CHAPTER VI CONCLUSIONS AND RECOMMENDATION

Online bidding has been applied in some Southeast Asian countries such as Indonesia, the Philippines, Singapore, and Thailand. These countries were found to have different practices in conducting online bidding. Each country implementing online bidding based on its existing conditions such as laws and regulations, geographical conditions, and internet availability. They also differ in using methods of bidding such as sealed bid and reverse auction bid. Each practice has its advantages and disadvantages that consequently should be addressed to get maximum benefit of online bidding.

This chapter concludes the overall discussion presented in previous chapters and provides some suggestions.

6.1 Current Practices of Online Bidding

In overall view, Indonesia has more than one local systems of online bidding. Each local government or government agency may have its own system because the local autonomous policy makes possible to each local government to make their own policy as long as in conformance with central government policy. Later, the central government needs to have a system that can cover the whole nation. The advantage of the local system is that the system is easy to manage since it only covers a relatively small area. It is also easy to monitor the bidders since most of them located in the surrounding area. However, there may not be any eligible bidder in that area. Therefore, the government needs to open the possibility to other bidders from other areas. This adds complexity in managing bidders. The government has regulations that a company cannot handle projects that exceed his capability, both financial and resources, in order to make sure that the projects can be finished as designed. By using the local system, a crossing-bidder may not be monitored.

another problem. The electronic documents may not yet fully replace the legal paper work such as stamp. Therefore, some documents have to be re-submitted in hard copy to avoid legal problems. Minimizing human decision in selecting the winner by using computer reduces possibility of price arrangement between committee and bidders. Geographic conditions of Indonesia are also the obstacles of full online bidding implementation. Availabilities of internet and communication technology are not at evenly distributed because infrastructure developments are not in the same quality levels among regions.

Similarly, geographic condition of the Philippines is islands. IT system and infrastructure development are obstacles of implementing online bidding at whole nation. However, in the PhilGEPS system, electronic submission of bid price is conducted in a place specified by the committee. Therefore, the committee can set a system in the bidding place by sending a computer system from capital city to the local area, or asking the bidders to come and bid from capital city.

Electronic invitation to bid, instead of invitation on the newspapers, reduces cost in the administration. However, paperwork in the bid documents is not reduced by this system. There is possibility of price arrangement among bidders because they know each other when obtaining the documents at the bidding committee office.

As a small country with high technology, Singapore can manage its online bidding easier. Infrastructures are well developed and linked as a unity. Law enactment is also strict in Singapore and makes easy in controlling the process. However, to avoid computers and connectivity problems, Singapore prefers using paperwork in the bid documents. The same problems may arise in the Philippines because the bidders may know each other when obtaining and submitting bid documents.

Private Service Providers applied in Thailand is a solution to switch government role to other private sectors. The interference between bidders and committee may be reduced by maintain professionalism of the service provider. Computer system and infrastructure can be provided in the remote area by this service with a relatively low fee. Although the premium fee to the service provider is fair, the cost at last will go to the project owner as bidders may include this fee to their bid prices.

Online bidding aims to reduce the possibility of arrangements by reducing bidding time. This makes the bidders not have time to talk among others. However, shorter duration makes bidders' estimate in different ways. Consequently, all terms and information in the bid documents must be clear and accurate in order to avoid problems occurring after the bidding period. Reverse auction is an effective method to save government budget. However, monitoring of works is required at higher level in order to maintain the quality not lower than what have been stated in the design.

From advantages and disadvantages discussed above, a new method of online bidding combining best practices in each stage is proposed. Modification may be required for some stages as the best method in each stage has some drawbacks in its application. Table 6.2 shows the proposed method and its necessary modification.

6.2 Proposed Guideline in Implementing Online Bidding

After defining critical issues in implementing and applying online bidding at both government side and contractor side, a guideline is proposed in order to give support for these four countries to improve their practices of online bidding. This guideline may also be used by country which wants to start to implement online bidding in its bidding processes. The guideline covers implementation stage as well as application stage. In implementation stage, government should prepare laws, regulations, infrastructure, and system software used in online bidding applications. After the preparation is ready, monitoring of practices in application stage is important.

In addition, contractors are required to update their information about online bidding applications according to the latest regulation of respective country. The contractors always follow the procedures stated by government, otherwise they may not be considered eligible in joining bidding processes. However, internal preparation of contractor resources is required. Training shall be given to employees for bidding method and computer technical competencies. Contractors also prepare facilities to make them easier in joining online bidding processes. A computer network with internet connection is mandatory. Additional software is also important such as estimating software, and paper-file converting software.

Table 6.1 Proposed method of online bidding and necessary modification

Item	Best Practice	Advantages/Disadvantages	Modification
Service Provider	Independent body works for government	- work independently - can be monitored easily	N/A
Registration	One time registration	- can track back historical performance of contractors - easy to be updated - can be linked to other entities	terminate the registration if bidder is inactive for specific period
Bidding system	Reverse auction	- save government budget - may be risky in terms of compromising quality	N/A
Invitation to bid	Newspaper and websites	- used in wide range - attract more participants	N/A
Obtaining bid document	Electronic file format	- reduce cost for paperwork - eliminate time and place obstacles - avoid direct contact - depend on availability of bandwidth	convert all document into smaller file format (e.g., PDF)
Pre-bid meeting	Electronic, via e- mail or web conference	 address time and place barriers avoid direct contact communicate one to one 	distribute minutes of meeting evenly to all bidders
Bid submission	Electronic file format	 reduce cost for paperwork eliminate time and place obstacles avoid direct contact depend on availability of bandwidth must rely on digital format document 	- convert all document into smaller file format (e.g., PDF) - create related laws supporting the use of digital document
e-Bidding	From any internet connection, only qualified bidders	 no need to prepare specific place and facilities avoid direct contact obtain qualified and eligible winner 	N/A

6.3 Future Research and Recommendation

Major limitations of this research are that (1) most of analysis is in terms of qualitative approaches, (2) number of samples is relatively small, and (3) different practices make comparison in specific items cannot be achieved.

Analysis in terms of quantitative should be performed when enough sets of data are available. Because most of the system runs for less than 5 years, effect of online bidding on saving government budget has not been identified. Numbers of similar projects (i.e., in terms of project cost and project type) have not been analyzed due to difficulty in getting data and also lack of data management in the system. Only some projects tendered by online bidding have been fully finished. There should be

also analysis on quality of construction work related to project cost on the construction project s using online bidding processes.

Finally, the main goal should be to study whether online bidding is beneficial for construction projects in a long term period.

