

The status quo and perspective for improvement of public works procurement performance in Vietnam

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The public procurement sector plays a vital role in the economic development in developing countries such as Vietnam. However, public procurement activities usually perform poorly. This situation can be attributed to ineffective procedures and system (“hardware”) and human resource management (“software”), which occurs at every stage in project purchasing. The poor performance has reduced the effectiveness and efficiency of project delivery in the construction industry, causing delays, cost overruns, and defects in construction projects. This paper, through working experience and observation by the first author, problems of public procurement were obtained as hypotheses and then validated based on questionnaire surveys and CIS (Construction Industry Structure) model analysis. The survey results indicated a relative correlation with CIS model in description of current construction industry. The study aims to identify issues of public procurement at all stages: pre bid, bid information, evaluation, and award. Based on identified major problems and determined risks, the results are expected to provide a valuable perspective, and thus, to propose necessary strategies to deliver high performance, competition and transparency for the public procurement. In further studies, it is relevant to propose a new model for sustainable public procurement based on the best value approach.

Key words: Public procurement, procurement performance, best value environment, Vietnam.

Introduction

Vietnam, as a developing country, has achieved and maintained a high economic growth rate since the Reform and Opening-up policy in 1986, and is targeted to be an industrialized country by 2020. The construction industry sector has significantly contributed to total growth, and in order to maintain the level of development, the infrastructure system needs to be appropriately erected to serve that development. In practice in Vietnam, the public work investment sector plays a vital role in infrastructure systems such as road transportation networks. Therefore, public works procurement has received much attention in the social community; especially, in low income countries, where there is insufficient budget to cover the infrastructure system investment.

However, in all sectors, public procurement is confronted with many existing problems at all stages of the implementation process. Although public procurement regulation changed substantially in the last two decades, projects delays, budget overruns and poor customer satisfaction are major issues being faced in the period of change. The low-bid system has remained the most popular procurement approach in public expenditure of public authorities. In addition, as a result of the economic crisis in the early 2000s, it has forced bidders to compete harder and offer lower prices. It is reported in other countries that the intense competition and lowest price have led to overregulation by the clients, resulting in inefficient practices, contractor collusion (Mawenya, 2007), and poor performance regarding productivity (Constructing Excellence, 1994; Egan, 1998), safety, timeliness, and quality (Gardenas and Ashley, 1992;

Constructing Excellence, 2011) and low contractor profit margins (Drew, 2011;Kashiwagi et al., 2012). Also, Lowest bid is attributable to poor wages and working conditions and low environmental standards, thus declining the quality and sustainability of products and services (ClientEath,2012). Vietnam is no exception. At the same time, many users of facilities have witnessed poor performance of contractors procured through the low-bid process.

Public procurement has two characteristics as a game. First, as players, buyers (clients) and sellers (constructors) are willing to join in a bid game where the both players pursue their individual objectives. In this game, if procurement scheme cannot balance multiple objectives, then an equilibrium scenario is not formed to the stakeholders. Second, the rule of this game is determined and operated by the public client side. Thus, the public client side is responsible for whether the above mentioned equilibrium is formed or not. However, in other countries, the public client side has not necessarily been successful in fulfilling this responsibility. In many cases the public client uses lowest bid price approach to fulfill accountability of cost efficiency and fairness associated with contractor selection. The low bid process may result in a large number of problems, including project delays and budget overruns (Flyvbjerg et al., 2007; Illia, 2001) that cause poor performance of the construction industry (Kashiwagi et al., 2004). These poor performances of projects reduce the growth of construction industry, and consequently impede the development process. In summary, the game of public procurement is not necessarily designed and operated successfully in other countries.

Measures to improve this game have been intensively discussed and practiced. Education of owners has always been an issue. That is, the owners' low bid mentality and lack of education are perceived as problems in the construction industry. It requires a drastic change of paradigm and concepts from traditional practices to move from price competition to best value environment. The best value approach is efficient, effective, minimizes communication and flow of detailed information, creates a "win-win" scenario, the highest possible value at the lowest costs, high vendor profit and minimal project cost and time deviations (Kashiwagi et al., 2012). Japan has also made many efforts to improve the game of public procurement (Watanabe et al., 2012).

In Vietnam, studies on public procurement have just started. Thus, this paper aims to identify the root causes of poor performance of the public works procurement. The analysis of the problem pattern of public procurement process is expected to provide valuable awareness, and thus, ensure that potential strategies are being proposed to improve the performance, competition, and transparency in public work procurement in order to achieve the best value environment. In the further studies, a new scheme for sustainable public procurement is relevant to propose based on practical condition of Vietnam.

Methodology

Based on both working experience and observation by the first author, problems of public procurement were obtained as hypotheses. The validation, solid identification of hypotheses problems, consists of literature reviews, additional observation of existing conditions and 15 complete packages of road and bridge in Vietnam, and the questionnaire surveys. A total of 219 sets of questionnaires were sent out between February 2014 and March 2014. The data collection was conducted by e-mail survey and personal survey via face-to-face interviews. Follow-up

telephone calls were made to remind and urge the participants to respond to the survey. A total of 124 responses were received – about two-third were submitted via e-mail and another one-thirds were verbal responses to the first author. The response rate of 57 per cent exceeded the expected range of 25-40 per cent for surveys of this type (Furtrell, 1994). Other sources that support this view include Takim et al.(2004) which reported response rate norms for postal questionnaire surveys to be 20 – 30%. 124 respondents of stakeholders were working for public client offices (40 respondents), constructors (53 respondents), consultants (19 respondents), and academia (7 respondents) and 5 other respondents. The Construction Industry Structure model was then employed to explain the current Vietnamese construction industry characteristic.

The Significance of Public Procurement Improvement

Public procurement is not only a purchase process; it is also the crucial pillar of the national economic structure. Through the procurement process, monetary value is conveyed to infrastructure assets. The survival of governments must be based upon its ability to maintain public trust and to do so in a cost effective manner (Connell et al., 1998). Procurement seems to be the process with the largest impact on Cost, followed by Design, Construction, Operation, in descending order (Gardenas and Ashley, 1992). Therefore, an effective and efficient procurement scheme plays a vital role in guaranteeing optimal monetary utilization and quality product achievement. Whereas, a poor procurement process contributes to poor performance of public works such as over budget, time delays, and not meet quality specification.

Procurement position plays a crucial joint in the string of project life cycle (Fig.1). Through this phase, clients and potential bidders can be contracted with each other in a long process to construct the certain works.

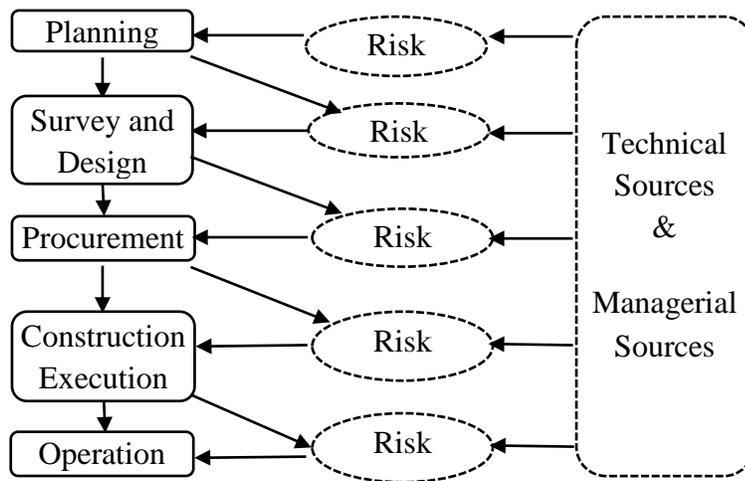


Figure 1: Risk sources in project life cycle

Given project life cycle processing, risks are generated by both technical and managerial sources of the preceding phase that affect directly the succeeding stage. The technical risks are identified through activities such as planning quality, developing design document, preparing request for proposal, studying construction plans, and operating the process during project delivery. At the same time, managerial risks are made as a result of human’s biased decision-making on each

phase due to insufficient information, unaccountability, inappropriate direction, improper management, inadequate control, and unnecessary intervention. Decision making happens in each constituent part, and almost decision is obtained by uncertainty associated with further events; risk is typically intrinsic in projects. Project decision-making occurs in the perspective of the project stakeholders (Edwards et al., 2005).

Hence, identification and their classification into either technical sources or managerial sources at the procurement stage are important. The risk identification and classification at the procurement stage becomes a foundation for appropriate risk management. They also contribute to stopping increase in the risk transferred from the previous stages and minimizing the risk left for the following stages of the procurement.

Over the last two decades, of 80s and 90s, the predominant procurement process in construction has been the competitive 'low-bid' procurement process, encouraging an increase in the pressure on price, proliferation of construction systems and products to meet the minimum specifications (Kashiwagi and Byfield, 2002). Since beginning 2000s, many countries have been endeavoring to reform the public procurement by enacting a great deal of regulations on that. According to Larasati and Watanabe (2010), reform process should be concentrated on range of factor following:

- Reform process encompasses several stages
- Reviewing existing problems in the first step of framework development of reform process
- Reviewing existing issues through historical approach is one of necessary method
- Tools should be created for implementation is an effort to improve performance
- The objective of reform process in to improve the value of public investment

Based on the above mentioned process, first of all, existing issues should be explored and explained then strategies proposed in further.

Existing Major Issues of Public Procurement Performance in Vietnam

As previously mentioned, public infrastructure works play a vital part of the construction industry and GDP growth as well. Infrastructure investment in Vietnam annually account for 9-10% GDP (Alfen et al., 2009); however, both World Bank and Asian Development Bank advised that investment in infrastructure should be increased to 11-12% of GDP in order to maintain the current growth rate (Lovells LLP, 2009). It indicates that there is a strong connection between infrastructure investment and Vietnam's economic growth.

The investment budget of construction works by Vietnamese government during fiscal year 2008 to 2012 is shown in Figure 2. The data indicates that the construction industry had increased gradually during the period of five fiscal year observation. It is also expected to increase in following years.

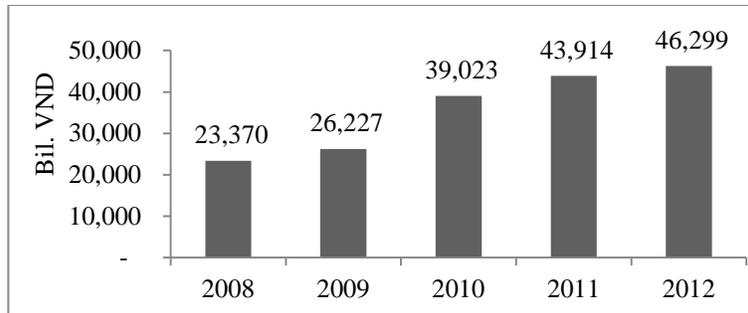


Figure2: Construction investment by Vietnam government during FY 2008 to 2012 (Source: General Statistical Office of Vietnam 2012)

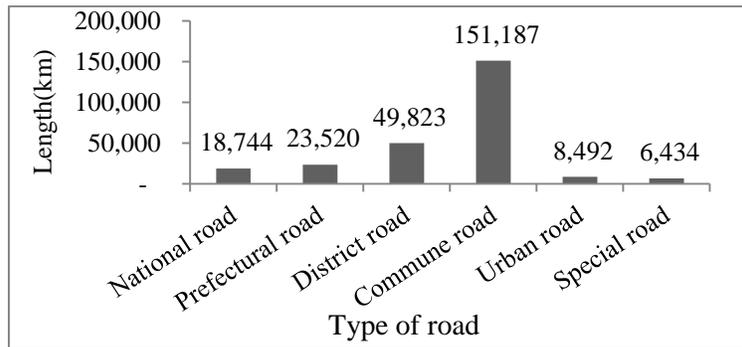


Figure3: Vietnam road network 2011 (Source: Transport Development & Strategy Institute, 2013)

Regarding the transportation sector, its investment requires 4.1% of GDP per year (Alfen et al., 2009). The total current length of road networks in 2011 in Vietnam shows that most of road type is ongoing erected to support the development process (Fig. 3). According to the report of Transport Development & Strategy Institute of Vietnam, a budget is required about 1.619.226 billion VND (approximately 77 billion USD) in ten years investment from 2010 to 2020, attributing to about 202.308 billion VND per year on average (approximately 9.63 billion USD per year), as seen in Figure 4.

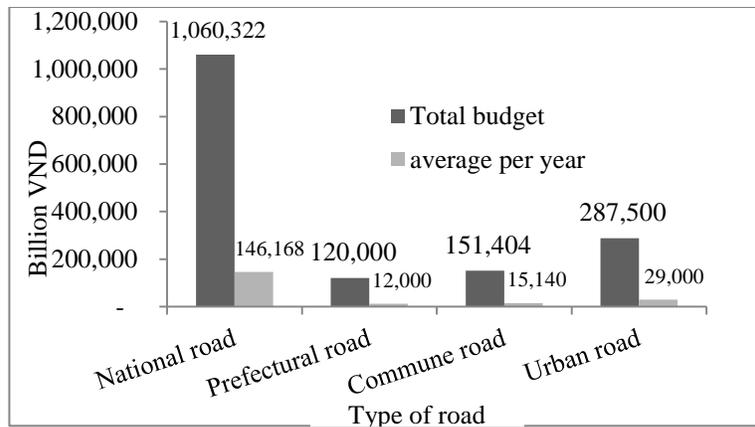


Figure 4: The capital demand for road networks development in Vietnam until 2020 (Source: Transport Development & Strategy Institute, 2013).

The data indicates that a great amount of budget for the national road networks investment such as highway express is needed during the decade by 2020. Vietnamese government has approved an estimated 2,160 km of the new highway projects as part of a national Transport Master Plan, being built between 2008 and 2020 (Italian Trade Commission, 2010). So far, public share has regularly played a major role in financial resources for these investment; actually, budget for transportation infrastructure development accounts for 98% of the total capital expenditure in the last decade (Alfen et al., 2009). Therefore, Vietnamese government has a very strong commitment to develop and modernize the national transport infrastructure systems since it is believed that such development will noticeably support the economic growth.

On the other hand, corruption is always a threat to the infrastructure projects, especially in developing countries. Public procurement sector typically accounts for the largest share of public expenditures aside from government salaries and social benefits. This massive spending goes, in large part, to essential public services such as clean water, education, healthcare and infrastructure. However, it is estimated that corruption can add 10-25 percent to the cost of public procurement, and in some cases even 40 to 50 percent; as a result, the potential financial and social costs are staggering (Transparency International, 2011). That problem was also confirmed by World Bank in the report stating that “Corruption is so common among state agencies, state officials, citizens and firms, between employees of public services and customers, and the people are concerned” (World Bank, 2013). The construction sector was ranked 8th in terms of most corrupted sectors in this report. Corruption not only impedes the economic growth, but also reduces public works procurement performance, competitiveness, and transparency.

In practice, a number of regulations on public procurement have been enacted by Vietnamese government in the two last decades (Fig. 5), and some of drafting guidance law has been discussed to publish in next time. However, the regulation namely “public procurement” has not ever been issued so far; it was the tender regulations instead, and these rules were adopted as the public procurement law. Although first regulation was launched in 1989 (Fig.5), there was not any comprehensive and open competitive bidding regulations until 1994. The founding process of a modern procurement framework for public expenditures, based on principles of competitive bidding, was begun after the first procurement review in 1994. The regulations were separately

developed for capital investment and recurrent expenditures. On the capital investment works were done under technical assistance grants provided by World Bank and Asian Development Bank (ADB). Given those assistances and hands-on experience, the regulations have steadily improved. As requests of the National Assembly, under conducting of the inter-ministerial members group led by the Ministry of Planning and Investments (MPI), tender regulations have been severally issued then revised and substituted since they were first formally enacted in 1996 (Fig.5). The latest regulation is the Tender Law imposed in 2013 which substitutes the prior existing regulations. The latest Law shows some significant improvements in comparison to the first regulation imposed in 1989, making the tender procedures more detailed and approaching to internationally common procedures.

Objectives of the tender law confirmed in its commencement statement are to guarantee four bidding principles including competitiveness, fairness, transparency, and efficiency. The Law also provides for a number of different procurement methods described as follows. Firstly, open competitive bidding is compulsory for most of procurement of goods, works, and consulting services above certain financial thresholds; and there is no restriction on the number of participants. Secondly, designated competitive bidding, which requires a direct invitation to at least five candidates, can merely be utilized in one of the following situations: (i) The procurement is for a research or an experimental nature and only a few bidders have the capability to implement; (ii) under the requirement of the foreign donors; and (iii) the highly specialized procurement. Thirdly, appointed bidding which is used as the given special circumstances for goods, works, and consulting services that require urgent action to respond to an event of force majeure; or involve goods or services from a supplier that cannot be switched to other suppliers due to the technologically compatible requirement; or involve the national security and energy security. Additionally, the appointed bid can solely be employed for procurements below certain financial thresholds. Finally, the special cases may be applied if none of those methods could be used and it also needs to get the approval of the Prime Minister.

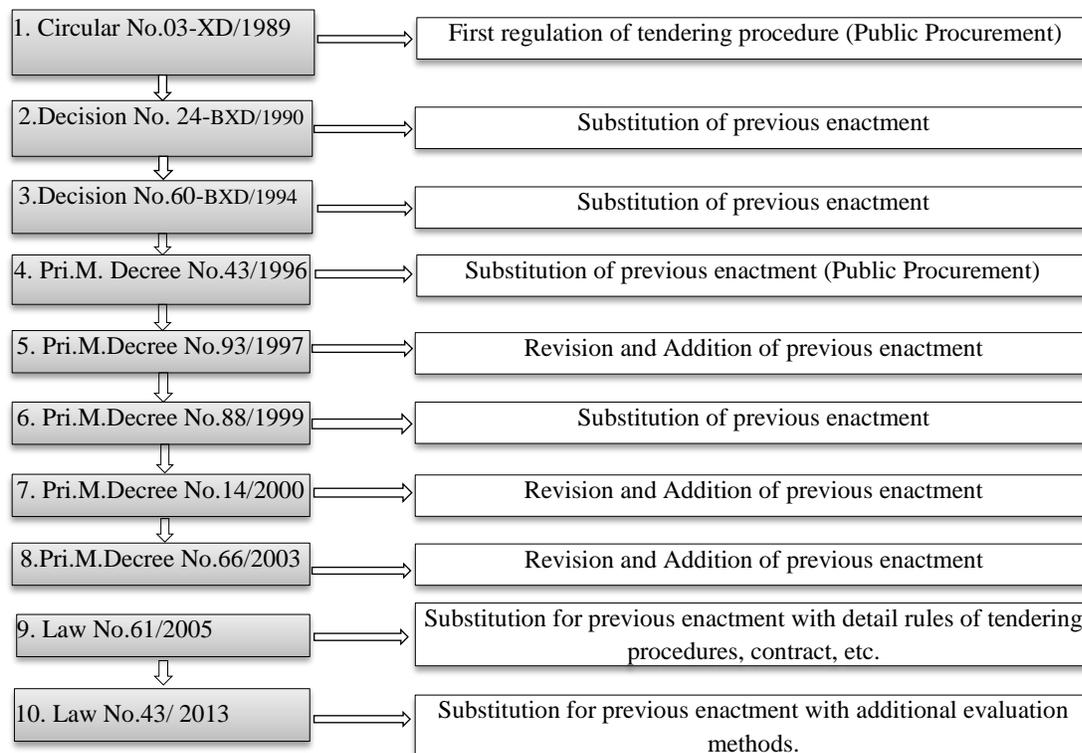


Figure 5: Changing procedures of public procurement regulation in Vietnam.

Table 1 shows results of the questionnaire survey. Summarizing results of this survey, the above stated four objectives of the procurement law are not considered to be achieved. Main problems usually result from insufficient promulgation of tender regulations form, inappropriate bid scheme, unpractical evaluation method, insufficient responsibility fulfillment by each level of management in each organization, and insufficient public information disclosure. Law 2005 first introduced an unique evaluation method was the price based on “an equal footing basic” in which multiple criteria including that technical and commercial evaluations are converted into the total price proposal; however, it appears to be unpractical.

In addition, the latest tendering law offered two more evaluation methods, namely “lowest price based” and “technical criteria combined with financial criteria based weighting.” Here two survey results should be noted. First, 82% of respondents agree to the problem statement of “Difficulty to receive the RFP due to obstruction in the case of collusion.” This shows that collusion phenomena are prevailing. Second, 85% of respondents agree to the problem statement of “Poor quality of Request for Proposal.” This hints that RFP gives ambiguous introductions and poor definition of evaluation criteria. Thus, the low bid method has been the most likely employed in bid processes. As for another actual concern, a comprehensive evaluation method, in which multiple criteria are effectively inclusively evaluated, has not been defined by the existing tender regulations; consequently, clients could not have the legal frame to implement that method in the Request for Proposal and evaluation. Therefore, bid decisions are usually based on lowest price; as a result, the awarded bidder is forced to make high profit margin by

providing cheapest construction services or making more claims as much as possible. Subsequently, poor public works performance is a natural consequence.

In order to capture issues visibly, the open competitive bidding process is described in Figure 6. It can be seen that most of stages of public procurement process have specific problems caused by both involved stakeholders (software) and structured system (hardware). There are the following issues at each stage:

In the following section, each specific problem is discussed.

Table 1

Summary of survey results

ID	Questions	Agree	Disagree	Others
1	Difficulty to receive the RFP due to obstruction in the case of collusion	82%	18%	0%
2	Poor quality of Request for Proposal	85%	14%	1%
3	Lack of independent and trustworthy reference information of contractors.	83%	15%	2%
4	Low trust between client and constructor in bidding process and execution	77%	18%	5%
5	Information of projects is not provided conveniently.	71%	28%	1%
6	Prevailing collusion is a cause of low competition.	81%	18%	1%
7	Many poor design document is still an issue, resulting in change orders during construction	87%	12%	1%
8	Past performance of constructor is still not considered/ or ineffectively evaluated	89%	10%	1%
9	Risk assessment plan of constructor is still not considered effectively	83%	16%	1%
10	Key persons of constructor are not effectively and efficiently considered.	89%	10%	1%
11	Sub-constructors and suppliers are still not evaluated appropriately and efficiently	76%	22%	2%

Lack of information reference systems of bidders

83% of respondents agree to the problem statement of “Lack of independent and trustworthy reference information on contractors.” The capacity and past performance of candidates cannot be effectively and conveniently verified. Consequently, in practice, qualification of each bidder is only judged from documents submitted in each bid proposal. In addition, the qualification documents submitted, which includes only a financial statement confirmed by a private audit firm and a list of completed contracts in the past, is not assured by any bid bond or a third party. It implies that contents of most qualification documents are questionable and that clients cannot effectively verify the capacity, experience and performance of each bidder. Thus, 77% of

respondents agree to the problem statement of “Low trust between client and constructor in bidding process and execution.”

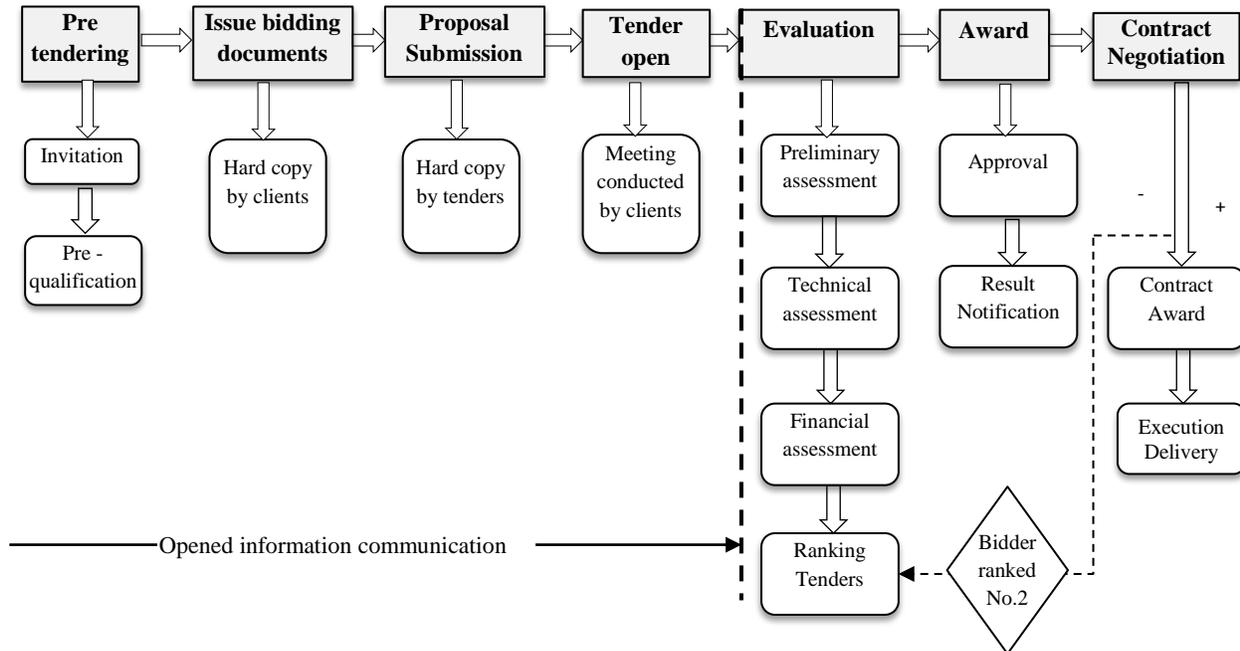


Figure 6: Open competitive bidding process in Vietnam

Designated competitive bidding

The designated competitive bidding is conducted in most projects even if a project is announced an open competitive bid. As mentioned above, the law offers a certain number of selection methods including open competitive, designated competitive, negotiated, and purchased biddings; however, 81% of the respondents agreed to the problem statement of “Prevailing collusion is a cause of low competition,” that is, the selection mechanism is attributed to an “easy” practice of less competitive approaches involving collusion. Given such a restricted competitive environment, only candidates who have good relationship with clients or top management positions of public authorities can participate in certain bids. Furthermore, there is one important survey result. 82% of respondents agree to the problem statement of “Difficulty to receive the RFP due to obstruction in the case of collusion.” This behavior means that the public client makes pre-bid information unavailable to certain bidders including bid invitation information and Request for Proposal document. These techniques preventing open competition are widely employed. As a result, the open competitive bid approach is certainly not competitive enough because bidders can be successful by having a good relationship with the client rather than improving their competitive capacity. Therefore, practices of restricted competition are conflicted with stated objectives of the law.

Lack of transparent and convenient information system of bid process

71% of the respondents agree to the problem statement of “information of the certain projects is not provided conveniently.” The adequate and timely notification of bid opportunities is a

cornerstone of transparency in procurement. Moreover, information publication and openness in regulations should be available in not only the tender announcement but also the myriad of other contents such as evaluation criteria, scoring criteria, and evaluation method. In addition, the “ceiling price” of bid packages, public engineer’s price, is also kept confidential during bid screening; as a result, bidders usually tend to exploit the package’s price information from clients or client’s representatives. Naturally, the more confidential clients keep information the more curious bidders exploit; consequently, that lack of transparency is also a source of bid collusion and corruption.

Here it should be worthwhile mentioning Japan’s experience. Japan has been suffering from the same unfair activities associated with confidentiality of the ceiling price. Thus, many local governments disclose the ceiling price before the bidding. Some governments even disclose the lower limit on contract value. These measures are certainly effective to reduce corruption; however, there is a side effect. Most of bids concentrate on or around the lower limit; thus, a winner is often determined by tossing a coin. This measure may be hindering development of truly excellent constructor; however, an epoch making measure to prevent unfair behavior and promote truly excellent constructor has not been found yet (Watanabe et al., 2012). There seems no almighty measure. Depending on the history and the current practice of procurement, a most suitable measure should be carefully discussed, derived, implemented, and modified based on the implementation results.

To be transparent in information communication, not only should all the disclosure information requirements be satisfactory; but also such requests should be publicly explained to candidates during bidding process. However, the provided interpretations to unsuccessful bidders, for example, are insufficient to clarify the reasons. Therefore, the obvious accountability stakeholders in the bid information justification should be confirmed by regulations in order to warrant the transparency and the objectivity of all bid information.

Poor quality of Design and Request for Proposal document

87% of the respondents agreed to the problem statement of “poor design is one of major issues, which causes frequent change orders during the executing period.” This becomes a fundamental reason that awarded constructor makes many claims for supplement works. As a result, the actual cost usually exceeds the initial budget of packages; consequently, budget is forced to adjust additionally after completion of works.

In addition, the Request for Proposal (RFP) document is regularly developed by consultant firms. However, risks appeared when the consultant has insufficient capability. In fact, as 85% of respondents agreed to the problem statement of “Poor quality of Request for Proposal,” most of consultant firms have inadequate capability causing the poor RFP document. Certain RFP documents are completed without appropriate constructing technologies, specifications, and effective standard. Consequently, those poor criteria cannot be an accurate judgment function to assess competitors. As a result, the poor design document and the poor Request for Proposal are the critical sources and causes of change orders and supplementary work claims during construction delivery.

Issues of Bid Evaluation

Bid documents, in principle, disclose the method of bid evaluation and contract award criteria. The award criteria for goods and works are (1) minimum requirements fulfilled; (2) lowest “evaluated price”; and (3) proposal price not exceeding pre-bid estimate (ceiling price). However, the ambiguous term of “evaluated price”, which is defined as the bid price after errors correction, deviations adjustment, and then the conversion of technical, financial, commercial criteria and others to make bids comparable, has not been practical or feasible. The inapplicability of the “evaluated price” technique is caused by an insufficient clarification in the Request for Proposal document. Therefore, in practice, assessors cannot apply the “evaluated price” technique even if it is ruled by the Law. Actually, the technical evaluation score is not obtained by its relative importance to price evaluation score. Generally, the lowest price proposal is awarded among those who satisfy the minimum of the technical requirements.

In addition, 89% of the respondents agree to the problem statement of “Past performance of constructor is still not considered/ or ineffectively evaluated.” Quality, schedule over-run, warranty activities, and past client’s claims are not assessed in qualification screening or in-depth assessment stage. The lack of past performance criteria evaluation is partly as a result of the untrustworthy references information of candidates. In other claims, 83% and 89% of the respondents also agreed to the problem statements of “the risk assessment plan and superintendent assessment are still not considered or ineffectively evaluated in the evaluation process, respectively.” In fact, those criteria are not critically required in the Request for Proposal document. Consequently, those inadequate criteria consideration become a major cause of poor potential project performance such as time overrun, exceeding budget with change orders, and unfulfilled quality expectations. Therefore, a winner is substantially determined based on the lowest price. Furthermore, the evaluation process is not transparent enough to both bidders and communities who can straightforwardly monitor the process in order to confirm its transparency, equality, and award result as well.

Lack of effective Sub-constructors’ performance consideration

76% of the respondents agree to the problem statement of “sub-constructors’ performances are not effectively and efficiently evaluated.” Moreover, there is a poor quality control mechanism between prime constructor and sub-constructors after bid award such as insufficient quality control on constructing site and third-party supervision. As a result, the prime constructors liberally make multi-tiered subcontracting to just ease their financial conditions without paying much attention to quality management on site. Sub-constructors with poor experiences, capabilities, competencies, and responsibilities could be hired. The poor sub-constructor constitutes directly to the poor quality public works. In fact, those poor sub-constructors’ performances evaluation is caused by not only inadequate quality assurance regulations, but also lack of sub-constructor’s evaluation criteria.

Given stated issues above, problems of tender scheme and Accountable stakeholders are summarized in Table 2.

Table 2

Problems in public procurement process and Accountable stakeholders

ID	Stages	Major problems	Accountable Stakeholders
1	Pre-bid	- Poor design document - Lack of independent and trustworthy references of bidders - Bid collusion	Government and Clients
2	Bid information	- Inconvenient available information. - Ineffective criteria evaluation - Sealed up the “ceiling price”	Government and Clients
3	Request for Proposal document (RFP)	- Poor quality - Minimum of specification requirements - Lack of effective evaluation criteria	Client and Consultant
4	Evaluation method	- Many evaluation methods proposed inapplicably - Predomination of the price based method - Lack of the effective comprehensive method - Lack of past performance consideration - Lack of the risk assessment plan consideration - Ineffective superintendent evaluation.	Government, Client and Consultant.
5	Post award	- Poor performance of Sub-constructors. - Insufficient fulfillment of bid proposal commitments. - Claim for change orders	Client, consultant, constructor.

The current situation proves that Vietnamese Construction Industry is classified in Quadrant- I, and occasionally, in Quadrant IV in the Construction Industry Structure, as seen in Figure 7.

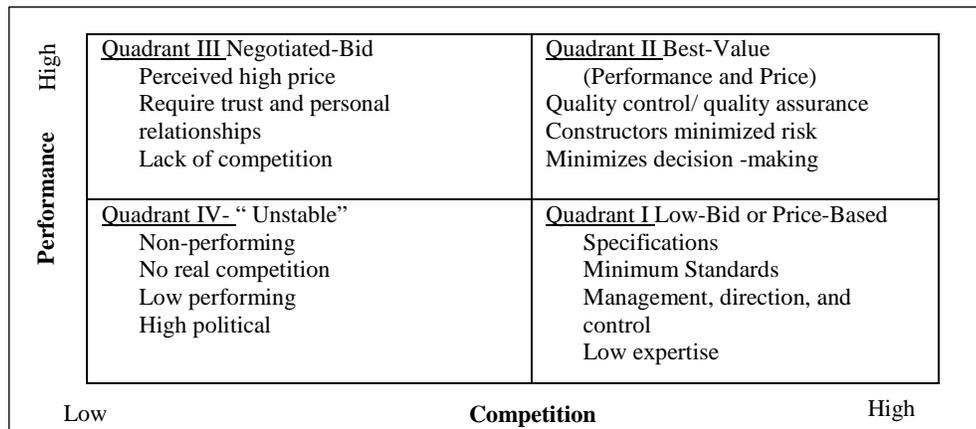


Figure 7. The Construction Industry Structure (Kashiwagi, 2010)

Strategies for Improvement

Through analysis above, and the major issues in the public procurement are investigated, these issues could be classified in two sources, the first one belongs to technical aspects (hardware) and the other one comes from managerial aspects (software) (Fig.8).

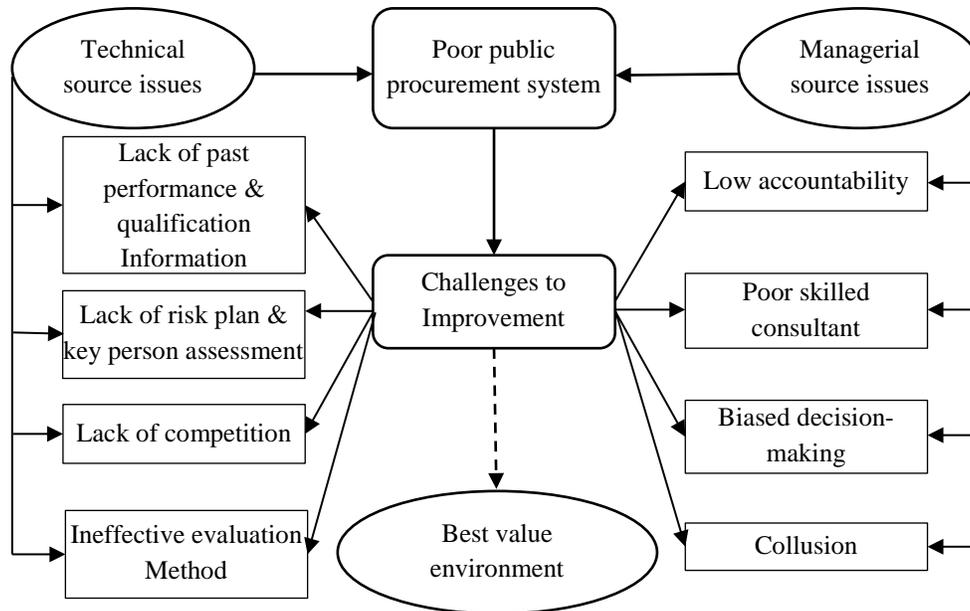


Figure 8. Risk structure of public procurement

Based on the existing identified issues of the public procurement; essential strategies are made for reforms that could be expected to address the above issues and improve current performance, competition and transparency. It is recognized that resolving all would require radical changes; which needs a move away from perception of based solely on price to alternative procurement systems under best value environment. The suggestions put forward include:

1. Building a bidder classification system with appropriate criteria provide greater efficient way of weeding out incompetent contractors during the qualification stage. Assessors can conveniently and authentically reference the specific constructor's capacity that is conforming to project requirements and project classes as well. Constructors should be clustered and stratified into various classes. These classes are taken into account on capacity, capability, and competence including technical profile, financial position, specific field operation, and past performance.
2. Past performance of bidders needs to be evaluated and given a substantial weight in the selection process. Furthermore, the past performance criteria should be effectively updated after completing works. Subsequently, it should be kept records and incorporated in a developing register of constructors' past performance. The past performance register can be efficiently reused in the next procurement cycles as a way of giving an incentive for improving performance to gain continuity of works for contractors, reducing tender costs.

3. Current capability associated to risk assessment plan document and superintendent positions should be obligatorily considered in the evaluation process. The potential identified risks of project performance understood by the project managers are expected to minimize during execution. As a result, works can be conducted by expert vendors who control the risks. Consequently, clients would not have to manage, direct, and control vendors excessively.
4. Bid information of projects including invitation, price, criteria, and evaluation method should be available to the public during the bidding process. The accessible information creates a transparent environment in which all candidates have access to better opportunity to compete and inspect the bid process. In addition, given the sufficient information provided, bidders' decision-making is effectively made for bid proposal. Given such available information, there is a less room for collusion.
5. To ensure that all criteria are considered, an effective and efficient comprehensive evaluation method should be applicably introduced as the core approach to achieve high performance and competition environment. The structure of evaluation method has to be methodically defined by determining criteria metrics and measuring appropriate importance of criteria. At the same time, as given effectively structured selection method, biased decision-making of stakeholders is mitigated and competitive environment is nurtured.
6. The accountability of stakeholders should be evidently explored and appropriately situated to not only procurement process but also other stages of project life cycle. Accountability is also dynamics to generate high trust among stakeholders in project delivery.

Conclusion

An effective public procurement scheme delivers high performance and competition for the construction industry, which significantly contribute to maintain the economic growth and to reduce corruption efficiently. However, in practice in Vietnam, the analysis conducted through survey results and CIS model adopted, it suggests that the public procurement under the price based environment has performed poorly and threatened not only value of public investment but also stability of the construction industry.

In order to achieve the best value environment, the construction industry performance needs to be radically improved through reforming public procurement process. Some ideas and suggestions proposed in both technical and managerial sources are in agreement with the best value approach which realized to value for money of bid and offered high industry's performance.

Beside the adaptation of successful lessons learned from other countries, a new procurement model proposed has to be tailored the particular local circumstance. Procurement method applied therefore should be given more insight concerning cultural characteristics such as nation, industry, and project level. Such cultural issues are relevant to further investigation, by which the

mutual influences between performance criteria and project culture dimensions can be more accurately determined.

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