

THE USE OF QUALIFICATIONS-BASED SELECTION IN PUBLIC PROCUREMENT: A SURVEY RESEARCH

Yuhua Qiao and Glenn Cummings*

ABSTRACT. Public agencies have started to shift away from the traditional lowest responsive and responsible bid to other approaches in purchasing certain items and services. These alternative approaches emphasize the quality of the products and the qualifications of the vendors. The purpose of this article is to explore the use qualifications-based selection (QBS) and other non-traditional source selection methods in public procurement processes. An online survey was sent out to 1665 members of the National Institute of Governmental Purchasing, and a mail survey sent a random sample to 300 American Public Works Association members. The survey results show that while the traditional lowest responsive and responsible bidding is still the dominant selection method when all procurement is considered, QBS and other non-traditional methods have gained wide acceptance and use in public agencies, especially for the purchase of professional services and information technology.

INTRODUCTION

Public procurement is an old and a big business¹ (Thai & Grimm, 2000; American Bar Association, 2000). But only until recent years have public officials realized their strategic role in contributing to the improvement of public services. For public procurement to meet such an important responsibility, governments have reengineered or reformed many aspects of the public procurement process. In this article the authors examine the changes in one of these aspects – how public agencies select vendors.

* *Yuhua Qiao, Ph.D., is Associate Professor, Department of Political Science, Southwest Missouri State University. Her research interests are in public budgeting and financial management and in general public administration. Glenn Cummings, CPPO, is Director, Purchasing Division, Broward County, Florida. He was the past president of the National Institute of Governmental Purchasing and presently serves as Parliamentarian for this organization.*

One emerging phenomenon in source selection is that public agencies have started to shift away from the traditional lowest responsive and responsible bid to other approaches in purchasing certain items and services, ranging from Request for Proposal (RFP) to qualifications-based selection (QBS). These alternative approaches emphasize the quality of the products and the qualifications of the vendors. The purpose of this article is to document and explore the degree to which QBS and other non-traditional selection methods are used in public procurement processes. As a pioneer study on the use of QBS, this research is important. Its results will allow both practitioners and academia to understand better selection practices of public procurement at the present and in the near future. To explore the use of qualifications-based selection in public procurement, this article has four parts. The first part reviews the literature regarding recent changes in public procurement and highlights the recent emphasis on qualification-based selection. The second part explains the research method. The third section discusses the findings in reference to the existing literature. The conclusion discusses the policy implications of this study and highlights future research.

SOURCE SELECTION METHODS IN PUBLIC PROCUREMENT: A LITERATURE REVIEW

With public demand for more effective and efficient services and with dramatic increasing use of information technology, public procurement has faced challenges and opportunities in recent years. Thai and Grimm (2000) noticed the environmental changes and the consequent issues public agencies have faced in recent years. Pettijohn and Qiao (2000) explored how public agencies have changed their ways to procure information technology (IT). McCue and Pitzer (2000, p. 400) stated that “in the face of growing uneasiness by elected officials, service delivery managers, and citizens about rule-driven process, inefficient systems, and poor management of resources, purchasing professionals are being challenged to develop new dynamic, adaptable structures.”

Reforms in public procurement practices and process are inevitable, given the social and technological changes and the increasingly complex nature of public procurement. The traditional procurement system formed during the first part of the twentieth century is rules-driven and regulations-driven. These rules and regulations attempt to provide equity, integrity and efficiency in the public procurement system² and worked

well in an environment in which government tasks were relatively simple and straightforward and when procurement dealt with simple commodities. However, as government jobs became more complex and its procurement, particularly the information technology and professional services acquisitions, became more intricate, many of the rules were outdated and severely limited the central procurement office's ability to respond to these changes (Kelman, 1990; National Association of State Procurement Officials [NASPO], 1999).

Traditional Source Selection Method: Competitive Sealed Bidding

While many changes have occurred in public procurement systems, the focus of this research is on how public procurement agencies select vendors and award contracts. “The evaluation of bids and offers is a highly significant part of the purchasing process. It brings together the two principal aims of public contracting: economy and fairness” (Council of State Governments, 1987, p. 72). Under the traditional procurement system is the long-standing policy recommendation that “competitive sealed bidding be the preferred method of contracting above a certain dollar amount” (NASPO, 1997, p. 1). All government procurement statutes require that under competitive sealed bidding, a bid is awarded to the lowest responsible and responsive bidder. “Responsiveness” means that the bid meets all of the material terms of the solicitation’s requirements. “Responsibility” means that the bidder “has the capability, financial capacity, and integrity to perform the contract” (NASPO, 1997, p. 66).

The rise of competitive sealed bidding during the mid-20 century was necessary to prevent waste and corruption in public procurement. This practice opens the process to public scrutiny. All the sealed bids are opened publicly and the award goes to the lowest bidder, not to favored vendors. “Awards to other than the lowest bidder must be clearly explained in terms of the previous stated criteria” (Lynch, 1995, p. 331).

Competitive sealed bidding worked well then, and it still works well now in determining awards when the product or services are essentially identical, irrespective of which bidder receives the award. However, there are situations where it is impossible to delineate adequately the differences among bidders when the award must be on a strict competitive bid basis. To address this inadequacy in the traditional bid system, some governments have enacted laws that grant procurement officials discretion to take action deemed to be most advantageous to the

jurisdiction, thus giving wide latitude of choice for the purchasing officials as long as they do not cross the line into arbitrary and capricious actions. This is particularly true with the purchases of IT and professional services where quality and performance of purchased items and services depend on the creativity or experience of vendors. The National Association of State Procurement Officials (1997) in its publication – *State and Local Government Purchasing* - and American Bar Association (2000) in its publication – *Model Procurement Code for State and Local Governments* – define this concept of “best interest” of the jurisdiction. Though the competitive sealed bidding can serve the best interest of the jurisdiction when procuring standard commodities, it is appropriate to say that the best interest concept encourages the use of alternative selection methods as reviewed below. For instance, *Model Procurement Code for State and Local Governments* indicates Request for Proposal and QBS will serve the best interest of the jurisdiction when competitive sealed bidding does not work. In addition to the “best interest” law, in the past two decades, many state and local governments specifically grant their procurement officials authority to use RFP, the two-step competitive bidding, the best value approach, and QBS that will be reviewed below.

Alternatives to lowest responsible and responsive bidding selection

In this section, we will review various alternative source selection methods, ranging from Request for Proposal to qualifications-based selection. While some of them such as Request for Proposal have been in use for a while, others like QBS are gaining more recognition and have been used only in certain areas.

Request for Proposal

The Request for Proposal is also known as the Competitive Sealed Proposal. While RFP often refers to an entire selection process, public works and infrastructure managers use the same term to refer to a distinct element (not the whole process) that may be used in competitive bidding, QBS, or other alternative forms of selection.

As a selection process, the competitive sealed proposal is a complex procedure. It is used when competitive bidding is either impractical or is not advantageous to the public agency. One example is the procurement of an information technology commodity such as data processing

software. Procurement officers may not have the expertise to draft the specific or generic specifications, and it is unwise to use cost as the absolute criterion to evaluate the bids. Very often, state and local governments use the competitive sealed proposals method for the procurement of high technology commodities and professional services, especially data processing and telecommunication services (NASPO, 1997).

Like competitive sealed bidding, competitive sealed proposal also follows a competitive process but only in certain aspects. For instance, public procurement agencies have to announce competitive sealed proposals in public places. Under the competitive sealed proposal method, consideration is given to both price and other important factors such as experience, past performance, approach to the problem posed by the jurisdiction and staffing. However, price is not the most dominant factor, and negotiations are often encouraged between public procurement officers and vendors (NASPO, 1997, p. 58). While competitive sealed proposals are opened publicly, usually only the names of the offerors are revealed. Whether other information is open to the public varies from jurisdiction to jurisdiction. Their prices and other information are not open to the public until public agencies make a notice of intent to award.

Until 1979 when the American Bar Association (ABA) issued its Model Procurement Code for State and Local Government, competitive sealed bidding had been almost the only source selection method used by state and local governments (NASPO, 1997). Since then, many changes have occurred in public procurement due to the easy use of telecommunication technologies. To update its code that has been fully adopted by 15 state governments and thousands of local governments to the changing nature of public procurement and to offer the best practices to acquire the technology-oriented procurements, ABA published its revised Code in 2000 (Miller, 2002). The revised Code recognized that certain services may be better acquired in certain cases via the competitive sealed proposal process.

According to the 1997-1998 *Survey of State and Local Government Purchasing Practices* (NASPO, 1999) forty-four states authorized its procurement officers to use competitive sealed proposals. Using competitive sealed proposal is not really a new practice. It has been in use for a while, though the survey did not document when these states authorized their agencies to use competitive sealed proposals. Twenty-

nine states reported that they utilize the competitive sealed proposals process in “some” solicitations issued; five states reported use of competitive sealed proposals in “most”; and twelve states described their use as “very few”. The same survey also found that nine states assign minimum weighting for prices. Twenty-three states reported that their use of competitive sealed proposal has some restrictions. Examples of the restrictions are “used for information technology and service contracting, and may be used for commodities under pilot projects” as in California and “must be approved by Secretary of Administration” as in Arizona (NASPO, 1999, p. 27).

In some jurisdictions, procurement officials use a Request for Qualification solicitation to purchase professional services that are difficult to price. The process of Request for Qualification solicitation is similar to that of Competitive Sealed Proposal. The only difference is that price is not an evaluation criterion. Rather, the price or cost is negotiated between the procurement officer and the vender selected for contract award.

Two-Step Competitive Sealed Bidding

Two step competitive sealed bidding (also referred to as multi-step competitive sealed bidding) is a source selection method that allows public purchasers discretion to negotiate with possible vendors about the technical aspects of an acquisition but still requires the use of lowest responsive and responsible bidding to select the final vender. There are various versions of two-step competitive sealed bidding. One of the most advantageous versions works as follows: For the first round, potential bidders submit only technical proposals responding to the performance specifications issued by public agencies in an Invitation for Bid (IFB). Then, the evaluation team opens and evaluates the proposal and holds candid and detailed discussions with all the offerors, or only with those whose technical proposals have merit as to how well the proposal responds to the requests and how to improve the proposal. In the second round that follows the discussions, requests for bids are sent to those offerors with whom discussions have been held. The final award is determined mainly by the price.

This method can be used to obtain the benefits of both competitive sealed bids and competitive sealed proposal procedures where the evaluation team can exercise discretion to negotiate and to discuss with

potential vendors. It “is particularly valuable in complex procurements when establishment of a full-blown statement of work or set of performance specifications is extremely difficult or not useful” (NASPO, 1997, p. 60). For example, the state of Tennessee (Tennessee State Government, n.d.) requires its agencies to use two-step competitive bidding when acquiring institutional computer systems involving the purchase of hardware and the development of application software. Another advantage of this method is its reduction of the workload of both the bidders and procurement officers since only those that passed the first round screening will submit detailed bids in the second round.

According to NASPO (1999), forty states have authorized its agencies to use this method. While twenty-six of them reported that their agencies use it “occasionally,” only nine indicated that they used it “regularly,” and five said they “never” used it (p. 62). National Performance Review (NPR) (1993) recommended a two-phase competitive source selection process for a design-build approach which “would focus on qualifications and concepts in the first phase and limit competition in the second phase to a specified number of contractors” (p. 57). In 1993, the U.S. General Service Administration started a two-step pilot program to select contractors for several federal design-build projects (“General Service Administration to Test,” 1993, p. 10). Such a two-step design-build selection method that emphasizes top-quality design for federal building projects has been institutionalized in U.S. General Service Administration’s design excellent program (General Service Administration, n.d.).

Best Value Approach

Another shift away from the traditional lowest responsive and responsible bidding is “the best value” approach that is mainly used in the procurement of information technology. It is also used for other acquisitions such as design-build projects.

Kelman (1990) and NASPO (n.d.) attack use of the lowest responsive and responsible bid in procuring IT. Lowest responsive bidding for purchasing software or other information technology usually results in “product that is low in quality, high in risk and fails to meet the needs of the agency” (NASPO, n.d, p. 11). As a response, some governments allow their agencies to procure information technology based on best value rather than least cost. For IT procurement, non-cost factors such as performance of the vendor (e.g., reliability and the quality of services

and products) are more crucial than cost (Mechling, 1995; NASPO, n.d.). Several states, including Texas, Massachusetts, New York, Missouri, and New Mexico have adopted the best value approach (NASPO, n.d.). Gardner (1999), a Canadian writer, also reported that in recent years, government information systems management in Canada is increasingly awarding the business to those suppliers who bid solutions that dramatically increase employee productivity and customer satisfaction.

The U.S. federal government also recognizes the need to use the “greatest value” or the “best value” approach in awarding contracts to IT vendors. “The award of a contract to a supplier based on lowest price can be a false economy if there is subsequent default, late delivery, or other unsatisfactory performance resulting in additional contractual or administrative costs” (National Performance Review, 1993, p. 51). In IT procurement, National Performance Review (1993) recommended that the negotiated method of procurement be used where “the government has considerable latitude in structuring the procurement and can consider both price and other factors (e.g., technical capabilities, qualifications of key personnel, past performance records, quality of proposed solutions) in selecting the contractor” (p. 52). The best value approach is also used in acquiring professional services to a large extent in the federal government (Office of Federal Procurement Policy, 1985).

Best value is both a procurement philosophy and a source selection method. As a procurement philosophy, it emphasizes the overall return or value of the procurement rather than the lowest cost, as explained above. The RFP and the two-step competitive bidding that have reviewed above and the QBS to be reviewed below all fall under this philosophy. As a selection method, it is “a process used in competitive, negotiated contracting to select the most advantageous offer by evaluating and comparing factors in addition to cost or price” (Turbo Streamliner, 2000). Best value procurement has several underlying tenets as outlined by the Professional Service Council (n.d.).

- Statements of work that clearly reflect the specific (versus generic) requirements and the special quality demands of the customer and are expressed in terms of “what” is required rather than “how the work is performed.”
- Formal and measurable (in terms of quality, timeliness, quantity, etc.) performance standards.

- Evaluation and selection procedures that utilize quality-related factors such as technical capacity, management capacity, cost realism, and past performance.
- Incentive provisions to ensure reward for good performance based on predetermined performance standards.

The best-value process has certain similarities to the QBS process to be reviewed below. Both processes emphasize the quality of the products or services, and both involve negotiation and allow procurement officials to use many non-cost factors as criteria in the selection process. However, they are different terms. The best value approach is a selection process that assesses the return “which can be achieved based on the total life cycle cost of the item. [It] can include an assessment of the functionality of the item; can use cost/benefit analysis to define the best combinations of quality, service and cost considerations over the useful life of the acquired item” (NIGP, 1996, p. 7). While the top priority is qualification in QBS, the best-value approach takes into consideration the combination of quality of the commodity (or qualification of vendors) and the costs. The point in best value procurement is that every penny should get its worth. There is another difference between the two approaches. Best value is a general process that usually involves the procurement of a commodity such as IT and professional services as well. QBS has a narrow connotation that often involves selection of vendors, particularly vendors that provide such professional services as engineering and architectural design.

Qualifications-Based Selection

Qualifications-based selection is a negotiated procurement process whereby service providers are selected on the basis of qualifications for a particular project, rather than price factors. The prospective vendor that has the best qualifications is offered the contract, and fee is considered and negotiated only after selection. While some website and literature describes the QBS process in more details than others and the specific sequences may be a little different, the major elements in QBS process remains the same as highlighted in Table 1.

As indicated above, under QBS, professional service firms are weighted first on competence, creativity and performance, and second on negotiation of a fair and reasonable fee (Indiana QBS Coalition, n.d.).

TABLE 1
QBS Process

Step 1: Select the best qualified firm	<ul style="list-style-type: none"> -Establish evaluate criteria -Solicit statements of qualifications from interested firms -Develop a short list of 3 to 5 firms. Investigate references, jobs and office. Invite for interview -Interview and rank the firms
Step 2: Jointly define scope and contract terms	<ul style="list-style-type: none"> -Invite the highest-ranked firm to assist in defining the scope of the work. -Establish contract terms -If the agency and firm do not agree upon the terms, go to the next firm on the short list
Step 3: If yes, retain the firm on the basis of an acceptable proposal	<ul style="list-style-type: none"> -Ask for fee proposal -Agreement? If not, go to the next firm on the short list; if yes, retain the firm and enter into a written contract

Source: QBSColorado (n. d.).

Like the traditional competitive sealed bidding, QBS also involves competition. However, the competition here is on a different basis – that of qualification. To assess the qualifications of a firm, interview and discussions, not bidding, are needed.

While public agencies have experienced an increasing use of QBS in recent years, there is no academic research about its use. In addition to a number of websites sponsored by professional associations promoting the use of QBS, the authors are fortunate to have obtained a series of leaflets, handouts and publications on the use of QBS from American Public Works Association (APWA). According to the limited available literature, qualifications-based selection is mainly used in selection of professional services of engineering, architecture, and land survey.

Using QBS for Professional Services

As early as 1987, NASPO recognized the controversy over the use of sealed competitive bidding to select professional services.³ “Some professional groups argue that their fees should be non-competitive and that price should not be a factor in evaluating proposals for their

services” (Council of State Government, 1987, p. 68). However, concern exists over whether the noncompetitive and non-fee-based approach would result in monopoly and corruption. NASPO (1997) also emphasized the complex and demanding nature of procurement of professional services. “While the purchase of services requires innovative methods of acquiring quality services at a reasonable price, traditional procurement strategies are amenable to the process” (p. 74). As indicated above, in most cases, professional services are procured through competitive sealed proposals, although the option of multi-step competitive sealed bidding is also considered (NASPO, 1997).

It is interesting to note that the public procurement community and private industries hold different views as to whether QBS or conventional selection methods should be used. This difference was well documented in 1985 report by the Office of Federal Procurement Policy (1985, p. vii):

Contracting for professional services is viewed differently by the government than by certain private organizations and interests. The government contracting community is, for the most part, satisfied with the present contracting process.⁴ Contracting officials stated that current procedures provide for the proper consideration of both cost and technical factors and that contract awards can now be made on the basis of technical and quality factors when appropriate to do so. Private trade associations and organizations, representing surveyors, mappers, real estate appraisers, and soils consultants, are not satisfied with present practices. The surveyors, mappers, and soils consultants want the services offered by their respective professions to be acquired pursuant to the contracting process specified in Public Law 92-52, the “Brooks Architect-Engineer Act.”

In the past few decades, there has been an increase of interest and use of QBS in procuring professional services in the areas of engineering, architecture, and land surveys.⁵ A number of professional associations such as the American Public Works Association (APWA), the American Consulting Engineers Council (ACEC), the American Institute of Architects (AIA), and the National Society of Professional Engineers (NSPE) are strong advocates and promoters of the use of QBS.⁶ They have identified several rationales for the use of QBS in procuring engineering, architecture, and land survey.

First, QBS is the appropriate method in selection vendors for the creative professional services in that creative services cannot be described precisely. “Qualifications for architectural and engineering services, like those for medicine and law, do not lend themselves to being set forth in detail in advance as is done for construction services and office supplies” (Martin, 1997, p. 2). Therefore, “reliance must be placed on the experience, expertise, creativity and overall intellectual capacity of the people involved who will ultimately determine the success of the project design or technical study” (Martin, 1997, p. 1-2). Bidding or other cost-based selection does not produce the best-qualified firms for the job, because lowest cost and high quality never go hand in hand. No two firms can or will have precisely the same qualifications for any particular projects design or technical study. Only detailed interviews allow public agencies to evaluate a technical consultant’s qualification related to the work at hand, and negotiating a detailed scope of work with the highest ranked firm under QBS serves as a basis for realistic fees and promotes full cooperation of the consultant in fulfilling the contract (Martin, 1997).

Second, while design fees are always a very small part of overall project costs, regardless of the method of consultant selection, quality of design has a profound influence on the life-cycle cost of the project. As the first step and also the most important element in any construction project, planning and designing determines the size of the layout of the facility; type of construction materials; capacity of mechanical and electrical systems; energy efficiency; and other factors” (QBS Utah, n. d.). When a defect occurs in the design, even the best contractor using the finest construction materials cannot overcome the effects. Indeed, compared with construction and the life-cycle costs, the cost of planning and designing is very small. The federal government estimated that original design service costs is only about 1% or less of the project’s life-cycle costs. Therefore, choosing the best designers will have long-term economic benefits. According to Martin (1997), QBS can achieve the goals of economy, safety, efficiency, sound construction, serviceability, maintenance, and operations.

Third, QBS facilitated by interview and negotiation fosters a partnership relation between the clients and the design firms. This type of relation will allow design firms to play an effective and constructive role in representing the owner’s interests in day-to-day dealings with contractors, suppliers, equipment manufacturers, and others providing

goods and services during construction (QBS Utah, n. d.). QBS also fosters greater creativity and flexibility, and minimizes the potential for disputes and litigation. Overall, “the public interest is best served when governmental agencies select architects, engineers, and related professional technical consultants for projects and studies through Qualifications Based Selection (QBS) procedures” (Martin, 1997, p.1).

Legal Bases for QBS Use

There are some legal bases for the use of QBS in public procurement. The federal government passed the Brooks Act in 1972 (Office of Federal Procurement Policy, 1985). Congress mandated a policy of negotiating contracts for architectural and engineering services on government projects on the basis of "demonstrated competence and qualification ... at fair and reasonable prices" (cited in Office of Federal Procurement Policy, 1985, p. 10). Since then, many states and numerous localities have followed the federal order. According to American Consulting Engineers Council's (ACEC) 2001 survey, 42 states passed legislation to authorize the use of qualification-based selection in their states. The specific requirements differ from state to state. For instance, in Maryland, under \$100,000 value of purchase price is 40% of selection criteria. Tennessee requires qualifications but also allows considering prices when its local units use QBS. Thirty-seven states, and local units in 21 states were allowed to use QBS (American Council of Engineering Companies, n.d.).

Professional associations have made constant efforts to promote the use of QBS. For instance, NSPE and ACEC have co-sponsored national qualifications-based selection awards for both the government sector and the non-government sector to honor entities that use QBS to retain design professionals. Since 1989, ACEC, AIA, APWA, and the National Society of Professional Engineers/Professional Engineers in Private Practice (NSPE/PEPP) have funded and administered a QBS Facilitator Grant Program. Modeled after the remarkable success of the Wisconsin State QBS effort that started in the mid-1980s, the program is to assist state efforts to inform public agencies about the QBS process (Martin, 1997). “State programs, which receive the grants, are expected to assign or engage ‘facilitators’ to encourage selection of A-Es on the basis of qualifications, rather than price” (Ross, 2000). These national associations and many regional associations have distributed various publications, workbook, handouts, and websites to assist public agencies

in understanding the importance of QBS and how to successfully implement a recruitment based on qualifications.

In addition, the American Bar Association also recommended state and local governments “negotiate contracts for Architectural and Engineering Services on the basis on demonstrated competence and qualification for the type of services required, and at fair and reasonable prices” (American Bar Association, 2000, p. 48).

Research Questions

The above literature review shows that due to the increasing complexity of commodities and services, public agencies have started to use various source selection methods in addition to the traditional lowest responsive and responsible bidding method. It seems that most of the innovative approaches are used mainly in the acquisition of IT and professional services, including human services, engineering, and land surveys. However, we do not know to what extent QBS and other alternative approaches are used in these acquisitions, how they are used and the impact of the uses. Therefore, this study will focus on the following research questions regarding the use of QBS and the alternative approaches:

1. To what extent are QBS and other non-traditional selection methods used in public procurement, in what areas and in what forms? What are the factors that explain the use in some jurisdictions but not in others?
2. If QBS is used, are public agencies happy with it? Does it work better than the traditional lowest responsive bidding in that specific acquisition area? If QBS is not used, why?
3. What is the trend? Do those that are not using QBS plan to use it in the near future?

METHODOLOGY

To document the use of qualifications-based selection process, questionnaires were sent to about 1665 National Institute of Government Purchasing (NIGP) members throughout the United States and Canada through e-mails and to 300 American Public Works Association members by mail in December 2001. Responses from the online NIGP survey totaled 216. However, seven pairs and three clusters, each of

which has three cases, have identical responses. The authors suspect those answering the survey may have sent their responses twice or three times. If this is true, the number of online surveys is reduced by 13 to 203. However, all of these responses were kept in the analysis for two reasons: First, the authors were not 100 percent sure that the duplication had, in fact, occurred. Second, online surveys that may have been submitted multiple times is small and will not distort the analysis results.

Most of the online responses came in December 2001 and early January 2002. The last response was in the middle of February 2002. There are 87 responses from American Public Works Association members, a response rate of 29%. All of the responses came between December 2001 and February 2002.

The two versions of surveys were slightly different. The survey instrument completed by NIGP members consists of an online survey, which was designed and sent to the NIGP office in summer 2001. When the survey instrument was sent to Dennis H. Ross, Director of Professional Development for the American Public Works Association, he made valuable comments. Accordingly, several survey questions⁷ were revised. In addition, the online survey instrument completed by NIGP members cannot collect data on some questions.⁷ The survey completed by APWA members, a mailed survey with a pre-addressed return envelope, was designed to allow more detailed exploration. The differences in the questions on the two surveys are explained in the discussion of each question.

FINDINGS

The findings cover the use of QBS in public procurement from various aspects, including what percentage of the respondents are allowed to use and do use QBS, how they use it, whether they are satisfied with it, why they do not use it if they have not used it, and projected use in the coming 3-4 years.

Number of Public Agencies Using QBS

One survey question asks respondents which of the following selection methods is allowable under their enabling legislation: The use of QBS; selection of a vendor based on "best interest of the jurisdiction(s); or the use of lowest responsive and responsible bidder only. As Table 2 shows, about one third (e.g., 29.5% of the APWA

respondents and 32.4% of the NIGP respondents) indicated the laws allow them to use QBS. The percentage of APWA respondents that are allowed to use QBS can be as high as 59.3%, because another 29.8 percent indicated that they are allowed to use a combination of the three methods (e.g., 8 percent stated that they are allowed to use both QBS and best interest, 9% are allowed to use QBS, best interest, and the lowest responsible and responsive bidding, and 14% are allowed to use both QBS and the lowest responsive and responsible bidding). Whether the NIGP respondents are also allowed to use a combination of these methods is not known, because the coding of the online survey allows only one choice while mail survey respondents can mark multiple choices.

While the existing literature reveals that by 2001 thirty-seven states had authorized the use of QBS for their state contracts and twenty-one states allowed their local units to use QBS, the finding of this study is that about one-third to half of the respondents confirmed the authority

TABLE 2
Selection Methods Allowed by Enabling Legislation

	APWA N=87	NIGP N=216
Qualifications-based selection	29.5%	32.4%
“Best interest of the jurisdiction”*	18.2%	29.2%
Lowest responsible and responsive bidding	15.9%	34.7%
A combination of QBS & other method(s)	29.8%	N/A
A combination of “best interest” with others	17.6%	N/A
Missing cases	2.3%	3.7%
Total	96%**	100%

Notes:

* “The best interest of the jurisdiction” is a broad concept as explained in the literature review. As explained in the NIGP (1996), in the absence of specific authority, “best interest” law provides an official discretion in taking the action deemed to be most advantageous to the jurisdiction” (p. 7). It encourages a wide range of selection methods, particularly those non-traditional selection methods such as RPF, best value approach and QBS.

** The 4% that is not shown in this calculation is the cases where respondents marked “best interest of the jurisdiction” together with the lowest responsive and responsible bidding.

to use QBS. While these numbers do not agree exactly, they may be explained by the sample bias in which there are few state respondents and many representing city and county governments.

As for the alternative enabling legislation, 15.9% of the APWA respondents and 34.7% of NIGP respondents indicate they are required to use the lowest responsible and responsible bidding. Though 18.2% of the APWA respondents stated that they are authorized to select a vendor based on best interest of the jurisdiction, another 17.6% of them indicated they could use both “best interest” together with QBS or/and lowest responsive and responsible bidding. Twenty-nine percent of the NIGP group is authorized to use best interest of the jurisdictions.

It is interesting to observe that the two groups have a like proportion of respondents governed by the “best interest” laws. Higher proportions of NIGP respondents are allowed only to use “lowest responsive and responsible” law, but higher proportions APWA respondents are authorized by the QBS laws.

Then how widely is QBS actually used by the respondents? The findings are reported in Table 3. Fifty-six percent of the APWA group and 73% of the NIGP respondents are selecting vendors based on qualification; Though the lowest responsive and responsible bidding is still more widely used (91% of APWA members and 61% of NIGP members) than vendors’ qualification, we can say that QBS has gained a wide use. This conclusion is also supported by the fact that another 14% of APWA and 32% of NIGP respondents are using a hybrid method in which qualification or quality is often considered. The finding that 91% of APWA respondents are using lowest responsible and responsive bid may reflect their construction contracts rather than professional service contracts.

Many of the respondents stated that they are using more than one selection method. For instance, 64% of the APWA group and 56% of NIGP group stated that they select vendors on the basis of both vendors’ qualification and quality of the commodities. Around 9% of APWA and 14% of NIGP respondents state they use a combination of qualification, quality, and hybrid. It is also interesting to find out that 37% of APWA and 38% of NIGP respondents are using a combination of price, qualification, and quality. This may prove that NIGP members are allowed to use multiple selection methods, and the online survey did not pick up this information as explained in the previous paragraph.

TABLE 3
Vendor Selection Criteria

Selection criteria	APWA members N=87	NIGP members N=216
Lowest responsible & responsive bid	91%	61%
Quality of commodity	44%	61%
Vendor's Qualification	56%	73%
Hybrid	14%	32%
Others	2.0%	27%
Combination of quality & qualification	64%	56%
Combination of quality, qualification, & hybrid	9%	14%
Combination of price, quality, and qualification	37%	38%

Crosstabulation between Enabling Legislation and the Use of QBS

The authors did a cross-tabulation with selection methods and the actual QBS users, and the findings are reported in Table 4. As expected, QBS users heavily concentrated in those jurisdictions that have QBS enabling legislations, which accounts for one third of the respondents. Twenty-one percent of respondents indicated that they are allowed to select vendors on the basis of best interest of the jurisdiction and they use QBS. It is interesting to observe that while 8.1 percent of the respondents are allowed to use QBS under the law, but do not use QBS methods, 16% of the respondents that use some form of QBS method state that their enabling legislation requires all purchases based on lowest responsive and responsible bidder only. How are these contradictions explained? It may be the way the survey is coded. Though the online survey allows the respondents to check only one of the three types of enabling legislation, respondents may be allowed to use multiple methods. This is obvious in the mail survey where many respondents checked multiple methods. Some online respondents who checked the "lowest responsive and responsible bid," which may be the dominant selection method, may also be allowed to use QBS to a certain extent. Whether the law allows public agencies to use QBS methods is statistically significant in explaining whether QBS methods are adopted as seen by the significant level of .000.

TABLE 4
Crosstabulation between Enabling Legislation and the Actual Use of QBS (N=303)

	Selection methods allowable under your enabling legislation			
	QBS methods	For “best interest of the jurisdiction”	Lowest responsible & responsive only	Total
Use QBS*	33.3%	21.8%	15.8%	70.9%
Not use QBS*	8.1%	5.6%	15.4%	29.1%
Total	41.4%	27.4%	31.2%	100%
Df = 2				
Pearson Chi-Square: 25.899				
Significance level = .000				

Note: * Use or Not Use of QBS is based on the answers to the question – Vendors are selected by a) lowest responsive and responsible bids, b) quality of the commodity, c) qualification of vendors, d) hybrid method, and e) others. If the respondents report they select vendors by qualification of vendors, then they are coded as “Use of QBS”.

The Distribution of QBS Users

The authors did various crosstabulations to illustrate the distribution of the QBS users. Table 5 reports the distribution of the QBS users by regions. Among the 71% of the respondents that use QBS, 25% of them are in the South, 17% in the West, and about 12% in Midwest and Northeast respectively. Table 5 also reports QBS users v. non-users ratios by regions. As shown, the South has the highest users v. non-users ratios. There are four QBS users for any one non-user. The lowest user v. non-user ratio within the U.S. is found in the Midwest. The region has been found to be a statistically significant in explaining the use of QBS.

Table 6 reports the distribution of QBS users by the size of community’s population. The QBS users concentrate in medium and large cities. For instance, over 43% of all the respondents that use QBS are in the communities with population larger than 100,000 (e.g., 20.5% for communities with population of 100,000 –300,000 and 22.4% for communities with population over 300,000). Table 6 also shows that those communities with population of 50,000-100,000 and 100,000-300,000 have the highest QBS users v non-users ratios. But the sizes of

the cities are not statistically significant in explaining whether QBS is used or not.

TABLE 5
Distribution of QBS Users by Regions

	Regions						Total
	Midwest	Northeast	South	West	Outside USA	Missing	
QBS users	12.9%	12%	25%	17%	4.3	.3%	71%
Non-users	10.6%	5.0%	5.3%	5.3%	2.6%	.7%	29%
Total	23%	17%	30%	22%	7%	1%	100%
Ratio*	1.2/1	2.4/1	4.7/1	3.1/1	1.7/1	1/2.3	2.4/1
N	71	51	91	66	21	3	303
Df. = 6							
Pearson Chi-Square: 18.16							
Significance level = .006							

Note: * QBS user v. nonuser ratios = the percentage of those that use QBS is divided by percentage of those that do not use QBS. For instance, QBS users v. non-users ratio for the Midwest = $12.9/10.6 = 1.2:1$.

TABLE 6
Distribution of QBS Users by Size of Community's Population
(In 1,000)

	Population of communities						Total
	<10	10-50	50-100	100-300	>300	Missing	
QBS Users	6.3%	11.9%	10.9%	20.5%	22.4%	.7%	71%
Non-users	4.0%	6.9%	4.0%	8.3%	13.1%	3%	29%
Total	10%	18.8%	14.9%	28.7%	35.5%	1.0%	100%
Ratio	1.6/1	1.7/1	2.7/1	2.5/1	1.7/1	2.3/1	2.4/1
N	31	60	45	87	108	3	303
Df. = 5							
Person Chi-Square = 4.856							
Significance level = .434							

Table 7 reports the distribution of QBS users by the size of professional employees in the department. It is interesting to note that 39% of all respondents that use QBS have only a small number of professional employees (5 or fewer). This group is also the leading non-users. Only 26% of the respondents that use QBS have more than 6 professional employees. Those that have 6-10 professional employees in the department have the highest users v non-users ratios. Number of professional employees is not a statistical factor in explaining the use of QBS.

TABLE 7
Distribution of QBS Users in Terms of Number of Professional Employees in the Department

	Number of professional employees in the Department					Total
	None	<5	6-10	>10	Missing	
QBS Users	5.6%	38.6%	12.9%	12.9%	.7%	70.6%
Non-users	3.0%	15.5%	3.6%	5.6%	1.7%	29.4%
Total	8.6%	54.1%	16.5%	18.5%	2.3%	100%
Ratio	1.9/1	2.5/1	3.6/1	2.3/1	0.4/1	2.4/1
N	26	164	50	56	7	303
Df. = 4						
Pearson Chi-Square = 7.689						
Significance level = .104						

Table 8 reports the cross-tabulation between QBS users and number of professional employees in the entire agencies. The question about the number of professional employees in the entire agency is sent only to APWA members. The finding shown in Table 8 is consistent with that in Table 7. Most of QBS users (24%) have a relatively small number of professional employees in the entire agencies (e.g., with 5 or fewer employees). Again the number of the employees in the entire agency is not a statistical significant in explaining the use of QBS.

Table 9 reports the correlation between types of jurisdiction and QBS users. Almost half of QBS users are in the cities, but cities are also the leading non-QBS user. The QBS user v. non-user ratio is 2/1. Counties and state agencies as a whole rank second as QBS users.

TABLE 8
Distribution of QBS Users by Number of Professional Employees in the Entire Agency

	Number of professional employees in the entire agency						Total
	None	5 or less	6-10	10-15	>15	Missing	
QBS user	9%	24%	8%	2%	11%	9.1%	64%
Non-users	6%	17.0%	5.7%	0%	4.5%	3.4%	36%
Total	15%	41%	14%	2%	16%	13%	100%
Ratio	1.6: 1	1.4: 1	1.4: 1	N/A	2.5: 1	2.7: 1	1.7: 1
N	13	35	12	2	14	12	87
Pearson Chi-Square = 2.511							
Df = 5							
Significance level = .755							

TABLE 9
Distribution of QBS Users by Types of Jurisdictions

	Types of Jurisdictions							Total
	City	County	State	School District	Special District	Federal	Other	
QBS users	33%	15%	14%	4%	1%	.7%	3.0%	71%
Non-users	16%	5%	5%	1%	.3%	None	1%	29%
Total	49%	19.8%	19%	5%	1.3%	.7%	4%	100%
Ratio	2/1	2.7/1	2.5/1	4.3/1	3/1	N/A	2.3/1	2.4/1
N	148	60	57	16	4	2	13	303
Pearson Chi Square = 3.504								
Df. = 8								
Significance Level = .899								

How to Use QBS

This last section documents QBS users and distribution. This section reports how QBS and other non-traditional source selection methods are used from several aspects.

Different Non-Traditional Source Methods

First, what non-traditional source selection methods (e.g., RFP, two-step competitive bidding, invitation to negotiation, letter of interest, best

value/best delivery approach, Brooks bill approach) do public agencies use? According to the findings reported in Table 10, the most frequently used method is RFP (93% among the APWA group and 87% among the NIGP). About a quarter of APWA members are using invitation to negotiation and two-step competitive bid, and about a quarter of NIGP members are using QBS, letter of interest, and best value approach. While higher proportions of APWA respondents are using letter of interest (31%) and invitation to negotiation (26%) than the NIGP members (13% and 24% and 13%), more NIGP respondents are using best value approach. Only 3% in both groups indicated they are using Brooks bill approach.

TABLE 10
Use of Different QBS Approaches

	APWA members (N=87)	NIGP members (N=216)
QBS	N/A	26%
RFP	93%	87%
Two step competitive bid	23%	N/A
Invitation to negotiation	26%	13%
Letter of interest	31%	24%
Best value approach	19%	27%
Brooks bill approach	3%	3%
Others	2%	9%

How often do the agencies combine non-traditional methods? As Table 11 shows, while 39% of all the respondents use only one of the approaches (e.g., RFP), the survey does find many public agencies using a combination of these non-traditional approaches. For instance, 27% reply that they use two of them, and 12.5% are using three of them, and 8% are using four of these approaches. Only 1% combines all six non-traditional approaches.

Extent of Using QBS

Another question asks the extent agencies have used QBS in their procurement. This is another question potentially affected by the

TABLE 11
Combinations of QBS Approaches Used by Public Agencies

Various combinations of QBS methods	% of the overall respondents N= 303
1 approach	38.9%
2 approaches combined	27.7%
3 approaches combined	12.5%
4 approaches combined	8.3%
5 approaches combined	2.6%
6 approaches combined	1.0%

different versions sent to the two different groups. The questionnaire sent to NIGP members is a general one asking “to what extent do you use QBS where 1 means ‘none’ and 5 means ‘for all purchases’”. The findings are reported in Table 12. Fourteen percent do not use QBS at all and 6% use QBS for all the purchases. Many indicate (40%) that they use QBS only to a limited extent while about 27% of the respondents reply they use QBS for half of their purchases. This blanket result does not show what purchase they use QBS for. The questionnaire sent to APWA members fills this gap by breaking down the purchases into different categories and asking respondents to mark the extent they use QBS in each type of purchase (e.g., commodities, professional services, vocational rehabilitation, contractual technology, construction contracts). The findings are reported in Table 13.

TABLE 12
To What Extent Do Public Agencies Use QBS: Responding from NIGP Members

(1 means “none” and 5 means “for all purchases”)

N= 216	1	2	3	4	5	Missing data
% NIGP members	13.9	40.3	26.9	6.0	5.6	7.4

As shown in Table 13, QBS is more often used in purchasing professional services followed by procurement of IT. Fourteen percent of respondents use QBS for half of their professional services and 27%

TABLE 13
Extent of Use QBS: % among APWA Responses
 N=87

Types of purchases	1*	2	3	4	5*	Missing
Commodities/supplies	38.6	19.3	10.2	6.8	4.5	20.5
Professional services (e.g., A/E, accounting client service contract)	6.8	2.3	13.6	27	40.9	9.1
Vocational rehabilitation, guidance counseling, employment services	21.6	2.3	10.2	6.8	5.7	53.4
Contractual services (e.g., lawn care, janitorial, computer maintenance)	20.5	18.2	28.4	2.3	11.4	19.3
Information technology	14.8	8.0	19.3	11.4	11.4	35.2
Construction contracting	42.0	17.0	8.0	9.1	11.4	12.5

Notes: * “1” means “none” and “5” means “for all purchases.”

uses QBS for more than half of their professional services; and 41% use QBS for all of their professional services. There is a little use of QBS for purchasing commodities and supplies and construction contracting. However, it is interesting to observe that QBS is not always used with the purchasing of professional services and QBS is used for commodities and supplies to a limited extent. The purchase of information technology has a relatively even spread as to what extent QBS is used. Forty-two percent of construction contracts do not use QBS at all.

Required Information in QBS Selection Process

As shown in Table 14, all of the information is required when public agencies select vendors through the QBS process. However, the most frequently required information is the proposer’s ability to perform a function, which is required by 87% of NIGP respondents and 97% of APWA respondents. While a higher proportion of the APWA group require experience of staff and experience of the company, more NIGP members require financial stability of the vendors and understanding of the project among the areas, vendor’s demonstration, sites visits, and vendor’s approach to the problem or task. Both groups also require other information, including availability of experienced staff and fees, cost

after being accepted, experience in energy reduction initiatives, fee compensation proposal, proof of insurance, prevailing wages, certification, past experience with the companies, cost for those who are on the short list, certifications of staff, criminal record checks for sensitive areas access and whether they are bondable, financial rating, value added incentives, general marketing plan, interviewing with company, meeting bonding requirement, product or service availability, quality assurance program, quality of the response to RFP, safety policies and procedures, occupational health and safety clearances of staff, sample, DOT pre-qualification, total long term cost to acquire goods or services. NIGP members also indicated that their requirements differ from the type of purchases.

TABLE 14
Information Required in the QBS Selection Process

Information required	% APWA responses	% NIGP responses
Proposer's ability to perform a function	96.6	87.5
Proposer's staff names	59.1	67.1
Experience of its staff	90.9	77.3
Experience of the company	93.2	84.3
Financial stability of the vendor & understanding of the project among the areas	61.4	81.0
Vendor's demonstration	36.4	61.6
References	81.8	84.3
Site visits	39.8	64.8
Vendor's approach to the problem or task	63.6	71.3
Others	7.9	13.4

Table 15 shows that when using the QBS method to select vendors, over 70% (e.g. the sum of 13.5%, 15.8%, 13.9% and 31.9%) of the respondents require 6-9 types of the information, and 32% indicated they require all of the nine types of information listed. A relatively small number of respondents relied only on a few types of the information. This seems to suggest that, in general, public agencies tend to select the vendors on a comprehensive basis.

TABLE 15
Number of Information Items Required in QBS Selecting Process
 (N=303)

# of information items that an agency requires	Frequency	Percentages
None	16	5.3
One	4	1.3
Two	7	2.3
Three	6	2.0
Four	17	5.6
Five	25	8.3
Six	41	13.5
Seven	48	15.8
Eight	42	13.9
Nine	96	31.9
Missing data	1	0.3
Total	303	100%

Negotiation after initial QBS selection

Table 16 shows that both groups of respondents negotiated the three areas. A higher portion of those surveyed negotiate price, followed by terms and conditions. They may also negotiate other areas, including schedule, delivery date, quality levels and features, time frame and payment terms, storage, future price for long term contracts, reimbursable costs, software license, staff, technical requirements, payment schedules, training and additional warranties, travel, upgraded quality. One also stated that it has statutory authority to negotiate all, but rarely does.

TABLE 16
Items That Public Agencies Negotiate with Vendors After Initial QBS Selection

Items that is negotiated	APWA members N=87	NIGP members N=216
Price	68.2%	72.7%
Terms and conditions	62.5%	67.6%
Scope of work	53.4%	65.3%
Others	1.1%	14.4%

The questionnaire sent to the APWA members (but to NIGP members) asks respondents to indicate what type of selection processes are permitted in dealing with different purchasing. The results are reported in Table 17. Because agencies are allowed to use multiple selection processes for any type of procurements, the total for the column and the row is not 100%. It is noted that all the selection processes are permitted for use in all types of procurement, but some are permitted in more agencies than others. Formal competitive bid is still the widely permitted way for all types of purchases, except professional services, followed by informal quotations. Of the respondents, 23 to 42 percent indicate they are allowed to use the best value approach/best value delivery for all types of procurements. Eighty percent of responses stated that they use RFP for professional service, and 34 percent to 50 percent indicate they use RFP for all other purchases. When considering procurement of professional services, a much higher proportion of

TABLE 17
Permission to Use Various Selection Processes for the Different
Types of Procurement: Percentage of APWA Responses
(N= 87)

	(1)	(2)	(3)	(4)	(5)	(6)
Formal competitive bid	81.8	76.1	51.1	26.1	50.0	86.4
Informal quotations	73.9	52.3	48.9	26.1	43.2	43.2
Best value approach/ best value delivery	38.6	31.8	42.0	22.7	35.2	25.0
Sole source	50.0	37.5	46.6	21.6	40.9	19.3
RFP	43.2	50.0	81.8	34.1	48.9	35.2
Two-step approach	15.9	17.0	27.3	19.3	20.5	18.2
Letter of interest	15.9	18.2	43.2	18.2	23.9	15.9
Brooks bill approach or QBS	8.0	11.4	35.2	17.0	19.3	12.5
Request to negotiate	11.4	12.5	25.0	12.5	19.3	15.9
Others	2.3	1.1	2.3	1.1	3.4	1.1

Notes: Column (1) = Commodities supplies, or consumables; Column (2) = Contractual services (i.e., janitorial, etc.); Column 3 = Professional services, excluding IT; Column (4) = Client service (vocational rehabilitation, etc.); Column (5) = Information technology; (6) = Column (6) = Construction contracts.

respondents confirm their use of letter of interest, Brooks bill, and request to negotiate. IT procurement runs second in using these QBS approaches.

Satisfaction with QBS process

The respondents were also asked how satisfied they are with their qualifications-based selection process, where 1 means “not satisfied at all” and 5 means “very satisfied”. The finding is reported in Table 18. Overall, both groups indicate that they are satisfied by their qualification-based process, as seen by the means of larger than 3. The mean for the APWA group (3.87) is higher than the NIGP group (3.42), and a larger proportion of APWA group rank their level of satisfaction level at “4” and “5” than its NIGP counterparts.

TABLE 18
Public Agency Satisfaction with the QBS Selection Process

	1	2	3	4	5	Missing	Mean	St. Dev
NIGP (N=216)	5.6%	13%	23%	24%	18%	17%	3.42	1.18
APWA (N=87)	2.3%	3%	23%	34%	26%	11%	3.87	.967

Reasons for not adopting QBS

When asked if they have not adopted QBS, what the reasons are, nearly all the reasons that we listed are recognized by a small number of the respondents (see Table 19). In the NIGP group, the number one

TABLE 19
Reasons for Not Adopting QBS

Reasons	Frequency among APWA respondents	Frequency among NIGP respondents
We do not think it is a viable method	0	3
It takes too much time	3	7
It is prohibited by statute or regulations	6	31
We are satisfied with the traditional lowest responsible and responsive bidder	8	22
We do not have personnel to implement it	7	16

reason is that law prohibits it. The next reasons are their satisfaction with the traditional lowest responsible and responsive bidding and the lack of personnel. Although the ranking differs, these three factors are also cited more frequently than other reasons in the APWA group.

Likelihood for More Adoption of QBS

The authors are also interested in the trend for QBS in the near future. Among the 24 APWA members that answered the question, over 58 % ranked the likelihood as “1” and “2”, 29% ranked “3” and 12.5% marked “4” and “5” (Table 20). With the mean of 2.25, it seems that the likelihood for many agencies to adopt QBS remains moderate. This information was not collected from the NIGP group due to the authors’ coding error.

TABLE 20
The Likelihood to QBS in the Coming 3-4 Years
(1 means “not likely at all” and 5 means “very likely”)

N= 24	1	2	3	4	5	Mean	St. Dev.
% of Respondents	33%	25%	29%	8%	4%	2%	1.152

Summary

This section presents the findings about the use of QBS and other non-traditional selection methods in the public agencies from various aspects. The findings indicate that about 70% of the respondents report they select vendors based on qualifications. Two factors are found to be statistically significant in explaining the use of QBS. They are the region variable and the enabling legislation variable. Most QBS users are in the south. The findings support the literature that the QBS is being used in many public agencies. This is particularly true with the purchasing of professional services and IT. In general, public agencies are happy with their QBS process. It is also interesting to compare the two groups (e.g., APWA and NIGP) in terms of how they use QBS and other non-traditional selection methods. In general, they report similar trend and process, though they do vary somewhat in how they use them.

CONCLUSION

Public procurement has evolved into a strategic position in improving public services. While various changes have occurred in public procurement, this paper focuses on the use of QBS and other non-traditional methods by the public agencies for selecting vendors. Despite the potential flaws in the data due to the use of slightly different wording in survey questions and slightly different survey methods (online vs. mailed questionnaires), the authors believe that the following conclusions accurately depict the frequency and acceptance of QBS as a procurement method.

Though the traditional lowest responsive and responsible bidding is still the dominant selection method when all procurement is considered, various non-traditional methods have been introduced to public procurement due to the increasing complex nature of the commodities and services that government purchases. This study shows that QBS has gained wide acceptance and use in the public agencies. When considering only professional services, QBS becomes the most common method.

The paper also illustrates how public agencies are using non-traditional methods, particularly QBS. However, we have only very limited data to predict the trend in the near future. Future research can contribute to this area with more in-depth studies such as using interviews and more defined questions. Other related and important issues that need research include the impact of QBS and problems in using QBS such as possible legal disputes.

From the policy perspective, this study has found that the use of QBS is statistically correlated with enabling legislature. Therefore, for public agencies to use QBS, legislators should grant this permission. Finally, several non-QBS users state that they do not have enough personnel to implement QBS. So public agencies need to address staffing capacity to ensure QBS will be implemented.

ACKNOWLEDGEMENTS

The authors would like to express thanks to Rick Grimm, Chief Executive Officer of the National Institute of Government Purchasing and Dennis H. Ross P.E., Director of Professional Development for American Public Works Association, whose assistances were critical in

completing this research. Rick Grimm kindly sponsor the e-mail surveys to NIGP members. Dennis H. Ross kindly offered to fund and administer the mail survey to a random sample of 300 APWA members. He provided workbooks, publications, and websites on the use of QBS. His feedback on the literature review also greatly enhanced the quality of this study.

NOTES

1. According to Thai and Grimm (2000), the origin of public procurement can be traced to 2400-2800 B.C. in Syria. As far as its size is concerned, American Bar Association (2000) reported that only “state and local governments were spending approximately \$750 billions annually in the procurement of goods, supplies, equipment, services, and construction” (p. v).
2. Kelman (1990) defines equity as providing fair access to bidders in competing for government business; integrity as reducing the chances for corruption in the procurement process; economy and efficiency as procuring at the lowest possible price for goods or services of the quality desired.
3. Government procures different categories of services, and professional service is only of them. The other services include personal service (e.g., translation, technical editing, and technical appraisal), client services (e.g., vocational rehabilitation, guidance counseling, employment services), managerial services, and high technology services. Different selection methods are used for the procurement of different services, although competitive sealed proposal and two-step competitive sealed bidding are often used. While many jurisdictions authorize public agencies to use QBS to procure certain professional services, NASPO (1997) mentioned that QBS is most likely to be instituted in purchase of client service.
4. Office of Management and Budget did not specify the current professional services contracting which is difficult to generalize given the diversification of the professional services needed by the federal government.
5. The next section explains the number of state and local governments that have laws to authorize the use of QBS. American Council of

Engineering Companies maintains QBS website www.acec.org. This site provides a great deal information about the use of QBS.

6. The differences are mentioned and reported in the “finding” section.
7. For the question – which of the following selection methods is allowable under your enabling legislature? a) use of qualification-based selection method(s), b) selection of a vendor based on “the best interest of jurisdictions,” c) all procurements are based on low responsive and responsible bidder only - the online survey allows only a single entry while the mail survey allows multiple entries. For the question -- if you have not adopted qualification-based selection process, how likely will you adopt it in the coming 3-4 years? -- due to a coding error in the online survey, the information about the likelihood of adopting QBS by more agencies was collected only in the mail survey, but not in the online survey.

REFERENCES

- American Bar Association, Section of Public Contract Law. (2000). *The 2000 model procurement code for state and local governments*. Chicago, MI: Author.
- American Council of Engineering Companies. (2003). *Procurement/ Federal markets*. [Online]. Available: www.acec.org/programs/procissues.
- American Council of Engineering Companies. (n.d.). Qualifications Based Selection – 2001 Survey of State QBS Laws and Registration Boards. [Online]. Available: www.acec.org/advocacy/pdf/matrix01.
- Council of State Governments (1987). *State and local government purchasing* (3rd ed.). Lexington, KY: The National Association of State Purchasing Officials.
- General services administration to test two-step design-build selection. (1993, September). *Building Design & Construction*. 34 (9), p. 10.
- General Service Administration (n.d.). *Design Excellence Program: Architecture & Construction*. [Online]. Available at www.hydra.gsa.gov/pbs/pc/dsfiles/excellen.htm.
- Gardner, S. (1999). Procurement process key to selling to the public sector. *Computer Dealer News* 15 (20), 35.

- Kelman, S. (1990). *Procurement and public management: The fear of discretion and quality of government performance*. Washington DC: The AEI Press.
- Indiana QBS Coalition. (n.d.). *QBD user's guide: The process for selection of professional services* (2nd ed.). Indianapolis, IN: Author.
- Lynch, T.D. (1995). *Public budgeting in America*. (4th ed.). Englewood Cliffs, New Jersey: Prentice Hall.
- Martin, J. L. (1997). *Selection and use of engineers, architects and professional consultants: Guideline for public agencies* (2nd ed.). Kansas City, MO: American Public Works Association.
- McCue, C. P., & Pitzer, J. T. (2000). Centralized vs. decentralized purchasing: Current trends in governmental procurement practices. *Journal of public Budgeting, Accounting & Financial Management*, 12 (3), 400-420.
- Mechling, J. (1995). *Information technology and government procurement: Priorities for reform*. Cambridge, MA: John F. Kennedy School of Government, Harvard University.
- Miller, J. B. (2002). Principal areas of research. Cambridge, MIT. [Online]. Available at www.web.mit.edu/civenv/idr/JBMWebPages/miller6.
- National Association of State Procurement Officials (1999, January). NASPO whitepaper: State procurement -- Strategic positioning for the 21st century. [Online]. Available at www.naspo.org/whitepapers/whitepaper-21century.
- National Association of State Procurement Officials. (1997). *State & local government purchasing: Principles and practices* (5th ed.). Lexington, KY: Author.
- National Association of State Procurement Officials. (1999). *Survey of state & local government purchasing practices* (5th ed.). Lexington, KY: Author.
- National Association of State Procurement Officials (ND). Buying smart: State procurement saves millions. [Online]. Available at www.naspo.org/whitepapers/buyingsmart.
- National Institute of Governmental Procuring (1996). *Dictionary of Purchasing Terms*. Reston, VA: Author.

- National Performance Review. (1993). *Reinventing federal procurement*. [Online]. Available at www.npr.gov/npr/library/nprprt/annrpt/sysrpt93/reinven.
- Office of Federal Procurement Policy. (1985, January). *Study of professional services contracting* (Report to the Congress). Washington, DC: Author.
- QBSColorado. (n.d.). *About QBS* [Online]. Available: www.acec-co.org.
- Pettijohn, C., & Qiao, Y. (2000). Procuring technology: Issues faced by public organizations. *Journal of Public Budgeting, Accounting & Financial Management*, 12 (3), 441-461.
- Professional Service Council. (n.d.). *Best-value procurement for professional and technical services* (PSC Working Paper). [Online]. Available at www.pscouncil.org/westand/Best_value.
- QBS Utah (n.d.) *Why QBS*. [Online]. Available: www.acecutah.org/QBS/Why.asp.
- Ross, D. (2000, December 14). *2001 QBS facilitator grant program* (Memorandum). Kansas City, MO: American Public Works Association.
- Tennessee State Government (n.d.). *Guideline B-035: Subject: procedures for multi-step sealed bidding*. [Online]. Available at www.tbr.state.tn.us/policies_guidelines/business_guidelines/B-035.
- Thai, K. V., & Grimm, R. (2000). Government procurement: Past and current developments. *Journal of Public Budgeting, Accounting & Financial Management*, 12 (3), 231-247.
- Turbo Stremliner. (2000, 22 March). *Best value*. [Online]. Available: www.acq-ref.navy.mil/tools/turbo/topics/aw.