bridge; Construction co- Khounxay Phattana Construction Co. Joint venture
Road Length	23.67 Km	52.30 Km	83.00 km	75.25 km
Contract Value	USD 5,266,900.73 (including Contractor's Adjustment and Contingencies)	USD 5, 196,962.03 (including Contractor's Adjustment and Contingencies)	USD 7,802,681.74 (including Contractor's Adjustment and Contingencies)	USD 7,425,646.49 (including Contractor's Adjustment and Contingencies)
Contract Signed	1 st July, 2002	1 st July, 2002	1 st July, 2002	1 st July, 2002
Notice to Commence	30 th June, 2005	30 th June, 2005	30 th June, 2005	30 th June, 2005
Contract Period	36 months	36 months	36 months	36 months

Project 2

Project name: Northern Economic Corridor Project (R3) ADB Loan
No. 1989-LAO (SF)

Employer: Ministry of Communication, Transport, Post and
Construction Lao PDR

Lending agency: Thai Government, ADB, and the Chinese Government

Consultant: Oriental Consultants Co., Ltd
In association with
Asian Engineering Consultants Corp., Ltd
Lao Transport Engineering Consult

Bid Process

Invitation to bid issued: October 21, 2003

Closing date of bid: January 21, 2004

Contracts signed: August 13, 2004

Contract Name	<i>Package A</i> (Houay Xay to Ban Sod)	<i>Package B</i> (Ban Sod to Nam Lung)	<i>Package C</i> (Nam Lung to Boten)
Project Finance	Thai	ADB	PRC
Contractor	Phrae Trumrongwit-Namtha Road and Bridge construction company joint venture (Thai – Lao)	Nawarat Patanakarn Public Company Limited (Thai)	Yunnan Highway & Bridge Company (China)
Road Length	84.000 Km(+ 13.663 Km of feeder road)	76.800 Km	66,431Km(+18.5Km of feeder road)
Contract Value	TB 823,375,752	US\$ 16,496,774.00	CY 226,666,667
Contract Signed	13 th August, 2004	4 th May, 2004	7 th April, 2004
Notice to Commence	6 th September, 2004	5 th May, 2004	10 th July, 2004
Contract Period	33 months	34 months	26 months

VITA

Ms. Xoumaitri Panyanouvong was born in Vientiane City, Lao P.D.R in 1982. She received the Bachelor of Engineering Degree in Civil Engineering from National University of Laos, Lao P.D.R. She was admitted to the Master of Engineering (Civil Engineering) program in the Department of Civil Engineering, Chulalongkorn University since 2004. Her topic of interest is construction management.



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