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# IMPLEMENTATION OF GOVERNMENT E-PROCUREMENT: A COMPARATIVE STUDY OF THAILAND AND INDONESIAN PRACTICES

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**ABSTRACT:** In respond to the demand of an open, fair, transparent, and efficient environment for procurement, many governments have incorporated the use of internet in their procurement systems with online procurement (e-procurement). Given the different policies and laws which have to be complied with, the practice of government e-procurement system varies from one country to another. Thus, experiences in running e-procurement will vary as well. The achievements and obstacles of one country's experience will be a constructive reference for other countries in establishing e-procurement system. In this regard, government e-procurement system practices in two Southeast Asia countries i.e., Thailand and Indonesia particularly in public works are consecutively presented and finally compared in this paper.

The government of Thailand has applied Online Auctions (e-Auctions) as the national procurement practice since 2005 and performed the e-Auctions in two types: Reverse Auction and Sealed Bid Auction. Contrary to the common practice of e-procurement, the Thai government, with some rationales, runs the bid documents obtaining manually as well as qualification and technical documents submission and holding the e-Auctions at bidding office. Whereas Indonesian government runs Online Sealed Bid Bidding (e-Procurement) and most of the bidding stages are performed electronically except bid evaluation for both technical and financial. The advantages and drawbacks of these two e-procurement practices are discussed as well as improvements that have to be made for successful of e-procurement.

Keywords: Government procurement; Public work; e-Procurement; e-Auctions; Thailand; Indonesia

#### 1. BACKGROUND

Recently, number of countries using e-procurement is increasing. Procurement is a strategic factor for successful completion of a public work project. Due to its importance, the government always attempts to enhance its procurement system particularly in construction project, including by incorporating the use of internet to establish an open, fair, transparent, and efficient environment for government procurement. As a product of government laws and policies, the practices of e-Procurement vary from one country to another given the distinct implemented laws and policies.

The differences in laws and policies affect the eprocurement method selection and the procedure of eprocurement practice. Therefore the problems in and the outcomes of procurement implementation will vary as well from one country to another.

For instance, as initiated by the declared local autonomy policy (i.e., decentralization) in 1999 within almost every sector of governances in Indonesia, Surabaya City Government has implemented its e-Procurement as a full electronic system since 2005. Previously, conventional sealed bid bidding was used as main procurement method.

Even tough in the past Thai government also implemented conventional sealed bid bidding, since 2005 e-Auctions method have been nationally utilized as government procurement for every purchase over 2 Million baht.

Given the different advantages and drawbacks from each practice, comparative study between these two e-Procurement practices will be useful leaning tool and constructive reference for the other nation to establish or even enhance its e-Procurement system.

#### 2. OBJECTIVES AND METHODOLOGY

This paper aims to explore the current practices of e-procurement and to address advantages as well as drawbacks in each stage compared to conventional method and between countries i.e., Thailand and Indonesia. The current practice of e-Auctions and Surabaya e-Procurement as the Thailand and Indonesian Government procurement systems respectively, are consecutively presented and finally compared in this paper.

In each case study, in advance, current procurement system of respective government is briefly reviewed. The involved parties and their roles within government e-Procurement are explained prior presenting the practice of e-Procurement. Advantages and disadvantages are identified through stages comparison and subsequently discussed to propose potential improvements in government e-Procurement practice.

Data collection was performed mainly by interviewing the involved parties and by reviewing literatures as well. Interviews were conducted from July to August 2005 and August 2008 for Thailand and Indonesia case studies respectively and addressed to the involved parties in government e-Procurement practice. The results are presented and analyzed subsequently in the following sections.

#### 3. CASE STUDY OF THAILAND

## 3.1 Current Procurement System

After initiated in 2002 and was regionally implemented within Bangkok Metropolitan Area, the government of Thailand, since 2005, has nationally regulated the use of an electronic procurement system called e-Auctions for every purchase over 2 Million Baht. With the e-Auctions, the Government of Thailand aims to promote transparency, fair dealing, efficiency, and value for money.

Including the e-Auctions, in total there are six methods in government procurement system as illustrated by Hasiholan et al. [1]. Previously, there were five methods that were commonly used for procurement purposes. The methods are categorized by purchasing value and several methods are used under particular conditions. Before e-Auctions were introduced, when the purchasing value would be than 2 Million Baht, government offices were obliged to use the Competitive Bidding Method. The competitive bidding method is alternatively used when the prequalification stage in e-Auctions remains 2 qualified sellers.

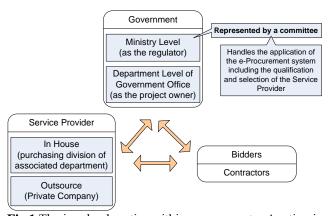
The Thailand Government runs the e-Auctions in two types, namely: Reverse Auction and Sealed Bid Auction. Both types run everything in reverse order. The sellers bid instead of the buyers and the prices are bid down instead of up [2]. As described by Hasiholan et al. [1], in Reverse Auction, the owner reveals the submitted bid prices during the process to the qualified bidders aiming to get lower price and qualified bidders are given chance to change their bids downward frequently within a specific period. Whilst in Sealed Bid Auction, qualified bidders submit their prices without being known by or knowing the prices of their opponents. After the bid period is closed, the owner opens the submitted prices and announces the winner.

# 3.2 The Involved Parties and Their Roles in e-Auctions

The e-Auctions process has been involving three parties. As described in **Fig.1**, the three parties are the Government at department level as the project owner, the Service Provider, and the contractors as bidders. Apart from these three parties, other parties may take part in the e-Auctions process, such as the Government at the ministry level represented by a committee; the Office of Procurement Management; and the Consultant Company.

At the ministry level, the Government acts as a

regulator of the e-Auctions process. The Thai Government prepares the regulation and guidelines of e-Auctions applications in Thailand. As shown in **Fig.1**, a committee has been formed to represent the Thai Government. This committee is responsible to set the regulations and conditions of using the e-procurement system by the SPs, to qualify, select and register the eligible SPs, to monitor and evaluate SP performance, and to give consideration and approval to the government office for using or not using the e-procurement system.



**Fig.1** The involved parties within government e-Auction in Thailand

In Thailand e-Auction, Service Provider (SP) is either the government agency (in house SP) or private company (outsource SP) which provides services for online bidding. The Government of Thailand prefers using private SPs although using an outsource SP is an option for the Department of Government Office. This increases competitiveness and professionalism between SPs.

# 3.3 Running the e-Auctions

The bidding procedures of e-Auctions at all stages for both government and contractor sides is shown in Fig.2. These stages must be followed by all departments if they want to use the e-procurement system. In detail, Fig.2 describes how each stage is carried out in Thailand e-Auctions.

Reverse Auction and Sealed Bid Auction are the two methods that have to be used for procurement with a purchase value of more than 2 Million Baht, or if the owner wants to use this electronic system. Hasiholan et al. [1] described the differences among these two methods. In Reverse Auction, basically the bidders can see the prices quoted by other bidders without knowing the identity of bidders quoting these prices. The Reverse Auction is used when there are more than two bidders quote the prices. In Sealed Bid Auction, the bidders can see the lowest-price bidder at particular time but they cannot know the price. The Sealed Bid Auction is applied as an auction method when there are only two bidders competing against each other.

According to Hasiholan et al. [1], sealed bid auction can be carried out in two ways: one action and multiple action. Bidders only submit their bid once without being known by or knowing the prices of their opponents in one action sealed bid auction. While in multiple action,

bidders are given a second chance to revise their bids and submit at the second round. The lowest bid in the first round is announced as the ceiling price for the second system has just recently established. Previously each department and local government has its own e-Procurement system which may be different one another.

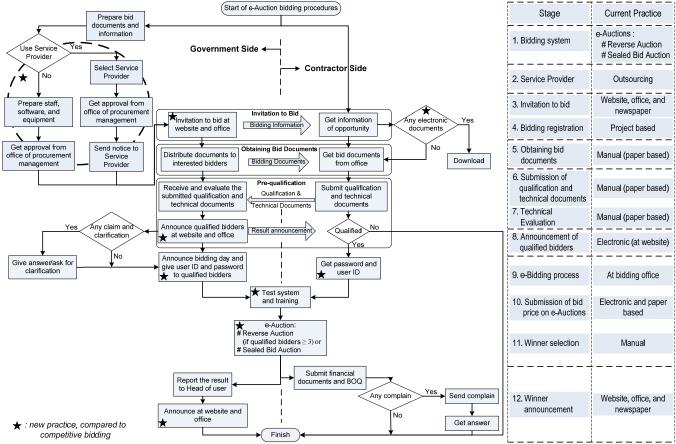


Fig. 2 Bidding procedures in e-Auctions at government and contractor side with current practice within stages

round. Thus, bidders can only submit the same or lower bid at the second round. But for reverse auction, bidders are allowed to bid downward frequently within a specified minimum sequential bid amount until no further downward bids are received. The minimum sequential bid amount is specified in advance and depends either on the project size or suggestion of the Service Provider.

The Thailand government, through a regulation also provides a guideline for the premium for the Service Providers. This premium is at the cost of the winner. It should be noted that the premium is only calculated and paid if the bidding obtains a winner. This premium is calculated by the Service Providers and comprises of two components: premium rate and transportation rate.

#### 4. CASE STUDY OF INDONESIA

#### **4.1 Current Procurement System**

According to Presidential Decree No. 80/2003 regarding procurement of goods and services, Indonesia has four methods to select contractors or supplier for public works. They are direct assignment, direct selection, limited bidding, and open bidding. These methods are categorized by procurement object. Detail categories for the procurement method selection are stipulated in Government Regulation No.29/2000.

As for e-procurement system, a national e-Procurement

This phenomenon is one result of local autonomous policy or decentralization which has been introduced in Indonesia since 1999 [3]. For instance, e-Procurement system of public work at national level is handled by Department of Public Work. The followings are methods of e-procurement under Department of Public Work:

- Copy to Internet (CTI), where information related to bidding stages is keyed in to internet but the process of bidding stage itself is still done manually.
- Semi e-Procurement, where several bidding stages are done interactively through internet while the rest are still done manually including pre-bid meeting and bid submission.
- Semi e-Procurement Plus, where similarly to semi e-Procurement but there is additional feature that enables bid submission is done electronically.

Among all of systems used in Indonesia, the e-Procurement of Surabaya City Government is chosen as representative based on these grounds.

- The system has been settled since it has been used since 2004.
- The system is adopted as the national electronic bidding system which is now under testing.
- Most of interviewed departments refer to this system as a good practice in Indonesia.

## 4.2 Surabaya City Government e-Procurement

Given to the recently issued Presidential Decree No. 80/2003 regarding procurement of goods and services, two major issues are emphasized and being ground of e-Procurement system in Surabaya. First, the new Presidential Decree prevents prospective bidders not attending pre-bid meeting from being disqualified. Second, an application of electronic media for bidding processes is recommended. Based on this regulation, supported by District Decree no. 10/2005, Surabaya e-Procurement system was modified to be full electronic based in 2005. The implementation of Surabaya e-Procurement based on the ground that these following problems exist.

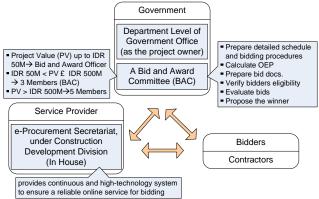
- There were delays in project bidding processes that made projects not finish on time and delayed projects utilization.
- Saving of budget was small because differences between budgets and contract prices were small.
- Bidding processes took long time, and thus they opened possibility for bidders and committee to make price arrangements.

Therefore, Surabaya e-Procurement aims to maintain time schedule in project administration so that project's objectives to serve public needs can be actualized on time. Budget saving is expected to be larger and can be reallocated to other projects. Transparency is expected to enhance fairness and to create bidding process more competitive. Moreover, Surabaya e-Procurement is expected to:

- minimize errors and frauds in bidding and procuring process by involving all parties in the process, including social community,
- increase government reliability for public, and
- help project administration by facilitating bidding process by using IT.

# **4.3** The Involved Parties and Their Roles in Surabaya City Government e-Procurement

Mainly, there are three parties that are involved in the Surabaya e-Procurement: the Government at department level either as the project owner or Bid and Award Committee, e-Procurement Secretariat, and Contractors or Suppliers. Given certain qualifications, an officer is assigned as the Owner representative. As shown in **Fig.3**, A Bid and Award either officer or committee shall be assigned by owner representative and its number of member varies based on project value.



**Fig.3** The involved parties within government e-Procurement of Surabaya City Government, Indonesia

The Surabaya City Government has its Service Provider in house namely e-Procurement secretariat which is under Construction Development Division. This secretariat shall provide continuous and high-technology system to ensure a reliable online service for bidding.

All contractors or suppliers that want to join the process must register to the system to get user ID and password to access e-Procurement web portal. Registration process can be done online for free because the system belongs to the government. Registration remains valid as long as the respective contractor active in the bidding process.

#### 4.4. Running the Surabaya e-Procurement

Indonesia uses either pre-qualification or postqualification for qualification method in sealed bid bidding. Stages in each qualification method are regulated in detail within District Decree of Surabaya No.10/2005. These stages are shown in Table 1. The procedure of Surabaya e-Procurement for both government and contractor side is shown in Fig.4. On government side, the Bidding and Award Committee shall prepare bid documents, pre-qualification criteria, weighing in merit point calculation system, and other information required in the online announcement. All information shall have keyed in and all bid data shall have been uploaded to e-Procurement web portal. In addition to key in the bid information, the BAC shall submit documents containing similar information to be checked by Administration Section.

All document including drawings shall be uploaded in PDF or DOC file format. Administration Section checks the documents and makes a summary of projects nominated by Owner and sends the summary to Budget Auditor in Construction Development Division after closing of information submission. Budget Auditor checks the summary and passes it to Head of Construction Development Division to get approval of which projects shall be bid in this period. After closing of information submission, Administration Section shall verify whether online information keyed in by Bid and Award Committee is completed.

Contractors can visit the web portal of Surabaya e-Procurement at <a href="www.surabaya-eproc.or.id">www.surabaya-eproc.or.id</a>. The website provides the details of projects, such as bid type, bid schedule, and bid method. Supported documents can also be downloaded from the website. After evaluating the bid documents, contractors then submit their bids according to the type of bid in electronic format via the same website. All of information can be submitted online; however, price bid shall be submitted by two types, electronic and hard copy. Bid submission electronically can be keyed into web portal of e-Procurement. Hard copy submission means that the bidder shall submit print out of a web page in e-Procurement web portal containing price he offered. This print out shall be certified by bidder signature and stamp.

In Pre-qualification method, after the bidder fills in all information required in the web portal of e-Procurement, except bid price, he must print it out, certify with signature and seal, and submit it to the BAC. BAC then

clarifies and verifies the information submitted by bidders. Pre-qualified bidders can proceed to the next step by obtaining documents from web portal of e-Procurement. These bidders may not attend the pre-bid meeting and may ask for explanation of bid documents online. After pre-bid meeting period is over, the e-Procurement secretariat summarizes and sends the minutes of meeting to all of pre-qualified bidders. After evaluating bid documents, bidders can submit their bids online. In case of bid price, the bidder shall submit both electronic and hardcopy of his bid price to the BAC. Otherwise, the respective bidder is not considered joining bid. The amount written on hardcopy shall be exactly the same as the amount keyed into the web portal. Otherwise, the respective bidder is considered as non-responsive.

#### 5. STAGE COMPARISON

#### **5.1** E-procurement Purposes

Most countries have similar purposes in using eprocurement. Increasing transparency in bidding processes and saving government budget as a result of lower bid prices are the common purposes. It is pointed out that an electronic government procurement system is required to render government procurement efficient, transparent, non-discrimination, and accountable [4]. Similarly, the Government of Thailand aims to promote transparency, fair dealing, efficiency, and value for money with the e-Auctions while Surabaya e-Procurement aims at efficiency, transparent, and accountable. Both e-Auctions and Surabaya e-Procurement offer higher process transparency than conventional procurement methods. Bidders are able to witness the whole procurement stages. The ease and speed in delivering information through internet and its vast coverage enhance the efficiency of the procurement process. Moreover, the usage of internet as publication media enables the bidders to access and stay updated the same and with recent information, respectively. Without compromising the quality of work, lower price can be derived as a result of higher and open competition. Thus the goal "value for money" can be secured by running the e-Auctions. More tangible and intangible advantages are presented in the following discussions.

# **5.2 Bidding System**

As in conventional bidding method, Thailand and Indonesia use sealed bid method. This method is easy to conduct and confidentiality is absolutely maintained. Bidder cannot know his opponents or their bid prices. If the bidders know each other, an arrangement may be agreed among them. Sealed bid method can be performed in either single action or multiple action type. Indonesia and Thailand are practicing single action type. In addition, Thailand is practicing multiple action method as well. The multiple action method increases budget saving of

**Table 1.** Stages and Online Bidding Process, Surabaya e-Procurement Practice

Stages based on		Online Bidding Process				
Qualification Method		Process		Method		
Pre-qualification (PQ)	Post- qualification	Pre- qualification	Post- qualification	Pre- qualification	Post- qualification	
Announcement for PQ			Bid Announcement		Electronic, newspaper, and announcement board	
			Bidders select project and obtain bid documents		electronic	
Submission of PQ documents		Submission of PQ requirements		electronic		
Evaluation of PQ documents		PQ		manual		
Selection of qualified bidders		Announcemen t of PQ result		electronic		
Announcement of PQ result		Pre-bid meeting		either direct or electronic		
Complain period for PQ	Bid Invitation	Bid submission		electronic		
Bid Invitation to qualified bidders	Registration	Opening of technical	Opening of financial	Manual		
Obtaining bid documents		documents	documents			
Pre-bid Meeting Resume agenda of pre-bid meeting and the addenda		Technical evaluation	Bid evaluation	Manual		
Bid submission		Opening of financial documents	Check for bidders eligibility	Manual		
Bid opening  Evaluation of the  Qualification and bid						
bids	evaluation	Bid	Opening of technical	Manual		
Winner selection		evaluation	documents			
Announcement of the winner			Technical evaluation		manual	
Complain period		Winner selection		electronic		
Winner nomination		Announcement of winner		electronic		
Contract signing		Contract award, signing LoI		manual		

the government since the bid price may be lower than using single action type.

Compared to Sealed Bid Auction, Reverse Auction is said an effective method to save more government budget. Bidders are given chance to change their bids downward frequently within a specific period. The result may be much lower than the fair price. A greater and more explicit price competition in reverse auction yields a lower price. It is highlighted that the fast-paced, dynamic bidding, along with the need to respond quickly to competitors' bids yields tense negotiation and pressure on bidders to cut prices vigorously [2]. Thailand is practicing this method in construction bidding while other countries are not using it for construction projects since the project value is relatively high. There is quality issue following the result of reverse auction bidding. Since the price may go very low compared to fair price, the quality may be reduced or compromised, thus resulting in quality concerns associated with e-Auctions bidding. Therefore to anticipate the quality issue, the Government of

Thailand, as the project owner emphasizes the prequalification stage to keep the qualified bidders. This means the project owner only needs to get the price from the e-Auction process. The project owner is suggested to develop realistic pricing expectation by considering current price and forecasted market condition [5]. Whenever the lowest bid is too low, the owner may not let award to the lowest bid. Owner may negotiate with this bidder to get reasonable price to prevent low quality of work.

#### **5.3 Registration Practice**

Thailand requires no special advance registration and uses one registration per project instead. Each qualified bidder is given a user ID and password to enter the online bidding processes. This system is useful in avoiding outsiders to hack into the system and disturb the bidding processes. The one time ID will be changed every time the bidder join bid processes; thus, confidentiality of this ID is higher as it is only known by the person authorized by the company.

Life time registration applies in Indonesia and the registration will be invalid after the account has been inactive for one year. This system automatically updates its databases. However, the registration system is simple and easy, where bidders can go to the e-Procurement website and fill in the form. No verification of documents is performed in the registration phase but verification will be done only to the winner. The disadvantage of this method is that there is a risk to conduct bidding again when the winner is found not eligible based on the verification of its registration.

One time registration may be selected if the condition of the contractors and suppliers may not change for a long period. This condition avoids relatively misclassification of contractors or suppliers due to outdated information. However, this alternative may prevent the black-listed bidders to come and join with bidding process since the database still contains the records. Periodic registration may also be selected. However, this alternative may be subjected to black-listed bidders to change their information and register again as a credible company. Periodic registration is useful when the companies' conditions are dynamic and need to be updated frequently. Both these alternatives give a long period for a user to use a particular user ID and password which is confidential. If the user ID and password are known by outsiders, the outsiders may use it for improper purposes. The third alternative, temporary registration, has been applied in Thailand and gives the solution.

#### **5.4 Service Provider**

Indonesia uses government agency (in house) SP while Thailand prefers using private company. There are trend that using government agency is cheaper to contractors since there are no registration fee. All operations and maintenance cost of the electronic service providers are at the government cost.

Thailand employs private companies as the electronic service providers and the winner pays a premium as a percentage of the winning price to the company. Thailand tries to outsource the owner's or bidding committee's job to the company to increase effectiveness of the process by reducing the workload of the bidding committee. However, the owner must spend some time in selecting the prospective electronic service providers and propose the result to the head of the procuring entity; this lengthens the bidding duration.

Private Service Provider is a solution in switching government role to the other private sector. The interference between bidders and committee may be reduced by maintain professionalism of the service provider. Computer system and infrastructure can be provided in remote areas through this service for a relatively low fee. Premium fee to the service provider is fair; however, the cost at last will go to the project owner as bidders may include this fee in their bids.

#### 5.5 Invitation to Bid

Both e-Auctions and Surabaya e-Procurement practice, invitation to bid may be published on the website, in newspapers, on the public announcement boards, or a combination of them. Thailand and Indonesia publish the invitation to bid in the newspaper in addition to announce it on the owner's website. Newspapers are still an effective media to publish invitation to bid given their wide range of uses. However, advertising fees may be an additional cost to the government. Another alternative is by posting announcements on the public or office's announcement boards. This alternative requires bidders to come to specific places which take more time. When the availability of internet and public illiteracy of computer and internet are sufficient, an electronic invitation to bid is effective to attract more bidders even from outside areas. In this regard, more bidders will be attracted and therefore the competitiveness is expected to increase. The process may yield the best among bidders, which benefits the owner.

#### **5.6 Bid Documents Distribution**

Thailand is still practicing manual obtaining of documents even though small sizes of files and information may be downloaded directly from owner's website. This method opens a possibility of bidders to make direct contact with their prospective opponents. This contact may increase the possibility of collusion since bidders know their prospective opponents and can make arrangement in the way they prefer. This arrangement is usually not favorable for the owner. The Thai government, with some rationales, exercises this practice regardless all the drawbacks of manual obtaining of bid documents.

Thai contractors are still preparing paper based bid proposals. If they obtain the bid documents in electronic format which at times are large in quantity and so will the file size be when transferred via internet, they will still have to print it out. This will cost them more time and money. Therefore, they prefer to spend more in obtaining the bid documents in hardcopy form rather than do the redundant work. This practice contradicts with the expected e-procurement process where document distribution is preferred in electronic file format than in

paper-based. Electronic documents distribution is cheaper and reduces the time to obtain as compared to providing hardcopies. Moreover, electronic distribution avoids direct contact between bidding committee and bidders and among bidders.

Indonesia tries to avoid this direct contact by providing all information including drawings and specifications available in the website. All documents are converted into PDF files so that the size is smaller. Moreover, there is no additional fee in obtaining these documents since the committee does not have to produce a hardcopy of all documents.

e-Procurement practice is advantageous to bidders since it may save cost and time in travelling from their bases to the office of the project owner or bidding committee to obtain or submit bid documents. Cost saving also exists as a result of using electronic format documents instead of paperwork. In order to get more benefit, bid documents shall be also estimated and evaluated in electronic file format instead of printing them into hardcopy which is an extra expense.

#### 5.7 Qualification and Technical Documents submission

Similar to bid obtaining, preparation of paperwork for bid submission is an additional cost. The possibility of direct contact is also larger when the bidders have to submit their bids directly to the owner's or bidding committee's office. Time and place obstacles are some other factors bidders should consider. Thailand is practicing this method. Technical documents are submitted in form of hardcopy. Meanwhile, Indonesia is practicing electronic submission for all bid documents. All documents are converted into PDF file format and uploaded to the server. However, because of the absence of ICT laws in Indonesia, a hardcopy of documents shall also be submitted to support the digital format ones because the existing laws have not covered the use of digital format as legal evidence. Currently, ICT laws are discussed in Senate to address this redundant work.

The qualification stage is essential in securing the quality of qualified bidder since project owner only need to obtain the price from the e-Auction process. The bidding committee is advised to put great effort into identifying and pre-qualifying potential bidders, constructing comprehensive and complete invitation to bid and reviewing pre-bid submission<sup>3)</sup>. Moreover, project owners are advised to establish prequalification criteria which might include financial stability, in-house expertise, historical performance, etc.

Evaluating the submitted qualification and technical documents in electronic file format is possible to be performed. Standardized electronic bid documents are required and subsequently distributed to the interested bidders. Whenever the standardized electronic qualification and technical documents are returned to the bidding committee, the electronic evaluation system will proceed with the evaluation and result in the qualified bidders. This will bring greater efficiency and less error in the qualification stage.

#### **5.8 E-Auctions Process**

In Thailand only bidders qualified in technical document evaluation are eligible to proceed to submit their bid price by e-bidding. This method ensures that the prospective winner is always eligible. In contrast, Indonesia allows all bidders to submit technical document and bid price at the same time in the case of postqualification. The lowest bidder may not be always eligible to be awarded the contract. e-Bidding process can be held in a specific place, so called bidding office, or can be accessible from any internet connection. Thailand sets its e-Auctions at bidding offices. This requires bidders to come to bidding office at specific time. Thus, time and place may become obstacles of bidders joining e-bidding. Indonesia allows bidders to submit their bid from any internet connection. Monitoring process in the latter system is more difficult than the former. Therefore, the software shall have log system to monitor all events during bidding period.

#### 6. CONCLUSIONS

Given the comparison between Thailand e-Auctions and Surabaya e-Procurement (Indonesia), conclusion may be drawn regarding the best practice in each bidding stage. The government of Thailand has implemented e-Auction as the national e-procurement practice, unlike Indonesia with its online sealed bid. The e-Auctions enable to conserve more of the government budget compared to online sealed bid as the result of lower bids due to greater and open price competition. A quality issue which is normally affected by the lower bids has been secured by a tight prequalification process. Thai government prefers a private service provider to run the e-Auctions process rather than an in-house provider i.e., Indonesia practice, to enhance competitiveness and professionalism among service providers.

The registration shall also record the historical performance of contractors and suppliers; therefore one time registration is the best application. Having long record of contractors' performance, the owner can easily pre-qualify the bidders. This registration shall also be linked to other entities such as Tax Department or Contractor Association so that companies' profiles can be cross-checked and updated frequently.

Collusion is another issue in bidding processes. The main idea of using online bidding is to avoid direct contact among bidders that opens possibility to make arrangement among them. Thus, as performed in Indonesia, electronic method is better for obtaining bid documents, pre-bid meeting, as well as bid submission. This method should also be supported by regulations and laws ruling about the interchangeability of paper documents and electronic documents in terms of their reliability and validity as evidences.

Through comparison of distinct implementation of government e-Procurement, learning from other countries' experiences of advantages and drawbacks in their systems can be carried out and resulting a constructive reference for other countries in establishing e-Procurement system.

### **REFERENCES**

- [1] Hasiholan, B., Budinugroho, S., Takano, S., and Tongthong, T., "e-Auctions for Government Procurement: a Lesson Learned in Thailand", Journal of Construction Management JSCE, Vol. 15, pp. 301-312, 2008
- [2] Jap, S. D., "An exploratory study of the introduction of online reverse auction", Journal of Marketing, Vol. 67, pp. 96-107, 2003.
- [3] Seymour, R. and Turner, S., "Otonomi Daerah: Indonesia's Decentralisation Experiment", New Zealand Journal of Asian Studies, Vol. 4(2), pp. 33-51, 2002.
- [4] Liao, T.S., Wang, M.T., and Tserng, H.P., "a Framework of Electronic Tendering for Government Procurement: a Lesson Learned in Taiwan", Journal of Automation in Construction, Vol. 11, pp. 731-742, 2002.
- [5] Gabbard, E. G., "Electronic Reverse Auction the Good and the Bad", 4 p, Pittsburgh: Allegheny Technologies Inc., 2003.